1. Upper limb deformity in Erb's palsy?

a) Adduction and lateral rotation of arm

b) Adduction and medial rotation of arm

c) Abduction and lateral rotation of arm

d) Abduction and medial rotation of arm

Correct Answer - B

Deformity in Erb's palsy (position of the limb):

- Arm: Hanges by the side; it is **adducted & medially rotated**
- Forearm: Extended and **pronated**
- The deformity is known as **‘policeman’s tip hand' or ‘porter’s tip hand’**

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2. Nerve roots involved in Erb's palsy:

a) C5, C6

b) C6, C7

c) C7,C8,T1

d) C5,C6,C7,C8,T1

Correct Answer - A

Erb-Duchenne Palsy

Upper lesions of the brachial plexus are injuries resulting from excessive displacement of the head to the opposite side and depression of the shoulder on the same side. This causes excessive traction or even tearing of C5 and C6 roots of the plexus. It occurs in the newborn during a difficult delivery or in adults after a blow to or fall on the shoulder.

The suprascapular nerve, the nerve to the subclavius, and the musculocutaneous and axillary nerves all possess nerve fibers derived from C5 and C6 roots and will therefore be functionless.

The following muscles will consequently be paralyzed: the supraspinatus (abductor of the shoulder) and infraspinatus (lateral rotator of the shoulder); the subclavius (depresses the clavicle); the biceps brachii (supinator of the forearm, flexor of the elbow, weak flexor of the shoulder) and the greater part of the brachialis (flexor of the elbow) and the coracobrachialis (flexes the shoulder); and the deltoid (abductor of the shoulder) and the teres minor (lateral rotator of the shoulder).

Thus, the limb will hang limply by the side, medially rotated by the unopposed sternocostal part of the pectoralis major; the forearm will be pronated because of loss of the action of the biceps.

The position of the upper limb in this condition has been likened to that of a porter or waiter hinting for a tip. In addition, there will be a

that of a porter or waiter hinting for a tip. In addition, there will be a loss of sensation down the lateral side of the arm.

Treatment

The three most common treatments from Erb's Palsy are: Nerve transfers (usually from the opposite leg), subscapularis releases and latissimus dorsi tendon transfers.

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3. Root value of thoracodorsal nerve ?

a) C_5,C_6,C_7

b) C_8,T_1

c) C_6,C_7,C_8

d) T_i T2

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Correct Answer - C

Ans. is 'c' i.e., $C_6C_7C_8$

Branches of brachial plexus

- Branches of brachial plexus arises from different anatomical segments : -

1. Branches of the roots

- Nerve to serratus anterior (long thoracic nerve) (C_5, ^{C}6, C7).
- Nerve to rhomboideus (dorsal scapular nerve) (C5).

2. Branches of the trunks

- These arise only from the upper trunk which gives two branches. I. Suprascapular nerve (C_5, C6)
- Nerve to subclavius (C_5, C6)

3. Branches of the cords

1. Branches of lateral cord

- Lateral pectoral (C5-C7)
- Musculocutaneous (C5-C7)
- Lateral root of median (C5-C7)

2. Branches of medial cord

- Medial pectoral (C_8, T1)
- Medial cutaneous nerve of arm (C_8, TO
- Medial cutaneous nerve of forearm (C_8, Ti).

- Ulnar (C7, C8, T_i). C7 fibres reach by a communicating branch from lateral root of median nerve.
- Medial root of median (C_8, T1).

3. Branches of posterior cord

- Upper subscapular (C_5, C6)
- Nerve to latissimus dorsi (thoracodorsal) (C6, C7, CO
- Lower subscapular (C_5, C6)
- Axillary (circumflex) (C_5, C6)
- Radial (C_5-C_8, T1)

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4. Teres minor is supplied by

a) Suprascapular nerve

b) Infrascapular nerve

c) Thoracodorsal nerve

d) Axillary nerve

Correct Answer - D

Ans. is'd'i.e., Axillary nerve [Ref:BDC 6h/e Vol.l p. 671

- Axillary nerve supplies teres minor and deltoid.

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5. Insertion of levator scapulae is ?

a) Lateral border of scapula

b) Suprolateral part of scapula

c) Superior part of medial scapula border

d) Inferior angle of scapula

Correct Answer - C
Ans. is'c' i.e., Superior part of medial scapula border
[Ref Rockwood, Charles A.; Matsen, (2009). The shoulder, Vol. 1]
Origin:
* Posterior tubercles of transverse processes of C 1 - C4 vertebrae.
Insertion:
* Superior part of medial border of scapula

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6. Number of lobes in breast

a) 5

b) 10

c) 15

d) 30

Correct Answer - C

Ans. is'c'i.e., 15lRef; BDC tr/eVol.I p. 361

- Breast (mammary gland) is a modifeil sweat glaad present in the superficial fascia of pectoral region.
- It consists of 15-20 lobes.
- Vertically it extends from 2nd to 6th ribs at midclavicular line and horizontal extent is from sternal margin to midaxillary line at the level of 4h rib.

KollegeApply

7. Which of the following arises from infraglenoid tubercle -

a) Longheadofbiceps

b) Longheadoftriceps

c) Shortheadofbiceps

d) Coracobrachialis

Correct Answer - B

Ans. is'b' i.e., Long head of triceps

- Supraglenoid tubercle of scapula : origin oflong head ofbiceps.
- Infraglenoid tubercle of scapula : origin of long head of triceps

KolleegeApply

8. Not attached on medial border of scapula ?

a) Serratus anterior

b) Levator scapulae

c) Rhamboides major

d) Teres major

Correct Answer - D

Ans. is 'd' i.e., Teres major

Muscles attached to scapula are :-

- Coracoid process :- Tip of the coracoid process gives origin to coracobrachialis (medially) and short head of the biceps laterally.
- The upper surface receives insertion of pectoralis minor.
- Spine of scapula and acromion process :- There is origin of Deltoid and insertion of trapezius.
- Glenoid tubercle :- Supraglenoid tubercle gives origin to the long head of biceps and infra glenoid tubercle gives origin to long head of triceps.
- Lateral border :- Origins of teres minor and teres major.
- Medial border :- Insertions of serattus anterior (anteriorly); and rhomboideus major, rhomboideus minor and levator scapulae (posteriorly).
- Costal (anterior) surface (origin) Subscapularis.
- Dorsal surface (origins) Supraspinatus, infraspinatus and at inferior angle latissimus dorsi.

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9. A patient has a herniated intervertebral disc impinging on the right C5 nerve roots. Which of the following movements would most likely be affected?

a) Extension of the fingers

b) Extension of the shoulder

c) Flexion of the elbow

d) Flexion of the wrist

Correct Answer - C

C5 helps mediate flexion, abduction, and lateral rotation of the shoulder, and flexion of the elbow. Both C5 and C6 mediate extension of the elbow.

- Extension of the fingers is mediated by C7 and 8.
- Extension of the shoulder is mediated by C7 and 8.
- Flexion of the wrist is mediated by C6 and 7.

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10. Medial boundry of Cubital fossa ?

a) Brachioradialis

b) Pronator teres

c) Supinator

d) None

Correct Answer - B
Ans. *is* 'b' i.e., Pronator teres

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11. True about lumbricals is

a) Flex IP joints and extends MCP joint

b) 1st and 2nd supplied by radial nerve

c) 3 and 4 supplied by superficial branch of ulnar

d) Origin from tendons of flexor digitorum profundus

Correct Answer - D
Answer. D
Origin from tendons of flexor digitorum profundus*
The four **lumbrical** muscles arise from the tendons of flexor digitorum profundus. They have different origins:
Each passes distally to the radial side of its nearest metacarpophalangeal joint of the fingers to be inserted into the dorsal extensor expansionof digits two to five.
Their actions on these digits are to:
* Extend the interphalangeal joints
* Flex the metacarpophalangeal joints
The innervation of the lumbricals is dual:
* The radial first and second lumbricals are supplied by the median nerve (C8, T1)
* The ulnar third and fourth lumbricals are supplied by the deep branch of the ulnar nerve (C8, T1)
* Occasionally, the third lumbrical can receive its innervation from the median nerve.

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12. Lateral boundary of cubital fossa is formed by:

a) Brachioradialis

b) Pronator teres

c) Brachialis

d) Biceps

Correct Answer - A
Brachioradialis
Boundaries of cubital fossa-
Laterally - Medial border of brachioradialis.
Medially - Lateral border of pronator teres.
Base - It is directed upwards, and is represented by an imaginary line joining the front of two epicondyles of the humerus.
Apex - It is directed downwards, and is formed by the area where brachioradialis crosses the pronator teres muscle.

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13. Muscle of Arm with additional supinator action?

a) Brachialis

b) Biceps

c) Coracobrachialis

d) Triceps

Correct Answer - B
Ans. is 'b' i.e., Biceps

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14. The nerve supply of nail bed of index finger is ?

a) Superficial br of radial nerve

b) Deep br of radial nerve

c) Median nerve

d) Ulnar nerve

Correct Answer - C
Ans. is 'c' i.e., Median nerve

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15. Content of anatomical snuffbox

a) Radial artery

b) Brachial artery

c) Ulnar artery

d) Interosseus artery

Correct Answer - A

Ans. is 'a' i.e., Radial artery [Ref: AK Dutta p. 861]

- Triangular depression on the dorsal and radial aspect of the hand become visible when thumb is fully extended.

Boundaries

- Media/Posterior → Tendon of the extensor pollicis longus.
- Lateral/Anterior → tendon of the extensor pollicis brevis and abductor pollicis longus,
- Roof → Skin and fascia with beginning of cephalic vein and crossed by superficial branch of the radial nerve
- Floor → Styloid process of radius, trapezium, scaphoid and base of first metacarpal
- Contents → The radial artery

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16. 3rd extensor compartment of wrist contains tendon of ?

a) ECRL

b) ECRB

c) EPL

d) EPB

Correct Answer - C
Ans. C) EPL

- The **third compartment contains** the **extensor pollicis longus tendon**, which originates at the mid-ulna and inserts at the base of the first distal phalanx.
- In combination with the EPB **tendon**, it extends the thumb at the first carpometacarpal and first interphalangeal joints.

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17. Which leaves the pelvis ?

a) Piriformis

b) Sciatic nerve

c) Superior gluteal vessel

d) Inferior gluteal vessel

Correct Answer - B

- Sciatic nerve leaves the pelvis and runs posteriorly in the thigh.
- In the upper angle of popliteal fossa, sciatic nerve divides into tibial nerve and common peroneal nerve

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18. Abduction and adduction of foot occurs at which joints

a) Ankle

b) Subtalar

c) Tarso-metatarsal

d) None

Correct Answer - B

Ans. is'b'i.e., Subtalar [Ret Clinical arthopaedics p. 7861

- Adduction and abduction of foot occurs mainly at subtalar joint.
- Movements take place at ankle are dorsiflexion and plantarflexion.
- Inversion and eversion take place at Subtalar joint and midtarsal joints.

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19. **All are true about femoral triangle, EXCEPT?**

a) Lateral margin is formed by sartorius

b) Floor is formed by adductor longus

c) Contains the femoral vessels

d) None of the above

Correct Answer - D
All are true about the femoral triangle
The femoral triangle is a depressed area of the thigh lying distal to the inguinal fold.
Its apex is distal, its limits are the medial margin of sartorius laterally, the medial margin of adductor longus medially and the inguinal ligament proximally (the base).
Its floor is provided laterally by iliacus and psoas major, medially by pectineus and adductor longus.
The femoral vessels, passing from mid base to apex, are in the deepest part of the triangle. Lateral to the artery the femoral nerve divides.
The triangle also contains fat and lymph nodes.

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20. Content of femoral canal

a) Femoral branch of genitofemoral nerve

b) Genital branch of genitofemoral nerve

c) Femoral vein

d) Lymph node

Correct Answer - D

Ans. is'd'i.e., Lymph node [Ref BDC 5th/e Vol.2 p. 53, 54]

- Femoral sheath is a funnel shaped fascial prolongation around proximal part of femoral vessels, situated in the femoral triangle, below the inguinal ligament. It is 3-4 cm long. It is formed by fascia iliaca.
- Femoral ring b bounded: Anteriorly by inguinal ligament, medially by the lacunar ligament, posterior / by pectineus with its covering fascia, and laterally by septum separating it from femoral vein.
- Femoral canal contains lymph node of cloquet or Rosenmuller and lymphatics.

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21. A patient presents with defective adduction of the hip joint and pains in the hip and knee joint. Which nerve is involved

a) Obturator nerve

b) Femoral nerve

c) Saphenous nerve

d) Sciatic nerve

Correct Answer - A
A. i.e. Obturator nerve
Adductors of thigh are mainly supplied by *obturator nerveQ.*
A disease in hip joint may cause referred pain in knee & medial thigh because of their common nerve supply by obturator nerveQ.

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22. Structure which lies outside the femoral sheath

a) Femoral artery

b) Femoral nerve

c) Femoral vein

d) Genitofemoral nerve

Correct Answer - B
Femoral nerve
Femoral sheath
Femoral sheath is a funnel shaped fascial prolongation around proximal part of femoral vessels, situated in the femoral triangle, below the inguinal ligament. It is 3-4 cm long. It is formed by fascia iliaca.
Femoral sheath is divided into 3 separate fascial compartements by septa **:?**

- **Lateral compartment :-** It contains **femoral artery** and **femoral branch of genitofemoral nerve.**
- **Intermediate compartment :- Femoral vein.**
- **Medial compartment (femoral canal) :-** It is conical in shape, wider above adn narrow below. The wider upper opening is known as **femoral ring,** which is potentially a weak point in lower abdomen and is the site for femoral hernia. Femoral ring is bounded : **Anteriorly by inguinal ligament, medially by lacunar ligament,** posteriorly by pectineus with its covering fascia, and **laterally by septum separating it from femoral vein. Femoral canal contains lymph node of cloquet or Rosenmuller and lymphatics.**

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23. Most common ligament damaged in knee injury is

a) ACL

b) PCL

c) MCL

d) LCL

Correct Answer - C

Ans. is 'c' i.e., MCL [lRef; Textbook of sports medicine &/e p. l38l]

- Most commonly injured ligament in knee -+ Medial collateral ligament (MCL).
- MCL tear is the most common knee ligament injury"
- MCL injury is the most common ligament injury to the knee"
- Practical orthopaedics sports medicine
- MCL is the most commonly injured knee ligament"
- ACL is the 2nd most commonly injured knee ligament, almost as frequent as MCL.

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24. Which structure(s) passes behind the inguinal ligament:

a) Femoral branch of genitofemoral nerve

b) Femoral vein

c) Psoas major

d) All

Correct Answer - D
A i.e. Femoral branch of genitofemoral nerve; B i.e. Femoral vein ; C i.e. Psoas major

KollegeApply

25. Lateral border of ischeorectal fossa is formed by?

a) Gluteus maximus

b) Perineal membrane

c) Pelvic diaphram

d) Obturator internus

Correct Answer - D

Ans. is 'd' i.e., Obturator internus

Boundries of ischeoanal (ischeorectal) fossa are :-

- Anteriorly :- Posterior border of perineal membrane .
- Posteriorly :- Gluteus maximus muscle, sacrotuberous ligament.
- Laterally :- Ischial tuberosity and obturator internus.
- Medially :- Sphincter ani externus (external anal sphincter) and pelvic diaphragm (levator ani).

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26. Arterial branches which supply the head and neck of the femur is/are:

a) Medial circumflex artery

b) Lateral circumflex artery

c) Profunda femoris artery

d) All

Correct Answer - D
A. i.e. Medial circumflex artery; B. i.e. Lateral circumflex artery; C. i.e. Profunda femoris artery
Proximal femur (head & neck) is supplied by artery of ligamentum teres (branch of obturator artery), *medial (main) & lateral circumflex femoral artery* (both arise from profunda femoris artery, give rise to ascending cervical (+ metaphyseal) and retinacular (+ epiphyseal:lateral & inferior) arteries and form extracapsular & intracapsular subsynovial arterial rings

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27. Femoral nerve supplies all except ?

a) Pectineus

b) Sartorius

c) Vastus medialis

d) Obturator externus

Correct Answer - D

Branches of femoral nerve are :?

1. From the main trunk :- Nerve supply to iliacus, nerve supply to pectineus and a few vascular branches.
2. From anterior division :- Intermediate femoral cutaneous nerve (intermediate cutaneous nerve of thigh), medial femoral cutaneous nerve (medial cutaneous nerve of thigh) and muscular branch to sartorius.
3. From posteior division :- Saphenous nerve, nerve supply to quadriceps femoris (rectus femoris, vastus medialis, vastus lateralis, vastus intermedius).
4. Articular supply :- Hip joint is supplied by nerve to rectus femoris; knee joint is supplied by nerve to three vasti.

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28. Superior gluteal nerve does not supply ?

a) Tensor fasciae latae

b) Gluteus medius

c) Gluteus minimus

d) Gluteus maximus

Correct Answer - D

Ans. is 'd' i.e., Gluteus maximus

Nerve supplying muscles of gluteal region are :-

- Inferior gluteal nerve : Gluteus maximus.
- Superior gluteal nerve : Gluteus medius and minimus.
- Nerve to piriformis : Piriformis
- Nerve to obturator internus : Obturator internus, Gemellus superior.
- Nerve to quadratus femoris : Quadratus femoris, Gemellus inferior.
- Tensor fascia latae is supplied by superior gluteal nerve.

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29. What is true about adductors of thigh –

a) Ischial head of adductor magnus is an adductor

b) Profunda femoris artery is the main blood supply

c) Ischial head of adductor magnus originates from adductor tubercle

d) Adductor magnus is the largest muscle

Correct Answer - D

Ans. is'd'i.e., Adductor magnus is the largest muscle

- Ischial head of adductor magnus is a hamstring muscle (not adductor).
- Ischial head of adductor magnus originates from inferolateral aspect of Ischial tuberosity (not from adductor tubercle).
- Main artery of adductor (medial) compartment of thigh is obturator artery (not profunda femoris).
- Adductor magnus is the largest muscle of the adductor compartment.

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30.

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A nerve injured in radical neck dissection leads to loss of sensation in medial side of the arm, nerve injured is?

a) Long thoracic nerve

b) Thoracodorsal nerve

c) Dorsal scapular nerve

d) Medial cutaneous nerve of arm

Correct Answer - D

Answer- D. Medial cutaneous nerve of arm

- The medial cutaneous nerve of the arm is the smallest and most medial branch of he brachial plexus, and arises from the medial cord.
- It pierces the deep fascia at the midpoint of the upper arm to supply the skin over the medial aspect of the distal third of the upper arm.

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31. Secondary ossification center for lower end of femur?

a) Present at birth

b) Appears at 6 months of age

c) Appears at 1 year of age

d) Appears at 5 years of age

Correct Answer - A

Secondary center of lower end of femur appears at 9^{th} month of intrauterine life (present at birth).

Ossification of femur

- The femur ossifies from one primary and four secondary centres. The primary centre for the shaft appears in the seventh week of intrauterine life. The secondary centres appear, one for the lower end at the end of the ninth month of intrauterine life, one for the head during the first six months of life, one for the greater trochanter during the fourth year, and one for the lesser trochanter during the twelfth year.
- There are three epiphyses at the upper end and one epiphysis at the lower end. The upper epiphyses; lesser trochanter, greater trochanter and head, in that order, fuse with the shaft at about eighteen years. The lower epiphysis fuses by the twentieth year.

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32. Which of the following prevents hyperextension of thigh

a) Ischiofemoral ligament

b) Iliofemoral ligament

c) Patellofemoral ligament

d) Puboischial ligament

Correct Answer - B
B. i.e. Iliofemoral ligament

- Hip extension is limited by the iliofemoral ligament, which passes over the front of the hip joint and connects the ilium (hip bone) to the femur (thigh bone).
- This ligament elongates when the pelvis is tilted backwards, restricting the distance the joint can be extended.
- The iliofemoral ligament also limits external (outward) rotation of the hip joint when flexed, and it restrains both internal (inward) and external rotation when the joint is extended

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33. Lower limit of superior mediastinum is at which level -

a) T_i

b) T1

c) T_8

d) T10

Correct Answer - B

Ans. is 'b' i.e., T1 [Ref. BDC &/e vol.I p. 245]

- Mediastinum is intrapleural space bounded on either side by mediastinal pleura, anteriorly by sternum and posteriorly by thoracic vertebral column.
- It is divided into superior and inferior mediastinum by a line passing through sternal angle and lower border ofTnvertebra.

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34. Azygous vein drains into:

a) Right subcostal vein

b) Superior vena cava

c) Braciocephalic

d) Right ascending lumbar vein

Correct Answer - B
The origin of the azygos vein is variable. It is often formed by the union of the right ascending lumbar vein and the right subcostal vein.
It ascends through the aortic opening in the diaphragm on the right side of the aorta to the level of the fifth thoracic vertebra.
Here it arches forward above the root of the right lung to empty into the posterior surface of the superior vena cava. The azygos vein has numerous tributaries, including the fifth to eleventh right posterior intercostal veins, the right superior intercostal vein, the hemiazygos and the accessory hemiazygos veins, and numerous esophageal, mediastinal and pericardial veins.

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35. Arch of aorta begins and ends at which level:

a) T2

b) T3

c) T4

d) T5

Correct Answer - C
The arch of the aorta (Transverse Aorta) begins at the level of the upper border of the second sternocostal articulation of the right side, and runs at first upward, backward, and to the left in front of the trachea; it is then directed backward on the left side of the trachea and finally passes downward on the left side of the body of the fourth thoracic vertebra, at the lower border of which it becomes continuous with the descending aorta.

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36. **Which among the following is NOT a branch of Arch of Aorta?**

a) Brachiocephalic

b) Right common carotid

c) Left common carotid

d) Left Subclavian

Correct Answer - B

The arch of the aorta begins at the level of the upper border of the second sternocostal articulation of the right side. The branches given off from the arch of the aorta are three in number: *the brachiocephalic artery (innominate), the left common carotid, and the left subclavian.*

Brachiocephalic Artery is the largest branch of the arch of the aorta. It divides into the right common carotid and right subclavian arteries.

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37. Which of the following represent the commonest variation in the arteries arising from the arch of aorta?

a) Absence of brachiocephalic trunk

b) Left vertebral artery arising from the arch

c) Presence of retroesophageal subclavian artery

d) Left common carotid artery arising from brachiocephalic trunk

Correct Answer - D

Most common anomaly of the aortic arch seen in 10-20% individuals is characterized by the origin of the left common carotid artery from the brachiocephalic (innominate) trunk.

Other common anomalies include: A four vessel arch with separate origins for the right common carotid and right subclavian arteries (2.5%), Origin of the left vertebral artery directly from a four vessel aortic arch typically between the ostia of the left common carotid and subclavian arteries (2.4- 5.8%).

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38. Intercostal nerve is a branch of ?

a) Brachial plexus

b) Dorsal rami of thoracic spinal nerves

c) Ventral rami of thoracic spinal nerves

d) Ventral rami of cervical spinal nerves

Correct Answer - C
Ans. is 'c' i.e., Ventral rami of thoracic spinal nerves
Ventral rami of upper 11^{th} thoracic spinal nerves are known as intercostal nerves and ventral ramus of T12 is known as subcostal nerve.
Upper six intercostal nerves supply thoracic wall whereas lower five intercostal nerves and subcostal nerve supply thoracic and anterior abdominal walls and hence known as *thoracoabdominal nerves.*
Upper two intercostal nerves also supply the upper limb.
Thus only 3^{rd} to 6^{th} are called typical intercostal nerves.

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39. Distance of cricopharynx from incisor teeth

a) 15 cm

b) 22·5 cm

c) 27.5 cm

d) 40 cm

Correct Answer - A

Ans. is'a'i.e., 15 cm [Ref- BDC Sn/e Vol.l p. 269]

- Cricopharynx is at the level of pharyngo-esophageal junction i.e. beginning of esophagus. Its distance is 15 cm (6 inches) from incisor.
- Cardiac end is lower end of esophagus which is at 40 cm from incisors.

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40.

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Anterior part of interventricular septum is supplied by -

a) Right coronary artery

b) Left coronary artery

c) Posterior descending coronary artery

d) None

Correct Answer - B
Anterior 2/3rd of septum is supplied by LCA and posterior 1/3rd is by RCA

KollegeApply

41. All veins open in sinus venarum except -

a) SVC

b) Coronary sinus

c) Anterior cardiac vein

d) Small cardiac vein

Correct Answer - D

Ans. is'd'i.e., Small cardiac vein [Ref: Gray's 38e/e p. 14791

- Small cardiac vein does not open into sinus venarum (Posterior smooth part of right atrium).

KollegeApply

42. True about atrioventricular groove are all except ?

a) Contains left anterior descending coronary artery

b) Also called coronary sulcus

c) Contains right coronary artery

d) Contains circumflex branch of left coronary artery

Correct Answer - A

Ans. is 'a' i.e., Contains left anterior descending coronary artery

Grooves (sulci) of heart

A) Atrioventricular groove

- Atria are separated by ventricles by atrioventricular Sulcus (atrioventricular groove, also called coronary sulcus).
- It is divided into anterior and posterior parts. The right half of anterior part is large and lodges right coronary artery. Left half of anterior part is small and lodges circumflex branch of left coronary artery.

B) Interventricular grooves

- Right and left ventricles are separated by interventricular grooves.
- Anterior interventricular groove is nearer to left margin of heart and contains anterior interventricular artery (also called left anterior descending artery).
- Posterior interventricular groove is situated on diaphragmatic (inferior) surface. It contains posterior interventricular artery (continuation of RCA).

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43. Which vein is found at the apex of the heart ?

a) Great cardiac vein

b) Coronary Sinus

c) Anterior cardiac vein

d) Middle cardiac vein

Correct Answer - A
Ans. is'a'i.e., Great cardiac vein
[Rel BDC 4n/e Vol. I p. 251-252; Keith Moore 4e/e p. 136-137; Snell's 9/e p. 1211
Great Cardiac Vein:

- The great cardiac vein (left coronary vein) begins at the apex of heart and ascends along the anterior longitudinal sulcus to the base of ventricle.

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44. Which of the following does not directly drain into right atrium ?

a) Great cardiac vein

b) Anterior cardiac vein

c) Thebasian vein

d) Venae cordis minimi

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Correct Answer - A

Ans. (A) Great cardiac vein

Great cardiac vein does not directly drain into right atrium. It drains into coronary sinus, which in turn drains into right atrium.

Veinous drainage of heart

Coronary sinus : Opens into right atrium and has following tributaries : (i) Great cardiac vein, (ii) Middle cardiac vein, (iii) Posterior vein of left ventricle, (iv) Small cardiac vein, (v) Oblique vein of left atrium and (vi) Sometimes right marginal vein.

Anterior cardiac vein : Opens into right atrium.

Venae cardis minimi (thebasian veins) : All these are extremely small veins in the walls of all the 4 chambers of the heart. They open directly into the respective chambers. They're most numerous in the right atrium.

Right marginal vein : More often opens into right atrium but sometimes into coronary sinus.

45. Tributary of coronary sinus ?

a) Anterior cardiac vein

b) Thebesion vein

c) Smallest cardiac vein

d) Great cardiac vein

Correct Answer - D

Ans. (D) Great cardiac vein

Coronary sinus

- It opens *in* the posterior wall of right atrium, in the posterior part *of coronary sulcus.*
- Itopens in the right atrium between IVC and tricuspid orifices.
- Coronary sinus is guarded by **Thebesian valve (**Thebesian valve (incomplete semilunar valve) guards the orifice of coronary sinus.)

Tributaries of coronary sinus are :

- *Great cardiac vein :-* Lies in the anterior interventricular groove. *Left marginal vein* drains into it.
- *Middle cardiac vein :-* Lies in the posterior interventricular groove.
- *Posterior vein of left ventricle.*
- *Small cardiac vein :-* It lies in the *posterior part of coronary sulcus with RCA. Right marginnal vein may sometimes open into small cardiac vein, more often, however, right marginal vein opens directly into right atrium.*
- *Oblique vein of left atrium (vein of marshall) :-* It is continuous above with ligament of IVC. These two structures are embryological remnants of left common cardinal vein (duct of cuvier).

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46. Which are segments of upper lobe of right lung ?

a) Anterior, posterior, media

b) Lateral, medial, superior

c) Apical, anterior, posterior

d) Basal, medial, lateral

Correct Answer - C
Ans. is 'c' i.e., Apical, anterior, posterior

KollegeApply

47. What is the uppermost structure in left lung hilum?

a) Pulmonary artery

b) Pulmonary vein

c) Bronchial artery

d) Left mainstem bronchus

Correct Answer - A
A i.e., Pulmonary artery
Arrangement of structures in the hilum is as follows -
l. Anterior to posterior (same on both side) :-(i) Superior pulmonary (ii) Pulmonary artery, (iii) Bronchus
2. Superior to inferior -vein,

a) Right :- (i) Eparterial bronchus (superior most)' (ii) Pulmonary artery, iii) Hlparterial bronchus, iv) Inferior pulmonary vein (inferior most).
b) Left :- (i) Puhnonary artery (superior most), (ii) Primary/Principal bronchus (iii) Inferior pulmonary vein (inferior most)

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48. Lymphatic drainage of ovary?

a) Deep inguinal

b) Superficial inguinal

c) Obturator

d) Paraaortic

Correct Answer - D
Ans. is 'd' i.e., Para-aortic
Lymphatics of the ovary drain to *para-aortic nodes* alongside the origin of the ovarian artery (L2).

KollegeApply

49. Which structure does not pass through superior thoracic aperture -

a) Right vagus

b) Right brachiocephalic artery

c) Thoracic duct

d) Right recurrent laryngeal nerve

Correct Answer - D

Ans- Ans. is 'd' i.e., Right recurrent laryngeal nerve [Ref- BDC 6h/e Vol.I p. 192]

Thoracic inlet (superior aperture)

- The narrow upper end of the thorax, which is continuous with the neck is called the inlet of the thorax'
- The structure passing through the inlet are : -I. Vkcera:- Trachea, esophagus, apex of lung with pleura, remains of the thymus, thoracic duct.

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50. Ligamentum arteriosum is derived from:

a) Ductus arteriosus

b) Ductus venosus

c) Ductus utriculosaccularis

d) Ductus reunions

Correct Answer - A

Ans. A: Ductus arteriosus

The ductus arteriosus represents the distal portion of the sixth left aortic arch and connects the left pulmonary artery to the beginning of the descending aorta.

- During fetal life, blood passes through it from the pulmonary artery to the aorta, thus bypassing the lungs.
- After birth, it normally constricts, later closes, and becomes the ligamentum arteriosum.
- A persistent patent ductus arteriosus results in high-pressure aortic blood passing into the pulmonary artery, which raises the pressure in the pulmonary circulation.
- A patent ductus arteriosus is life threatening and should be ligated and divided surgically.

KollegeApply

51. Base of the heart is formed by ?

a) Right atrium

b) Right ventricle

c) Left atrium

d) Left ventricle

Correct Answer - C

Ans. is `c > a' i.e., Left atrium > Right atrium

- Base (posterior surface) is formed mainly by left atrium and partly by right atrium. It is separated from T_5 to T8 vertebrae by pericardium
- The **apex** (the most inferior, anterior, and lateral part as the heart lies in situ) is located on the midclavicular line, in the fifth intercostal space. It is formed by the left ventricle.
- Anterior (sternocostal) surface is formed mostly by right ventricle (major) and right auricle and partly by left ventricle and left auricle.

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52. Right border of heart is formed by ?

a) Right ventricle

b) Right atrium

c) SVC

d) IVC

Correct Answer - B

Ans. (B) Right atrium

External features of heart

The heart has following borders and surfaces :-

A) Borders

- Right border :- Formed by right atrium.
- Left border (obtuse margin):- Formed mainly by left ventricle and partly by left auricle (in its upper most part).
- Inferior border (acute margin):- Formed mainly by right ventricle and partly by left ventricle near apex.
- Upper border :- Mainly by left atrium and partly by right atrium where SVC enters.
- Apex :- Formed by left ventricle.

B) Surfaces

- Anterior (sternocostal) surface :- Formed mostly by right ventricle (major) and right auricle and partly by left ventricle and left auricle.
- Inferior (diaphragmatic) surface :- It is formed by left ventricle (left 2/3) and right ventricle (right 1/3). It is traversed by posterior interventricular groove (PIV) containing PIV branch of RCA.

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53. True about anatomy of right ventricle:

a) TV & PV Share fibrous continuity

b) More prominent trabeculation

c) Crista supraventricularis Separate Tricuspid valve & Pulmonary valve and Apex trabeculated both

d) All

Correct Answer - D
All Correct
Right ventricle is situated anteriorlyQ. As the anterior (sternocostal) surface of heart consists mainly of right ventricleQ with right atrium on its right and a narrow strip of left ventricle left border. The tip of left auricular appendage peeps over the to of this border.

KollegeApply

54. **Sensory supply to tongue is by all, EXCEPT?**

a) Lingual nerve

b) Vagus nerve

c) Glossopharyngeal nerve

d) None of the above

Correct Answer - D

The sensory innervation of the tongue reflects its embryological development.
The nerve of general sensation to the presulcal part is the lingual nerve, which also carries taste sensation derived from the chorda tympani branch of the facial nerve.
The nerve supplying both general and taste sensation to the postsulcal part is the glossopharyngeal nerve.
An additional area in the region of the valleculae is supplied by the internal laryngeal branch of the vagus nerve.

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55.

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Internal anal sphincter is a apart of:

a) Puborectalis muscle

b) Deep perineal muscles

c) Internal longitudinal fibers

d) Internal circular fibers

Correct Answer - D
D. i.e. Internal circular fibres
Involuantry internal anal sphincter is formed by *thickening of circular muscle layer (i.e. circular layer of muscularis externa, a smooth muscle)* of upper end (2/3 or 3/4) of anal canal. This sphincter *remains in the state of tonic contraction most of the time to maintain resting tone or pressures* (-90 cm H_20) & to prevent leakage of fluid or flatus. Its contraction (tonus) is maintained by *sympathetic* fibers from *superior rectal (periarterial) and hypogastric plexuses;* and inhibited (i.e. sphincter relaxed) *by parasympathetic pelvic splanchnic nerves.*

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56.

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Shortest part of male urethra is :

a) Prostatic

b) Membranous

c) Bulbar

d) Penile

Correct Answer - B
B i.e. Membranous
- Membranous urethra is *shortest & Penile urethra is longest* part.
Prostatic urethra is *widest & most dilatable portion & Urethral orifice f/19 membranous urethra is narrowest & least dilatable part*

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57. Posterior relation of neck of pancreas ?

a) IVC

b) Origin of postal vein

c) Aorta

d) Common bile duct

Correct Answer - B
Ans. is 'b' i.e., Origin of portal vein

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58. The right suprarenal vein drains into the

a) Inferior vena cava

b) Right renal vein

c) Right Gonadal vein

d) Left Renal vein

Correct Answer - A

A i.e. Inferior vena cava

Left testicular, ovarian or suprarenal vein usually drains into *left renal vein,* before entering the IVC

Organ	Vein	Drain into
Rt. Suprarenal gland	Rt. Suprarenal vein	*IVC*
Lt. Suprarenal gland	Lt. Suprarenal vein	*Left Renal Vein*

- Same is true for gonads (testis /ovary) i.e.

Lt. Gonad (testis or ovary)	Lt. Gonadal (testicular or ovarian) vein	*Left renal vein*
Rt. Gonad (testis or ovary)	Rt. Gonadal (testicular or ovarian) vein	*IVC*

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59. Suprarenal gland gets its blood supply from all of the following arteries except:

a) Aorta

b) Renal artery

c) Inferior phrenic artery

d) Superior mesentric artery

Correct Answer - D
D. i.e. Superior Mesenteric artery
Right suprarenal vein drain into *IVC ;* and left suprarenal vein drain into left *Renal vein* Suprarenal gland is supplied by suprarenal, renal, inferior phrenic artery and aorta

KolleegeApply

60. Inferior pancreaticoduodenal artery is a branch of which of the following artery?

a) Splenic artery

b) Left gastric artery

c) Gastroduodenal artery

d) Superior mesenteric artery

Correct Answer - D

Inferior pancreaticoduodenal artery is a branch of superior mesenteric artery. It supplies the pancreas and adjoining part of the duodenum. Its anterior and posterior branches anastomose with the branches of superior pancreaticoduodenal artery. This anastomosis is the only communication between the arteries of foregut and midgut.

Branches of superior mesenteric artery are:

- Inferior pancreaticoduodenal artery
- Jejunal and ileal branches
- Ileocolic artery
- Right colic artery
- Middle colic artery

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61. Superior pancreaticoduodenal artery is a branch of?

a) Hepatic artery

b) Splenic artery

c) Gastroduodenal artery

d) Inferior mesenteric artery

Correct Answer - C
Ans. is 'c' i.e., Gastroduodenal artery
Gastroduodenal artery gives following branches :-
1. Right gastroepiploic artery
2. Superior pancreaticoduodenal artery

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62. **All of the following are branches of splenic artery, except?**

a) Hilar branches

b) Short Gastric Artery

c) Arteria Pancreatica Magna

d) Right Gastroepiploic Artery

Correct Answer - D

Right Gastroepiploic artery is a branch of superior mesentric artery, a branch of hepatic artery. The left Gastroepiploic artery is a branch of splenic artery which anastomoses with the right Gastroepiploic artery.

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63. Common hepatic artery is a branch of -

a) Splenic artery

b) Superior mesenteric artery

c) Inferior mesenteric artery

d) Coeliac trunk

Correct Answer - D

Ans. is'd'i.e., Coeliac trunk [Ref BDC 6h/eVol.2 p. 2761

- Common hepatic artery is a branch of coeliac trunk.

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64. Esophageal varices occur in which portion of esophagus?

a) Upper

b) Middle

c) Lower

d) All sites

Correct Answer - C

Ans. is 'c' i.e., Lower [Ref: AK Dutta P. 275, 2761

- Esophageal varices occurs at lower end ofesophagus due to porto-caval anastomosis.

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65. External oblique forms all except?

a) Lacunar ligament

b) Pectineal ligament

c) Conjoint tendon

d) Inguinal ligament

Correct Answer - C

- Inguinal ligament (Poupart's ligament) is the folded lower border of external oblique aponeurosis
- Lacunar ligament (Gimbernats ligament) is the crescent shaped expansion from the medial end of inguinal ligament attached to pectineal line of pubis.
- Pectineal ligament (Cooper's ligament) is strong fibrous band extending laterally from the lacunar ligament along pectineal line of pubis. Similar to lacunar ligament, it is made of external oblique aponeurosis.
- Reflected part of inguinal ligament extends from the lateral crus of superficial inguinal ring formed by inguinal ligament upwards to linea alba. It forms the posterior wall of inguinal canal.
- Conjoint tendon (falx inguinalis) is formed by the aponeuroses of internal oblique and transversus abdominis muscle and is attached to pubic crest.

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66. Inferior epigastric artery forms the boundry of ?

a) Femoral triangle

b) Hesselbach's triangle

c) Adductor canal

d) Popliteal triangle

Correct Answer - B
Ans. is 'b' i.e., Hesselbach's triangle
The inguinal triangle (Hesselbach's triangle) is a region in the anterior abdominal wall. It is alternatively known as the medial inguinal fossa.
It was first described by Frank Hesselbach, a German surgeon and anatomist, in 1806.

The inguinal triangle is located within the inferomedial aspect of the abdominal wall. It has the following boundaries:
Medial – lateral border of the rectus abdominis muscle.
Lateral – inferior epigastric vessels.
Inferior – inguinal ligament.

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67. **The boundaries of the interconnection between greater sac and lesser sac of peritoneum known as 'Foramen of Winslow' are all, EXCEPT:**

a) Caudate lobe of liver

b) Inferior vena cava

c) Free border of lesser omentum

d) 4th part of Duodenum

Correct Answer - D

Interconnection between greater sac and lesser sac of peritoneum is known as Foramen of Winslow. It has the following boundaries:

Superior boundary: Caudate lobe of liver

Anterior boundary: Free edge of lesser omentum containing common bile duct, hepatic artery andportal vein.

Inferior boundary: First part of duodenum

Posterior boundary: Inferior vena cava and abdominal aorta

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68. Anorectal angle is formed due to action of -

a) Internal anal sphincter

b) Circular muscle layer of smooth muscles

c) Longitudinal muscle layer of smooth muscle

d) Puborectalis

Correct Answer - D

Ans. is'd' i.e., Puborectalis

- The ano-rectal angle (ARA) is the angle between longitudinal axis ofrectum (which is represented by posterior rectal line) and longitudinal axis ofanal canal.
- The normal average value is 95-96" (physiological range 65-100').
- ARA is an indirect indicator of the puborectalis muscle activity. During muscle contraction, ARA becomes more acute, while during relaxing phase it becomes obtuse.

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69. Prostate analogue in female is -

a) Skene gland

b) Bulbourethral gland

c) Great vestibular gland

d) Bartholin's gland

Correct Answer - A

Ans. is'a'i.e., Skene gland lRef: Clinical anatomy p.421]

- Prostate anolog in femal → > Skene glands (Periurethral glands).
- Uterus and vagina analog in male → > Prostatic utricle.

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70. **The uterine artery is a branch of which of the following?**

a) Left common iliac artery

b) Internal iliac artery

c) Internal pudendal artery

d) Ovarian artery

Correct Answer - B

Uterine arteries arise from **internal iliac artery or hypogastric artery.**
It runs downwards and forwards along the lateral pelvic wall until the base of the broad ligament.

Note: During pregnancy the uterine arteries hypertrophy and their course is straightened.

Ref: Comp Textbook of Obstetrics and Gynecology, Sadhana Gupta, 2011, Page 18

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71.

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All are true about 1st part of duodenum, except ?

a) 5 cm long

b) Is superior part

c) Develops from foregut

d) Supplied by superior mesenteric artery

Correct Answer - D
Ans. is 'd' i.e., Supplied by superior mesenteric artery
Duodenum

- Duodenum is **'C'** *shaped,* shortest, widest and most fixed part of small intestine. It is 25 cm long. It is devoid of mesentery. *Most of the duodenum is retroperitoneal and fixed,* except at its two ends where it is suspended by folds of peritoneum, and is therefore mobile. Duodenum lies opposite Ll, L2 and L3 vertebrae.
- Duodenum is C-shaped curve which encloses the head of pancreas and is subdivided into four parts :
  1. First part (Superior part) : It is *5 cm (2 inches)* long. It begins at the pylorus and meet the second part at superior duodenal flexure. This part appears as duodenal cap on barium studies.
  2. Second part (Descending part) : It is about 7·5 cm (3 inches) long. It is vertical part which begins at superior duodenal flexure and meet the third part at inferior duodenal flexure. The interior of second part of duodenum shows following features :
  i) Major duodenal papilla : It is present 8-10 cm distal to the pylorus. The hepatopancreatic ampulla or ampulla of Vater (joint part of bile duct and pancreatic duct) opens here.
  ii) Minor duodenal papilla : It is present 6-8 cm distal to the pylorus. **Accessory pancreatic duct opens here.**

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3. Third part (Horizonal part) : It is 10 cm (4 inches) long. It begins at inferior duodenal flexure and passes towards the left in front of IVC behind superior mesenteric vessels and root of mesentery to meet 4^{th} part of duodenum.

- Fourth part : It is 2-5 cm (1 inches) long and runs upward immediately to the left of aorta. It ends at duodenojejunal flexure by joining the jejunum.

Arterial supply

- The part of duodenum before the opening of bile duct (major duodenal papilla) develops from foregut and therefore is supplied *by coeliac trunk* through superior pancreaticoduodenal artery, a branch of gastroduodenal artery, which in trun is a branch of common hepatic artery. Part of duodenum distal to opening of bile duct is developed from midgut and therefore is supplied by *superior mesenteric artery* through inferior pancreaticoduodenal artery. First part of duodenum receives additional supply from *right gastric artery, supraduodenal artery (a* branch of common hapatic artery), retroduodenal branch of gastrodudenal artery and right gastropiploic artery.

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72. Ventral pancreatic duct give rise to ?

a) Body

b) Tail

c) Neck

d) Uncinate process

Correct Answer - D

Ans. is 'd' i.e., Uncinate process

Development of pancreas

- Pancreas is developed from the two pancreatic buds.
1. Dorsal pancreatic bud :- It is larger and most of the pancreas is derived from it i.e. most of the head, and whole neck, body & tail.
2. Ventral pancreatic bud :- It is smaller and forms lower part of the head of pancreas including uncinate process.
- During 7th week of development, the ventral and dorsal pancreatic buds fuse to form a single pancreatic mass.
- After the fusion of ventral and dorsal pancreatic buds, their ducts develop cross communications. Final duct system is formed as below ?

1. Main pancreatic duct (Duct of wirsung) is formed by the duct of ventral bud, distal part of duct of dorsal bud and an oblique communication between the two. The main pancreatic duct join the bile duct to form hepatopancreatic ampulla that enters th 2nd part of duodenum at major duodenal papilla.
2. Accessory pancreatic duct is formed by the proximal part of the duct of dorsal bud. It opens into 2^{nd} part of duodenum at minor duodenal papilla, 2 cm proximal (cranial) to major duodenal papilla.

Anomalies of pancreatic development may be:

1. Annular pancreas :- Two components of the ventral bud fail to fuse

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and grow in oppsite direction arround the duodenum and meet the dorsal pancreatic duct.

2. Pancreatic divisum (divided pancreas) :- Ventral and dorsal buds fail to fuse with each other. It is the most common congenital anomaly of pancreas.
3. Inversion of pancreatic duct :- The main pancreatic duct is formed by the duct of dorsal bud, i.e. accessory duct is larger than the main duct and the main drainage of pancreas is through the minor duodenal papilla.
4. Accessory pancreatic tissue :- May be found in ?

- Wall of stomach, duodenum, jejunum or ileum.
- Meckel's diverticulum.

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73. Tail of pancrease develops from -

a) Hepatic diverticulum

b) Dorsal pancreatic duct

c) Ventral pancreatic duct

d) All of the above

Correct Answer - B

Ans. is'b'i.e., Dorsal pancreatic duct [Ref I.B. Singh Vh/e p. 28]

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74. Haustrations are present in -

a) Duodenum

b) Ileum

c) Jejunum

d) Colon

Correct Answer - D

Ans. is 'd'i.e., Colon [Rel BDC #/e Vol.2 p. 2661

1. Characteristics features of large intestine (colon) are:-i) 3longitudinal bands, formed by longitudinal muscle coat, called Taeniae coli.
2. Sacculation or haustration
3. Fat filled peritoneal pouches called appendices epiploicae. These are not found in appendix, caecum and rectum.
4. Greater part is fixed except for appendix, transverse colon and sigmoid colon.
5. Pyere's patches (present in small intestine) are not present.

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75. The muscles attached to perineal body are A/E

a) Ischiocavernosum

b) Bulbospongiosm

c) Superficial transverse perinea

d) Deep transverse perinea

Correct Answer - A
A. i.e. Ischiocavernosus
Ten muscles of the perineum converge and interlace in the perineal body -
a) Two unpaired : (i) External anal sphincter, (ii) Fibres of longitudinal muscle coat of anal canal.
b) Four paired:- (i) Bulbospongiosus, (ii) Superficial transverse perenei, (iii) Deep transversus perenei, (iv) levator ani,

In females, sphincter urethrovaginalis is also attached here.

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76. Trigone of urinary bladder develops from:

a) Mesoderm

b) Ectoderm

c) Endoderm of urachus

d) None of the above

Correct Answer - A

- With differential growth of the dorsal bladder wall, the ureters come to open through the lateral angles of the bladder, and the mesonephric ducts open close together in what will be the urethra.
- That part of the dorsal bladder wall marked off by the openings of these four ducts forms the trigone of the bladder.
- Thus, lining of the bladder over the trigone is mesodermal in origin;
- The smooth muscle of the bladder wall is derived from the splanchnopleuric mesoderm.
- The apex of the bladder is continuous with the allantois, which now becomes obliterated and forms a fibrous core, the urachus.
- The urachus persists throughout life as a ligament that runs from the apex of the bladder to the umbilicus and is called the median umbilical ligament
  o Linining epithelium of bladder mucosa is transitional epithelium. When empty mucosa is thrown into rugae except in trigone, where mucosa is smooth and firmly adherent.
  o just beneath the mucosa of trigone there is layer of smooth muscle, Trtgonal muscle of Bell which replaces the submucous coat in trigone area

77.

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Anterior relation to upper part of rectum in male is-

a) Rectovesical pouch

b) Sacrum

c) Seminal vesicle

d) Ductus deference

Correct Answer - A

Answer-is'a' i.e., Rectovesical pouch lRef; BDC Ple Vol.2 p. 408}

Anteriorly In males

- The upper two-thirds of the rectum is related to the rectovesical pouch with coils of intestine and sigmoid colon.
- The lower one-third of the rectum is related to the base of the urinary bladder, the terminal parts of the ureters, the seminal vesicles, the different ducts and the prostate.

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78. FALSE for seminal vesicles:
***September* 2012**

a) Contains large amount of fructose

b) Stores sperms

c) Situated on either side near prostate

d) Secretion of seminal vesicle gives mucoid consistency to semen

Correct Answer - B
Ans. B i.e. Stores sperms
Sperms are stored in epididymis

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79. Sensory nerve supply of gall bladder is through -

a) Vagus nerve

b) Trigeminal nerve

c) Parasympathetic nerve

d) Facial nerve

Correct Answer - A

Ans. is 'a' i.e., Vagus nerve [Rel BDC &/e Vol.3 p. 2901

- Pain sensory fibers to gall bladder are through Vagus, synpathetic and phrmic nerves. Thus gall bladder pain may be referred to-a) Through vagus to the stomach (epigastrium).
- Through the sympathetic nerves to the inferior angle of the right scapula. Lateral horn of thoracic 7 segment of spinal cord gives sympathetic fibres to coeliac ganglion through greater splanchnic nerve. T7 segment receives pain fibres from skin over inferior angle of scapula. So visceral pain is referred to somatic area.
- Through the phrenic nerve to the right shoulder (C4 gives fibres to phrenic nerve and supraclavicular nerves).

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80. **Uvula vesicae seen in bladder is formed from the following structure ?**

a) Median lobe of prostate

b) Lateral lobe of prostate

c) Anterior lobe of prostate

d) Posterior lobe of prostate

Correct Answer - A

Uvula vesicae is a small elevation situated immediately behind the urethral orifice, which is produced by the underlying median lobe of the prostate. It enlarges with age due to enlargement of the underlying median lobe of the prostate and may inhibit complete bladder emptying.

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81. Ligament which prevents spleen to fall in left iliac fossa -

a) Leinorenal ligament

b) Phrenicolic ligament

c) Upper pole of right kidney

d) Sigmoid colon

Correct Answer - B

Answer- 'b'i.e., Phrenicolic ligament [Ref: Gruy's 4Uh/e p. 1107, 1108, 12141

- Spleen lies in left side of abdomen (left hypochondrium).
- But enlargment of spleen (splenomegaly) does not cause extension into left iliac fossa.
- A pathologically enlarged spleen extends downward and medially towards right iliac fossa because prenicocolic ligament and left colic flexure prevent a direct downward enlargement.

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82. Floor of Petit triangle is formed by?

a) Sacrospinalis

b) Internal oblique

c) Rectus abdominis

d) Fascia Transversalis

Correct Answer - B

Ans. is 'b' i.e., Internal oblique [Ref Text book of surgical anatomy p. 148]

Boundaries of Petit triangle (inferior lumbar triangle) are?

- Base - Iliac crest
- Anterior boundary (abdominal boundary) → Posterior border of external oblique muscle.
- Posterior boundary (lumbar boundary) - Anterior border of latissimus dorsi.
- Floor is formed by internal oblique muscle.

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83. In which of the following vessels transverse mesocolon seen ?

a) Right colic artery

b) Left colic artery

c) Middle colic artery

d) Iliocolic artery

Correct Answer - C
Ans. is 'c' i.e., Middle colic artery

Mesentery of gut	Vessels contained by mesentery
Mesentery proper (Mesentery of small intestine)	Jejunal and Ileal branches of superior mesenteric vessels
Transverse mesocolon	*Middle colic vessel*
Mesoappendix	Appendicular vessels
Sigmoid mesocolon	Sigmoid vessels

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84. Ovarian artery is a branch of:

a) Renal artery

b) Internal iliac artery

c) Abdominal part of the aorta

d) External iliac artery

Correct Answer - C

- The ovarian artery arises from the abdominal part of the aorta at the level of the first lumbar vertebra. The artery is long and slender and passes downward and laterally behind the peritoneum. It crosses the external iliac artery at the pelvic inlet and enters the suspensory ligament of the ovary.
- It then passes into the broad ligament and enters the ovary by way of the mesovarium.

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85. Labour pain in uterus is carried by

a) Parasympathetic nerves

b) Sympathetic nerves

c) Pudendal nerve

d) Splanchnic nerve

Correct Answer - B

Ans. is 'b'i.e., Sympathetic nerves [Ref: Clinical obstetics 3d/e p. 9121

Nerve supply of uterus:

- The uterus is supplied by both systems, sympathetic and parasyrnpathetic.
- Sympathetic system fibers arisefom Tn, Lt segments and carry painful sensations from the body of the uterus.
- Parasyrnpathetic fibers arise from S2, S3, S4 (in pelvic splanchnic nerve) and carry painful sensations from cenix.

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86. Nerve suply of cremastric muscle ?

a) Pudendal nerve

b) Femoral branch of genitofemoral

c) Genital branch of genitofemoral nerve

d) Ilioinguinal nerve

Correct Answer - C
Genital branch of genitofemoral nerve
Cremastric muscle is a muscle of scrotum. It is supplied by genital branch of genitofemoral nerve.

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87. True about the anatomy of great saphenous vein:

a) Starts as a continuation of medial marginal vein

b) Ends of femoral vein 2.5 cm below the inguinal ligament

c) There are 2 - 5 valves below the knee.

d) Ascends 2.5 - 3 cm behind tibial malleolus

Correct Answer - A
A i.e. Starts as continuation- of medial marginal vein

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88. Posterior relation of right kidney are all except -

a) Diaphragm

b) Subcostal nerve

c) 11^{th} rib

d) Ilioinguinal nerve

Correct Answer - C

Ans. is 'c' i.e., 11th rib

Posterior surface of both kidney is related to diaphragm, medial and lateral arcuate ligament, psoas major, quadratus lumborum, transversus abdominis, subcostal vessels, subcostal nerve, iliohypogastric nerve, and ilioinguinal nerve.

In addition, the right kidney is related to 12th rib and the left kidney is related to 11th and 12th ribs.

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89. Not True about blood supply of kidney -

a) Renal vein drains into IVC

b) Renal artery is a branch of common iliac artery

c) Right renal artery passes behind IVC

d) Branches of renal artery are end arteries

Correct Answer - B

Ans. is 'b'i.e., Renal artery is a branch of common iliac artery [Re/ BDC &/eVol.2 p. 313-3171

- Each kidney is supplied by renal artery (branch of abdominal aorta) and is drained by renal vein to IVC.
- Renal artery:- Right renal artery is longer and passes behind IVC.
- Branches of the renal artery are end arteries.

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90. **All pass through deep inguinal ring, EXCEPT?**

a) Spermatic cord

b) Internal spermatic fascia

c) Round ligament

d) Ilioinguinal nerve

Correct Answer - D

It transmits the spermatic cord in the male and the round ligament of the uterus in the female into the inguinal canal. Internal spermatic fascia is present in the spermatic cord. Ilio inguinal nerve passes only through the superficial inguinal canal and not through deep.

Inguinal canal: contains the spermatic cord and the ilioinguinal nerve in the male, and the round ligament of the uterus and the ilioinguinal nerve in the female. It is an oblique canal of about 4 cm. long, slanting downward and medialward, and placed parallel with and a little above the inguinal ligament; it extends from the deep inguinal ring laterally to the superficial inguinal ring medially.

Deep inguinal ring: a hole in transversalis fascia lying 3cm superior to the midpoint of the inguinal ligament.

Contents:

- Spermatic cord in males
- Round ligament in females

Superficial inguinal ring: V-shaped defect in the lower medial fibres of the external oblique just superior and lateral to the pubic tubercle. Ilioinguinal nerve passes through superficial inguinal ring.

Contents of inguinal canal

- Spermatic cord in males
- Round ligament in females
- Ilioinguinal nerve in both males and females

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91. Superficial inguinal ring is a defect in the:

a) Internal oblique aponeurosis

b) External oblique aponeurosis

c) Transverse abdominis aponeurosis

d) Internal oblique muscle

Correct Answer - B
The inguinal canal is an oblique passage through the lower part of the anterior abdominal wall.
The canal is about 1.5 in. (4 cm) long in the adult and extends from the deep inguinal ring, a hole in the fascia transversalis, downward and mediall^{y} to the superficial inguinal ring, a hole in the aponeurosis of the external oblique muscle. In the males, it allows structures to pass to and from the testis to the abdomen.
In females it allows the round ligament of the uterus to pass from the uterus to the labium majus.

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92. All are components of Spermatic cord except :

a) Poupart's ligament

b) Genito-femoral nerve

c) Vas deferens

d) Pampiniform plexus

Correct Answer - A
A i.e. Poupart's ligament
Poupart's ligament is also called as inguinal ligament. It forms the base of inguinal canal.
Constituents of spermatic cord are:

- Ductus deferens
- Testicular and cremasteric arteries, and the artery of the ductus deferens
- Pampiniform plexus of veins
- Lymph vessels from the testis
- Genital branch of the genitofemoral nerve and the sympathetic nerve plexus around the artery to the ductus deferens and visceral afferent nerve fibres.
- Remains of the processus vaginalis.

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93. Superficial perineal space contains ?

a) Sphincter urethrae muscle

b) Ischiocavernosus muscle

c) Deep transverse perinei muscle

d) Bulbourethral gland

Correct Answer - B
Ans. is 'b' i.e., Ischiocavernosus muscle

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94.

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3rd part of duodenum is not related -

a) Superior mesenteric vessels

b) Right ureter

c) Head of pancreas

d) Quadrate lobe of liver

Correct Answer - D

Ans. is 'd' i.e.,Quadrate lobe of liver [Ref BDC 6h/e VoL2 p.2sg_262]

Anterior:-

- Superior mesenteric vessel
- Root of mesentery

Posterior

- Right ureter
- Right psoas major
- Right testicular or ovarian vessels
- IVC
- Abdominal aorta with origin of inferior mesenteric artery

Superior

- Head of pancreas with uncinate process.

Inferior

- Coils of jejunum

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95. Gastrosplenic ligament contains ?

a) Splenic vessels

b) Tail of pancreas

c) Short gastric artery

d) Portal vein

Correct Answer - C
Short gastric artery

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96. Which of the following is a derivative of ventral mesogastrium ?

a) Greater omentum

b) Gastrosplenic ligament

c) Linorenal ligament

d) Lesser omentum

Correct Answer - D
Ans. is 'd' i.e., Lesser omentum

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97. Correct sequence of uterine blood flow -

a) Uterine A - Arcuate A Radial A Spiral A

b) Uterine A Radial A - Arcuate A Spiral A

c) Uterine A Spiral A Radial A Arcuate A

d) Uterine A Arcuate A → Spiral A - Radial A

Correct Answer - A

Answer- is'a 'i.e., Uterine A - Arcuate A Radial A Spiral A [Ref: Textbook of OBG p. 3061

- just Prior to contact with uterus, the uterine artery gives descending uterine artery Oaginal artery) which supply the isthmus, cervix and upper vagina.
- After joining the uterus, the uterine artery ascends along the lateral margin of uterus as ascending uterine artery.
- Asending uterine artery gives several branches between middle and outer thirds of myometrium. These are called arcuate arteries because of their semicircular course.
- Arcuate arteries give radial arteries which in turn terminate as spiral arteriole.

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98. Nerve supply of stapedius is:

a) 2nd nerve

b) 3rd nerve

c) 5th nerve

d) 7th nerve

Correct Answer - D
D. i.e. 7^{th} nerve

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99. Stapedius pulls stapes in which direction -

a) Anterior

b) Superior

c) Inferior

d) Posterior

Correct Answer - D

Ans. is 'd' i.e., Posterior [Ref: Textbook of auditory processing p. 361

- Contraction ofthe stapedius muscle pulls the stapes head in posterior direction.
- Contraction of tensor tympani pulls the malleus and tympanic membrane inward with a lateral to medial motion.
- Contraction of these muscles stiffen the tympanic membrane and ossicular chain thereby reducing the mobility of the middle ear and decreasing the sensitIVIty of ear to air-conducted sound.

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100. Sternocleidomastoid muscle is examined by

a) Turning the head towards the same side

b) Turning the head towards opposite side

c) Shrugging of shoulder

d) Overhead abduction

Correct Answer - B

Ans. is 'b' i.e., Turning the head towards opposite side [Rel BDC 6h/e Vol.3 p. 89]

Contraction of one side of sternocleidomastoid causes :

1. Tilting (bending) of head on same side
2. Turning (rotation) of face and head on opposite side, which can be appreciated as turning of chin to opposite side

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101. Occulomotor nerve supplies all extraocular muscles except ?

a) Superior rectus

b) Inferior rectus

c) Lateral rectus

d) Medial rectus

Correct Answer - C
Ans. is 'c' i.e., Lateral rectus

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102. Major central nucleus of sympathetic system is

a) Nucleus ambiguus

b) Nucleus tractus solitarius

c) Edinger-Westphal nucleus

d) Hypothalamus

Correct Answer - D

Ans. is'd'i.e., Hypothalamus

- The highest seat of regulation of autonomic nervous system (both sympathetic & parasympathetic) is hypothalamus.

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103. What is attached to the superior nuchal line?

a) Trapezius

b) Scalenus anticus

c) Coracobrachialis

d) Biceps Brachii

Correct Answer - A
Ans. is'a'i.e., Trapezius
[Ref: Snell's th/e p. 3a2l
Muscles attached to superior nuchal line

- Occipitalis muscle,
- The splenius capitis muscle
- Trapezius muscle,
- Sternocleidomastoid muscle

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104. Dangerous area of scalp is -

a) Superficial facia

b) Aponeurosis

c) Subaponeurotic tissue

d) Pericranium

Correct Answer - C

Ans. is'c'i.e., Subaponeurotic tissue

- Loose subaponeurotic areolar tissue (4s layer) is called dangerous area of scalp because it contains emissary veins throughwhich infection in subaponeurotic space may spread readily to intracranial venous sinuses

KollegeApply

105. Which nerve is preserved in dissecting the superficial and deep lobes of parotid gland -

a) Glossopharyngeal

b) Hypoglossal

c) Lingual

d) Facial

Correct Answer - D

Ans. is 'd' i.e., Facial [Ref- Anatomy recall by jared Antevil]

- The facial nerve separates parotid gland into superficial and deep lobes.
- Mandibular branch of facial nerve is most vulnerable to injury during parotid surgery

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106. Which intrinsic ocular muscle is supplied by parasympathetic innervation -

a) Superior rectus

b) Superior oblique

c) Constrictor pupillae

d) Dilator pupillae

Correct Answer - C

Ans. is'c'i.e., Constrictor pupillae [Ref: Gray's 39h/e p. 7101

Intraocular muscles (intraocular muscles)

- → Intraocular muscles are -

A) Muscles of iris

- → There are two types of muscles in iris that control the size of pupil:

1. The iris sphinctor or constrictor pupillae (circular muscles):- These muscles are innervated by the postganglionic parasympathetic fibres from Edinger westphal nucleus via 3'd nerve and ciliary ganglion. These muscles cause constriction of pupil (Miosis).
2. The iris dilator or dilator pupillae (railial muscles) → These muscles are innervated by sympathetic system via postganglionic sympathetic fibres for the dilator pupillae from neurons in the superior cervical ganglion. These muscles cause pupillary dilatation (mydriasis).

B) Ciliary muscles;--> these are innervated by the postganglionic parasympathetic fibers from EWN via 3rd nerve and ciliary ganglion. These muscles help in accommodation.

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107. Lips does not drain into which group of lymph nodes?

a) Submandibular nodes

b) Sublingual nodes

c) Preauricular parotid

d) None of the above

Correct Answer - C

Ans. is 'c' i.e., Preauricular parotid [Ref: BDC fi/e Vol. 3 p. 72-751

- → The face possesses three areas from which lymphatic drainage is as follows :-

1. Upper area, comparison greater part of forehead, lateral Yz of eyelids, conjunctiva, lateral part of cheek and parotid area, drains into preauricular (superficial) parotid nodes.
2. Middle area, comprising central part of forehead, external nose, upper lip, lateral part of lower lip, medial halves of eyelids, medial part of cheek, and greater part of lower jaw, drains into submandibular nodes.
3. Lower area, including central part of lower lip and the chin, drains into submental nodes.

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108. **Postganglionic fibres to parotid gland is supplied by?**

a) Glossopharyngeal nerve

b) Auriculotemporal nerve

c) Both of the above

d) None of the above

Correct Answer - B

Preganglionic nerves travel in the lesser petrosal branch of the glossopharyngeal nerve and synapse in the otic ganglion. Postganglionic fibers reach the gland via the auriculotemporal nerve.

Nerve supply of parotid gland

Innervation of the salivary gland is as follows:-

Parasympathetic (secretomotor) :

→ They reach the gland through auriculotemporal nerve as the following route:-

Preganglionic fibers - Originate in the inferior salivary nucleus; pass through glossopharyngeal nerve; its tympanic branch; tympanic plexus, and lesser petrosal nerve.

Relay ganglion:- Otic ganglion.

Postganglionic fibers:- Pass through the auriculotemporal nerve to reach the gland.

Sympathetic (Vasomotor) :

→ Derived from the plexus around the middle meningeal artery.

Sensory: derived from the auriculotemporal nerve, except for parotid fascia and overlying skin which are innervated by the great auricular nerve(c2, c3)

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109. Secretomotor fibers to parotid glands are through -

a) Tympanic plexus

b) Geniculate ganglion

c) Greater petrosal nerve

d) None

Correct Answer - A
Ans. is'A i.e., Tympanic plexus (Ref: BDC @/e Vol. 3 p. 111).

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110. Features of facial nerve palsy are all except -

a) Loss of salivation

b) Loss of lacrimation

c) Facial muscle paralysis

d) Loss of taste sensation from posterior tongue

Correct Answer - D

Ans. is 'd' i.e., Loss of taste sensation from posterior tongue [Ref: Dhingra 5'h/e p. 105, 106; Gray's 39h/e p. 12131

Facial nerve paralysis produces following manifestations :

→ Weakness of the muscles of facial expression and eve closure. which results in :

1. Absence of nasolabial fold.
2. Wide palpebral fissure
3. Epiphora
4. Drooping of angle of mouth
5. Loss of wrinkles of forehead
6. The face sags and is drawn across to the opposite side on smiling.
7. Voluntary eye closure may not be possible and can produce damage to the conjunctiva and cornea.

- In partial paralysis, the lower face is generally more affected.
- Loss of taste sensation over anterior 2/3 of the tongue.
- Intolerance to high-pitched or loud noises, i.e. Hyperacusis (due to stapedius muscle paralysis)
- Loss of lacrimation and salivation occur

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111. The nerve which has the longest intracranial course is:

a) Fourth cranial nerve

b) Third cranial nerve

c) Sixth cranial nerve

d) Fifth cranial nerve

Correct Answer - A
Ans. Fourth cranial nerve

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112. Largest cranial nerve is:

a) Trochlear

b) Trigeminal

c) Oculomotor

d) Vagus

Correct Answer - B

Trigeminal

Longest intracranial course	Trochlear nerve
Longest course overall and most widely distributed	Vagus
Smallest (thinnest) cranial nerve	Trochlear nerve
Largest (thickest) cranial nerve	Trigeminal nerve
The only cranial nerve arising from dorsal aspect	Trochlear nerve
Only cranial nerve decussating completely before emerging	Trochlear nerve
Cranial nerve most commonly involved in basal skull fracture	Facial nerve
Cranial nerve most commonlv involved in raised intracranial tension	Abducent nerve
Commonest cranial nerve affected in spinal anaesthesia	Abducent nerve
Cranial nerve most commonly involved in intracranial aneurysm	Oculomotor nerve
Cranial nerves carrying	3,7 , 9, 10

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paraslrrnpathetic fibers	

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113. Nasopharynx is lined by which epithelium ?

a) Stratified squamous nonkerationized

b) Stratified squamous keratinized

c) Ciliated columnar

d) Cuboidal

Correct Answer - C
Ans. is 'c' i.e., Ciliated columnar
The two main types of epithelia lining the nasopharynx are stratified squamous (comprising approximately 60%
of **nasopharyngeal** epithelium) and pseudostratified columnar respiratory epithelium containing **ciliated** cells, goblet cells and basal cells.

KottaceApply

114. Greater petrosal nerve is formed from ?

a) Geniculate ganglion

b) Plexus around ICA

c) Plexus around middle meningeal artery

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Geniculate ganglion

Petrosal nerves

Greater petrosal nerve

- First branch of facial nerve
- Arises from geniculate ganglion
- In foramen lacerum it joins deep petorsal nerve and forms the nerve to pterygoid canal
- Supplies lacrimal glands, nose, mucosal glands of pharynx, palate.

Lesser petrosal nerve

- Branch of $9t_h$ cranial nerve through tympanic plexus (passes via otic ganglion)
- It suplies parotid gland.

Deep petrosal nerve

- It is a branch of sympathetic plexus around internal carotid artery.
- It contains cervical sympathetic fibers.

External petrosal nerve

It is an inconsistaent branch of sympathetic plexus around middle meningeal artery.

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115. Nerve 3td ventricle is the cavity of -

a) Mesencephalon

b) Rhombencephalon

c) Diencephalon

d) Telencephalon

Correct Answer - C

Ans. is 'c' i.e., Diencephalon (Ref: BDC Vol.-3 6h/e p. 324, 441)

Part of Brain	**Cavity**
A)- forebrain (prosencephalon)	
i. Telencephalon(cerebrum)	Lateral ventricle
ii. Diencephalon (Thalamencephalon)	Third ventricle
B)- midbrain(mesencephalon)	Cerebral aqueduct
C)- Hindbrain (rhombencephalon)	Fourth Ventricle

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116. Occulomotor nucleus is located in -

a) Forebrain

b) Midbrain

c) Pons

d) Medulla

Correct Answer - B

Ans. is'b' i.e., Midbrain lRef: BDC 6/e Vol. 3 p' 3501

- Cranial nerves I, II → Forebrain
- Cranial nerves III, IV → Midbrain
- Cranial nerves V, VI, VII, VUI → Pons
- Cranial nerves IX, X, Xl, Xll → Medulla

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117. Which of the following is pure sensory nerve ?

a) Trigeminal

b) Abducent

c) Trochlear

d) Olfactory

Correct Answer - D

Ans. is'd'i.e., Olfactory

Cranial nerves

Pure sensory	Pure motor	Mixed	
	Oculomotor (III)		
	Trochlear (IV)		
Olfactory (I)	Abducent (VI)	Trigeminal (V)	
Optic (II)	Vestibulocochlear (VIII)	Facial (VII)	Glossopharyngeal (IX)
	Accessory (XI)	Vagus (X)	
	Hypoglossal (XII)		

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118. Olfactory Great cerebral vein of Galen drains into -

a) Cavernous sinus

b) Basal vein

c) Internal cerebral vein

d) Straight sinus

Correct Answer - D

Ans. is 'd' i.e., Straight sinus

- Great cerebral vein of Galen is formed by the union of two internal cerebral veins.
- It is 2 cm long.
- It is drains into the straight sinus.

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119. Superficial middle cerebral vein drains into -

a) Internal cerebral vein

b) Cavernous sinus

c) Great cerebral vein of Galen

d) Straight sinus

Correct Answer - B

Ans. is 'b' i.e., Cavernous sinus [Ref Textbook of neuroanatomy p. 189]

Superficial middle cerebral vein

- It runs along the posterior ramus and stem of lateral sulcus.
- It drains blood from superolateral surface of the cerebral hemisphere into the cavernous sinus.
- It communicates with the superior sagittal and transverse sinus through vein of Trolard and vein of Labbe respectively.

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120. Major supply of medial surface of cerebral hemisphere

a) Anterior cerebral artery

b) Posterior cerebral artery

c) Middle cerebral artery

d) Posterior inferior cerebellar artery

Correct Answer - A

Ans. is 'a' i.e., Anterior cerebral artery *[Ref: BDC 6th/e Vol.* 3 *p. 461, 462]*

Cerebral cortex is supplied by branches of all three cerebral arteries.

All the three surface receive branches from all three arteries.

But each surface is supplied predominantly by one artery *:?*

1. Middle cerebral artery is the main artery on superolateral surface.
2. Anterior cerebral artery is chief artery on medial surface.
3. Posterior cerebral artery is principal artery on inferior surface

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121. Which nucleus is not seen in floor of the 4th ventricle -

a) Abducens nucleus

b) Facial nucleus

c) Dorsal vagal nucleus

d) Hypoglossal nucleus

Correct Answer - B

Ans.is'b'i.e.,Facial nucleus {RefBDC Vol.3 &/e p.410; Last's l2n/e p. 482, 483}

- Medial eminence is present in each side of median sulcus. It presents facial colliculus formed by genu (recurving fibers) of facial nerve looping around abducens nucleus. Facial colliculus lies in pons (i.e. in pontine part of floor).
- Hypoglossal triangle overlying the hypoglossal nucleus and vagal triangle overlying dorsal nucleus of vagus. Both of these triangle lies in the medulla (medullary part of floor)

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122. Ventral tegmental decussation in cerebral peduncle is due to -

a) Tectospinal tract

b) Tectobulbar tract

c) Vestibulospinal tract

d) Rubrospinal tract

Correct Answer - D

Ans. is d'ie., Rubrospinal tract [Ref: BDC 6th/e Vol.3 p.398]

- Ventral tegmental decussation → Formed by decussation of rubrospinal tract.
- Dorsal tegmental decussation → Formed by decussation of tectospinal and tectobulbar tracts.

KollegeApply

123. Which of the following structures seen in the cavernous sinus?

a) Maxillary division of V nerve

b) Mandibular division of V nerve

c) Internal carotid artery

d) Facial nerve

Correct Answer - C
Ans. c. Internal carotid artery
Contents of the cavernous sinus
Structures in the lateral wall of the sinus
Oculomotor (lll) nerve
Trochlear (lV) nerve
Ophthalmic (1st division of V) nerve
Trigeminal ganglion
Internal carotid artery
Abducent (Vl) nerve

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124. True about fallopian tubes are all except :

a) Lined by cuboidal epithelium

b) Isthmus is the narrower part of the tube that links to the uterus

c) Tubal ostium is the point where the tubal canal meets the peritoneal cavity

d) MUllerian ducts develops in females into the Fallopian tubes

Correct Answer - A

The two uterine tubes are each about 4 in. (10 cm) long and lie in the upper border of the broad ligament.

Each connects the peritoneal cavity in the region of the ovary with the cavity of the uterus.

The uterine tube is divided into four parts:

The infundibulum is the funnel-shaped lateral end that projects beyond the broad ligament and overlies the ovary.

The tubal ostium is the point where the tubal canal meets the peritoneal cavity.

The ampulla is the widest part of the tube.

The isthmus is the narrowest part of the tube and lies just lateral to the uterus.

The intramural part is the segment that pierces the uterine wall.

Function

The uterine tube receives the ovum from the ovary and provides a site where fertilization of the ovum can take place (usually in the ampulla).

The inner mucous membrane of the uterine tube is lined by the ciliated columnar epithelium mixed with the nonciliated secretory cells or peg cells

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The Mullerian ducts develops in females into the fallopian tubes, uterus and vagina, while the Wolffian ducts develops in males into the epididymis and vas deferens

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125. Lining epithelium of vagina is

a) Squamous epithelium

b) Columnar epithelium

c) Transitional epithelium

d) Secretory epithelium

Correct Answer - A

Ans: A Squamous epithelium

(Ref: Ramesh Babu p. 24]

- Vaginal mucous membrane is lined by nonkeratinized stratified squamous epithelium.

KollegeApply

126. Oxyntic cells are present in -

a) Pylorus

b) Cardiac notch

c) Body

d) None

Correct Answer - C

Ans. is'c'i.e., Body

- Oxyntic.cells are present in principal glands of body and fundus.
- These glands are found in body and fundus. These glands contain mainly chief (peptic or zymogen) cells and parietal (oxyntic) cells. These glands also contain *mucous neck cells, stem cells and enteroendocrine cells (argentaffin cells).*

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127. First bone to start ossifying -

a) Femur

b) Tibia

c) Scapula

d) Mandible

Correct Answer - D

Ans. is'd'i.e., Mandible [Ref: T*tbook of anatomy with color Atlas p. I32I

'The mandible is one of the first bones in the body to start ossifying being next in this respect only to the clavicle..

- Thus, First bone to start ossifying Clavicle. Second bone to start ossifying → Mandible.

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128. Incudomalleolar joint is a ?

a) Ellipsoid joint

b) Pivot joint

c) Hinge joint

d) Saddle joint

Correct Answer - D

Synovial joints are classified as follows :

1) Plane synovial joints (flat joints)
2) Hinge joints (Ginglymus joints or ginglymi)
3) Pivot or trochoid joints
4) Condylar (bicondylar) joints
5) Ellipsoid joints

Note : Metacarpophalangeal joints are ellipsoid joints functionally, but structurally they belong to condylar joints.

6) Saddle (sellar) joints

- The articular surfaces are reciprocally saddle shaped, i.e. concavo-convex. Examples are first (thumb) *carpometacarpal joint, sternoclavicular joint, calcaneocuboid joint, incudomalleolar joint (smallest saddle joint) and patellofemoral joint.*

7) Ball and socket (spheroidal) joints

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129. Hilton's law is related to -

a) Venous drainage

b) Blood supply

c) Nerve innervation

d) All of the above

Correct Answer - C

Ans. is 'c' i.e., Nerve innervation [Rel Textbook operative orthopaedics p. 7861

- Hilton,s law states that nerves crossing a joint supplies that joint by giving branching to that joint

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130. Spermatogenesis begins at -

a) Birth

b) 5 years

c) Puberty

d) 18 years

Correct Answer - C

Ans. is'c'i.e., Puberty [Ref: Clinical embryology 3'd/e p' 311]

- Spermatogenesis refers to the process of formation of spermatozoa (sperm) from primitite germ cells (spetmatogonia)'
- spermatogenesis begins at puberty and continues throughout adult life to decline in old age.

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131. Which is not a stage of prophase -

a) Diakinesis

b) Leptotene

c) Zygotene

d) Arachytene

Correct Answer - D
Ans. is'd' i.e., Arachytene lRef: Essentials of medical genetics by A'K' Dutta 4'h/e p' 111

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132. Fossa ovalis is a remnant of -

a) Septum primum

b) Septum secundum

c) Septum spurium

d) AV cushion

Correct Answer - A

Ans. is'a'i.e., Septum primum lRef: Readbeloul

- Actually 'floor of the fossa ovalis represents septum primum. Full fossa ovalis is a remnant of foramen ovale

KollegeApply

133. Nephron is derived from ?

a) Ureteric bud

b) Mesonephric duct

c) Metanephros

d) Mesonephros

Correct Answer - C

Development of kidney

- Ureteric bud (mesonephros) arise from mesonephric duct and gives rise to *collecting system* of kidney (renal pelvis, major and minor calyces, *collecting tubule)* and *ureter.*
- Metanephric mesoderm (blastema or metanephors) arise from *nephrogenic cord* which in turn is derived from intermediate mesoderm. It gives rise to *excretory unit (nephron),* i.e. glomeruli, PCT, Loop of henle and DCT.

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134. Fibrous stroma of liver is derived from -

a) Foregut endoderm

b) Midgut endoderm

c) Hindgut endoderm

d) Septum transversum

Correct Answer - D

Ans. is'd i.e., Septum transversum Development Of liver

- Liver is developed from -i) Endoderm of foregut (endodermal diverticulum): Most of the liver (including hepatocytes) is derived from foregut endoderm. ii) Septnm transversum mesenchyme (mesoderm) : It gives rise to ligaments of the liver (except ligamentum teres), kupffer cells, hematopoietic cells, sinusoids and fibrous-areolar stroma of liver'
- Ligamentum teres is derived from left umbilical vein.

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135. True about Branchial cyst is:
March 2013 *(h)*

a) Cysts are more common than sinuses

b) Mostly arises from 2nd branchial system

c) Causes dysphagia and hoarseness

d) Sinus should always be operated

Correct Answer - B
Ans. B i.e. Mostly arises from 2nd branchial system

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136. True about notochord are all except?

a) Defines axis of embryo

b) Serves as primary inductor

c) Derived from hypoblast

d) Remains as nucleus pulposus

Correct Answer - C

- Notochord is a bud like structure formed by *epiblast cells* extending from cranial end of primitive streak to caudal end of prochordal plate, in between the ectoderm and endoderm. Siginificances of notochord includes following :-

i. *It defines the axis of embryo.*

i. *It functions as the primary inductor, inducing the overlying ectoderm to develop into neural plate (the primordium of CNS).*

i. *It serves as the basis for development of axial skeleton.* The notochord is an *intricate structure around which vertebral column is formed and indicates future site of vertebral bodies. However, the notochord does not give rise to vertebral column, after development of vertebral bodies,* the notochord degenerates and disappears, but parts of it persist as the nucleus pulposus of intervertebral disc.

KDegreApply

137. Structures derived from the neural crest are?

a) Pia

b) Dental papillae

c) Adrenal medulla

d) All of the above

Correct Answer - D
D i.e. All of the above

KollegeApply

138. Heart tube is formed at -

a) 3 weeks

b) 6 weeks

c) 10 weeks

d) 12 weeks

Correct Answer - A
Ans. is'a'i.e., 3 weeks [Ref: Embryology by Indu Khurana p. 209]
'Tubular heart is formed at the end of 3d week"

KollegeApply

139. Heart tube is formed in

a) Hyaluronic acid secreted by endocardium

b) Chondroitin sulfate secreted by endocardium

c) Hyaluronic acid secreted by myocardium

d) Chondroitin sulfate secreted by myocardium

Correct Answer - C

Ans-Ans. is'c'i.e., Hyaluronic acid secreted by myocardium [Ref Textbook of Human Embryolog p. 7861

- Cardiac jelly is a thick extracellular matrix rich in hyaluronic acid. It separates endothelial heart tube from myocardium.
- Cardiac jelly is secreted by myocardium.

KollegeApply

140. Remnant of umbilical artery

a) Ligamentum arteriosum

b) Ligament teres

c) Ligamentum venosum

d) Medial umbilical ligament

Correct Answer - D

Ans. is'd'i.e., Medial umbilical ligament {Ref:Garg 2d/e p. 2151}

Embryonic part	**Remnants**
Ductus arteriosus	Ligamentum arteriosum
Umbilical artery	Proximal part : - Superior vesical artery. Distal part : - Medial umbilical ligament
Umbilical vein (left)	Ligamentum teres
Ductus venosus	Ligamentum venosus
Septum prim urn	*Floor offossa ovalis*
Septum seconclum	Annulus ovalis / Limbus fossa ovalis

KollegeApply

141. Which of the following is a derivative of paramesonephric duct in males ?

a) Trigone of bladder

b) Paraphoron

c) Prostatic utricle

d) Gartner's duct

Correct Answer - C

Two structures are derived from paramesonephric duct in males :-

1. Appendix of testis (hydatid of morgagni)
2. Prostatic utricle.

KollegeApply

142. Myelination in peripheral nervous system is done by

a) Astrocytes

b) Oligodendrocytes

c) Ependymal cells

d) Schwann cells

Correct Answer - D
Ans. is d i.e., Schwann cells
Myelination in central nervous system → Oligodendrocytes.
Myelination in peripheral nervous system → Schwann cell.

KollegeApply

143. Malleus and incus are derived from ?

a) 1st Arch

b) 2nd Arch

c) 3rd Arch

d) 4th Arch

Correct Answer - A
Ans. is 'a' i.e., 1st Arch
lst (mandibular arch):-
Muscular Contribution:-Muscles of mastication, Anterior belly of the digastric, Mylohyoid, Tensor tympani, Tensor veli palatini.
Skeletal Contributions:- Maxilla, mandible (only as a model for mandible), Incus and malleus, Meckel's cartilage, Ant. ligament of malleus, Sphenomandibular ligament.
Nerve:- Trigeminal nerve (V2 and V3).
Artery:- Maxillary artery, external carotid artery.

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144. False about limbus fossa ovalis -

a) Situated above fossa ovalis

b) In right atrium

c) Derived from septum primum

d) Also called Annulus ovalis

Correct Answer - C

Ans. is 'c' i.e., Derived from septum primum

- Limbus fossa ovalis (also called annulus ovalis) is a thickened rim in right atrium, present above the fossa ovalis.
- It represents the *lower free margin of septum secundum.* (not septum primum.

KollegeApply

145. Sertoli cells are derived from -

a) Genital tubercle

b) Genital swelling

c) Primordial germ cells

d) Germinal epithelium

Correct Answer - D

Ans. is 'd' i.e., Germinal epithelium *[Ref I.B.Singh embryology 9thie* p. *278]*

- Testis develops at genital ridge (urogenital ridge).
- 'Primordial germ cells' are developed in the 4th week by proliferation of endodermal cells of the dorsal wall of hindgut (part of yolk sac). The primordial germ cells migrate into genital ridge, where proliferation of both germinal and nongerminal cells leads to formation of gonads.
- Genital ridge is covered by germinal epithelium (previous coelomic epithelium), which proliferates and forms sex cords (primitive seminiferous cords). Large number of sertoli cells are derived from these sex cords.
- Lyedig cells are also derived from sex cord, which in turn is derived from germinal epithelium.

KalpeApply

146. Prolactin secreting gland develops from -

a) Infundibulum

b) Rathke's pouch

c) Tuber cinereum

d) 3rd ventricle

Correct Answer - B
Ans. is 'b' i.e., Rathke's pouch
Prolactin is secreted by anterior lobe of pituitary which develops from Rathke's pouch.

KollegeApply

147. Posterior cardinal vein develops into -

a) Common iliac vein

b) Superior vena cava

c) Internal jugular vein

d) External jugular vein

Correct Answer - A

Answer- a' i.e., Common iliac vein fRef: Textbook of embryology p. 786

Derivatives of posterior cardinal veins, subcardinal veins and supracardinal veins are :

1. Inferior vena cava is derived from *:?*

.. Hepatic segment of IVC is derived from : (i) right hepatic cardiac channel, and (ii) anastomotic channel between subcardinal vein and right hepatic cardiac channel.

2. Renal segment of IVC is derived from right subcardinal vein. This part receives both renal and suprarenal veins.

3. Post renal segment of IVC (major part of IVC) is formed by (i) anastomosis between right supracardinal and subcardinal veins, (ii) right supracardinal vein (lower part), and (iii) right posterior cardinal vein (lowest part).

2. Gonadal veins develop from subcardinal veins (distal part below inter-subcardinal or renal anastomosis).

3. Suprarenal veins develop from subcardinal veins (proximal part above inter-subcardinal or renal anastomosis).

4. Right common iliac vein is derived from the right posterior cardinal vein (most caudal part).

5. Left common iliac vein develops from transverse anastomosis between lower end of posterior cardinal veins.

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6. Right renal vein is a *mesonephric vein* that drains into renal segment of IVC (which is derived from the upper part of right subcardinal vein).
7. Left renal vein develops from three sources : (i) mesonephric vein (drain into left subcardinal vein), (ii) left subcardinal vein (small part), and (ii) pre-aortic inter subcardinal anastomosis

KollegeApply

148. Superior vena cava develops from -

a) Right anterior cardinal vein

b) Left anterior cardinal vein

c) Left common cardinal vein

d) Right subcardinal vein

Correct Answer - A

Ans. is 'a' i.e., Right anterior cardinal vein lRef: Textbook of embryologlt p. 7861

- Superior vena cava (SVC) is derived from
1. right anterior cardinal vein (proximal to brachiocephalic anastomosis), and
2. right common cardinal vein.

KollegeApply

149. Structure developing from Mullerian duct in males?

a) Seminal vesicle

b) Epididymis

c) Prostatic utricle

d) Ureter

Correct Answer - C

Ans. (C) Prostatic utricle

Remnants of Mullerian duct (paramesonephric duct) in males are:-

- Appendix of testis (Hydatid of Morgagni)
- Prostatic utricle.

KollegeApply

150. Optic cup is derived from ?

a) Neural ectoderm

b) Surface ectoderm

c) Mesoderm

d) Neural crest

Correct Answer - A
Ans. is 'a' i.e., Neural ectoderm

KollegeApply

151. Which of the following is a derivative of Rathke's pouch -

a) Pars tuberalis

b) Neurohypophysis

c) Posterior pituitary

d) Pineal gland

Correct Answer - A

Ans. is 'a' i.e., Pars tuberalis lRef: Textbook of embryology p. 7861

The Rathke's pouch is an ectodermal upgrowth from the stomodaeum in front of buccopharyngeal membrane

The derivatives of Rathke's pouch give rise to the various components of the anterior pituitary:

1. Anterior lobe
2. Pars tuberalis
3. Pars distalis
4. Pars intermedia

KollegeApply

152. Which of glial cell is mesodermal in origin -

a) Macroglial cells

b) Microglial cells

c) Oligodendrocytes

d) Ependymal cells

Correct Answer - B

Ans. is'b'i.e., Microglial cells

- Microglial cells are derived from mesenchymal (mesodermal) cells

KollegeApply

153. Trigone of bladder is derived from ?

a) Mesonephric duct

b) Paramesonephric duct

c) Absorbed anal membrane

d) Mullerian duct

Correct Answer - A
Mesonephric duct

KollegeApply

154. Pisiform articulates with -

a) Scaphoid

b) Trapezium

c) Triquetral

d) Lunate

Correct Answer - C
Triquetral

KollegeApply

155. **Spleniculi are seen most commonly in:**

a) Colon

b) Hilum

c) Liver

d) Lungs

Correct Answer - B

Spleniculi or accessory spleens are most commonly (about 80%) seen at the ***hilum*** of the spleen.

Also know:

Location of accessory spleen in decreasing order are:

- Splenic hilum
- Gastrocolic ligament
- Tail of pancreas
- Greater omentum
- Greater curvature of stomach
- Splenocolic ligament
- Small and large bowel mesentery
- Left broad ligament of women
- Left spermatic cord in men

Ref: Schwartz 9/e, Page 1246; Bailey & Love 25/e, Page 25/e, Page 1103

KollegeApply

156. Structures passing through Calot's triangle are all EXCEPT:

a) Portal vein

b) Cystic artery

c) Right hepatic artery

d) Lymph node of Lund

Correct Answer - A
Portal vein
THE HEPATOBILIARY TRIANGLE OR CYSTOHEPATIC TRIANGLE OR CALOT'S TRIANGLE:
Boundaries:
Common hepatic duct medially
Cystic duct inferiorly
Inferior surface of liver superiorly
Contents:
Cystic artery
Right hepatic artery
Lymph node of Lund

KollegeApply

157. What structure passes through the quandrangular space ?

a) Axillary nerve

b) Radial nerve

c) Median nerve

d) Brachial Artery

Correct Answer - A

Ans. is 'a' i.e., Axillary nerve lRef Campbell's 12h/e p. 22131

- Axillary nerve and posterior circumflex humeral vessels are transmitted through quadrangular space

KolleegeApply

158. Seminal colliculus is present in ?

a) Testis

b) Prostate

c) Urethra

d) Scrotum

Correct Answer - C
Ans. is 'c' i.e., Urethra
Seminal colliculus or colliculus seminalis or verumontanum is present in the prostatic urethra.
Features of the prostatic urethra
Urethral crest - median longitudinal mucous fold.
Colliculus seminalis (verumontanum): An elevation in the middle of the urethral crest with the opening of a prostatic utricle at its summit and an ejaculatory duct on each side.
Openings of ejaculatory ducts: These are present on each side of the orifice of the utricle.
Prostatic sinuses: These are vertical grooves present on each side of the urethral crest. They are present with openings of prostatic glands.

KollegeApply

159. Which of the following is not a derivative of foregut?

a) Cecum

b) duodenum

c) Liver

d) Pancreas

Correct Answer - A

Ans. is 'a' i.e., Cecum [Ref Langman 11th/e p. 223]:-

Derivatives are:-

- Pharynx
- Lower respiratory tract
- Esophagus
- Stomach
- Duodenum upto the opening of the main pancreatic duct Liver
- Pancreas

KollegeApply

160. Most important factor in transport across a membrane?

a) Charge of particle

b) Membrane thickness

c) Size of particle

d) Concentration gradient

Correct Answer - D

Ans. D. Concentration gradient

[Ref Guyton 12h/e p. 48-501]

- Transport across a cell membrane is divided into passive or active, based on whether it is along the concentration gradient or against the concentration gradient.

1) Passive transport

- It is in the direction of concentration gradient i.e., “Downhill movement".

2) Active transport

- It is against the direction of concentration gradient, i.e., “Uphill movement”.

KollegeApply

161. Tronsport process which is against concentration gradient and carrier mediated is ?

a) Facilitated diffusion

b) Osmosis

c) Active transport

d) Endocytosis

Correct Answer - C

Ans. C. Active transport

Active transport:

- It is against the direction of concentration gradient, i.e., *Uphill 6ovenento.
- Energy (e.g., ATP) is required
- Carrier proteinis required
- Examples are primary active transport and secondary active transport.

KollegeApply

162. Similarity between active transport and facilitated diffusion ?

a) Energy requirment

b) Against concentration gradient

c) Carrier protein

d) All of the above

Correct Answer - C

Ans. C. Carrier protein

1) Passive transport

- Direction of concentration gradient i.e.,'Downhill movement"
- Does not require energy expenditure

Example are: -

1. Without carriers: - Simple diffirsion, osmosis
2. Through carrier : - Facilitated diftrsion

2) Active transport

- It is against the direction of concentration gradient, i.e., *Uphill 6ovenento.
- Energy (e.g., ATP) is required
- Carrier protein required
- Examples are primary active transport and secondary active transport.

KollegeApply

163. Transport through pores in cell members is ?

a) Active transpert

b) Transcytosis

c) Diffusion

d) Endocytosis

Correct Answer - C
Ans. C. Diffusion
[Ref: Guytonp.49]

- Substances can move by simple diffusion directly along the pores and channels from one side of the membrane to the other.

Thus, simple diffusion can occur by two pathways.

1. Through membrane lipid bilayer → for lipid soluble substances.
2. Through pores (water channel) -+ for ions/electrolytes.

CollegeApply

164. Percentage of total body water to body weight at birth?

a) 90%

b) 80%

c) 60%

d) 50%

Correct Answer - B

Ans. B. 80%

[Ref Principles of medical physiology p.712]

- The major component of body mass is water.
- The contribution of water to body weight varies with age.
- Total body water (TBW) as a percentage of body weight declines form as high as 90% in early fetal life to 75-80% at birth.
- Thereafter it delines progressively to 60% by the end of one year. After that it remains constant.

CollegeApply

165. Epithelial sodium channels has ?

a) 2a, 213

b) la, i(3

c) 2a, 213, 2y

d) 2a, 113, 2y

Correct Answer - D
Ans. D. 2a, 113, 2y
[Ref: Principles of medical physiology p. 241]
There are two different types of Sodium channels:-
Voltage-gated sodium channels:

- These are present in Excitable cells.
- These exist as heterodimer or heterotrimers of alpha and beta subunits, containing one alpha and one or two beta subunits.

Epithelial-sodium channels:

- These are present in epithelium of absorptive or secretory epithelium, e.g. colon, sweat gland duct, pancreatic duct, respiratory passage, and distal tubule of kidney.
- These exist as heterotetramers of alpha, beta and gamma subunits, containing mostly two alpha, one beta and one gamma subunits.

KollegeApply

166. True about ENaC are all except ?

a) Epithelial channel

b) Composed of 2 homolous subunits

c) Present in kidney and GIT

d) Inhibited by amiloride

Correct Answer - B

Ans. B. Composed of 2 homolous subunits

- Epithelial Na+ channels (ENaC) is rate limiting step in Na+ reabsorption across several epithelial linings.
- It is present in kidney (distal part), GIT (colon), salivary & sweat glands, and respiratory tract.
- ENaC is made of three homologous subunits > alpha, beta, and gamma.
- In late distal tubules and collecting ducts, ENaC is inhibited by potassium sparing diuretics like amiloride and triameterene.

KollegeApply

167. pH of intracellular fluid is ?

a) Slightly less than ECF

b) Slightly more than ECF

c) Same as ECF

d) Highly alkaline

Correct Answer - A

Ans. A. Slightly less than ECF

[Ref: Principles of medical physiology p.132]

- Extracellular fluid (ECF) has pH 7.4 (range 7 .35 - 7.45) and is slightly alkaline
- Intracellular fluid (ICF) has H* ion concentration slightly higher than ECF. Thus, pH of ICF is slightly low than ECF, but still it is slightly alkaline.

KollegeApply

168. Increased in plasma viscosity is maximally caused by which plasma protein?

a) Fibrinogen

b) Albumin

c) Globulin

d) All have equal effect

Correct Answer - C

Ans. C. Globulin

[Ref: Clinical aspects of blood p.80]

- The effect of a protein on plasma viscosity depends on its molecular weight and structure.
- The viscosity is higher if a protein has

1. Less spheroid shape
2. Higher molecular weight
3. Higher aggregation capacity
4. Higher temperature or pH sensitivity

- The globulin causes maximum increase in plasma viscosity followed by fibrinogen (2d after globnlin) and albumin (3rd in number).

KalkageApply

169. Oncotic pressure is contributed by?

a) Sodium

b) Chloride

c) Chloride

d) Albumin

Correct Answer - D
Ans. D. Albumin
[Ref: Clinical physiology 3'd/e p.336]

- Oncotic pressure, also called colloid osmotic pressure, is a form of osmotic pressure exerted by proteins in blood plasma that usually tends to pull the water into the circulatory system.
- The major contributing protein for plasma oncotic pressure is albumin.

KollegeApply

170. Most recent taste sensation is?

a) Sweet

b) Sour

c) Bitter

d) Umami

Correct Answer - D

Ans. D. Umami

The umami taste is the fifth taste which is unique.

- The proposed mechanism of umami taste is through glutamate taste sensors (glutamate receptors) with release of neuronal glutamic acid.

In nature, there are three umami substances:

- Monosodium glutamate (MSG)
- Disodium 5-guanosine mosphosphate (GMP)
- Disodium 5-ionsine monophosphate (IMP)

KollegeApply

171. Motor evoked potential assess ?

a) Peripheral motor pathways

b) Central motor pathways

c) Both of the above

d) Regeneration in muscles

Correct Answer - B

Ans. B. Central motor pathways

- Motor evoked potentials (MEPs) are electrical signals recorded from neural tissue or muscle following activation of central motor pathways.
- It is used for assessment of nervous system, especially during intraoperative neurophysiological monitoring (IONM).
- Most often, this is accomplished by using trans cranial electrical stimulation (TES) of brain and recording of evoked neural or myogenic activity distal (caudal) to area that is at risk during surgery.

KollegeApply

172. In electromyograply [EMG] transient response at the time of insertion of eloctrode indicates ?

a) Spontoneous muscle activity

b) Voluntary muscle activity

c) Induced muscle activity

d) Cell membrane damage

Correct Answer - D

Ans. D. Cell membrane damage

[Ref: Clinical physiology 24th/e p.222]

- Electromyography is a process of recording electrical activity of muscles.

It can be done by either of the two methods:

1. By putting a surface electrode and recording activity of underlying muscle.
2. By inserting a needle electrode into the muscle.

There are there types of signals (by needle electrode) : -

i) Insertional activity:

- It is the electrical activity at the time of insertion of electrode due to disruption of cell membrane.
- This should be ignored.

ii) Resting activity (spontaneous activity).

iii) Voluntary muscle recruitment.

CollegeApply

173. True about visual cycle cascade ?

a) Associated with conformational change in opsin

b) Light causes isomerization of all-trans-retinol to 11 Cis-retinol

c) Retinol [alcohol] is involved

d) All are true

Correct Answer - A

Ans. A. Associated with conformational change in opsin

- There is conformational change in opsin.
- Light causes conversion of 11 cis-retinal to all trans retinal.
- Retinal (aldehyde) is involved (not retinal).
- When light fans on photoreceptors, 11- Cis retinal of rhodopsin is isomerized to all-trans retinal (Photo isomerization).
- The change in physical configuration is such that it cannot hold protein opsin and therefore two are separated, i.e. rhodopsin is hydrolyzed.

KalaamApply

174. True about smooth muscle contraction ?

a) Troponin plays an important role

b) Calmodulin has no role

c) Phosphorylation of myosin

d) All of the above

Correct Answer - C

Ans. C. Phosphorylation of myosin

[Ref Guyton 12'h/e p.64-66]

- In smooth muscle there is no troponin.
- Therefore calcium initiates contraction through a mechanism different from that employed by skeletal muscle.
- Smooth muscle contains a calcium binding protein called calmodulin.
- Increase in cytoplasmic (sarcoplasmic) calcium leads to its binding to calmodulin.
- The calcium-calmodulin complex activates myosin kinase, also called myosin light chain kinase (MLCK).
- MLCK is a phosphorylase which phosphorylates a light chain belonging to myosin chain, often called cross-bridge phosphorylation.
- The phosphorylated myosin head interact with actin, i.e., cross-bridging of myosin with actin.
- The cross-bridging leads to contraction.

KollegeApply

175. Increase in Duration of expiration is due to?

a) J-reflex

b) Head's paradoxical reflex

c) Hering-Breure reflex

d) Proprioceptors

Correct Answer - C
Ans. C. Hering-Breure reflex
[Ref Ganong 24h/e p. 664 6 23d/e p. 632]

- The Herring-Breuer inflation reflex is an increase in the duration of expiration produced by steady lung inflation, and the
- Herring-Breuer deflation reflex is a decrease in the duration of expiration produced by marked deflation of the lung.

KollegeApply

176. Wallerian degeneration is for ?

a) Nerve degeneration

b) Muscle degeneration

c) Nerve regeneration

d) Muscle regeneration

Correct Answer - A
Ans. A. Nerve degeneration
[Ref: Samson Wright 13h/e p. 288]

- The part of nerve distal to the point injury undergoes 'secondary or Wallerian degeneration', the proximal part undergoes "primary or retrograde" degeneration up to a single node Ranvier.

KollegeApply

177. Withdrawal reflex is also known as ?

a) Extension reflex

b) Stretch reflex

c) Golgitendon reflex

d) Flexor reflex

Correct Answer - D

Ans. D. Flexor reflex

[Ref Understanding of medical physiology p. 680]

- Withdrawal reflex is a typical protective reflex.
- A painful stimulus applied to the hand or foot results in withdrawal of the limb.
- Withdrawal involves flexion of the limb therefore it is also called as flexion reflex.
- Flexion results from contraction of flexor muscles and relaxation of extensor muscles.
- Simultaneous contraction of flexors and relaxation of extensors is brought about by reciprocal innervation.

KollegeApply

178. Tetany in muscle occurs inspite of normal serum Ca" level. Which ion is responsible ?

a) Mg^{2+}

b) Ca^{2+}

c) K^{+}

d) Na^{+}

Correct Answer - B

Ans. B. Ca^{2+}

[Ref: Principles of medialphysiology p. 105, 1061]

- During a single twitch, the amount of Ca+2 released into sarcoplasm is not enough to produce tetanic tension.
- When the muscle is stimulated in rapid succession, Ca+2 comes out into the sarcoplasm with each stimulus and there is a progressive accumulation of Ca2+ in the sarcoplasm.
- Tetanic tension is reached when sarcoplasmic Ca2+ levels reach their maximum.

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179. Unspecified pain pathway is for?

a) Neuropathic pain

b) Trauma

c) Visceral pain

d) Psychogenic pain

Correct Answer - D
Ans. D. Psychogenic pain
Textbook of psychotherapy p.6

- Idiopathic or unspecified pain: It is purely psychological in nature and is therefore called psychogenic pain.

KollegeApply

180. Pain is carried by which nerve fibers?

a) Act, A13

b) Act, Ay

c) AS, C

d) Ay, C

Correct Answer - A:C
Ans. A. Act, A13 & C. AS, C
[Rd Ganong 24n/e p. 92 & 23'd/e p. 89; Principles of physiology p. 5121]

- Fast fibers carrying pain -+ Ad (fast pain)
- Slow fibers carrying pain -) C (slow pain)

KollegeApply

181. Action potential generates at fastest rate in?

a) SA node

b) AV node

c) Bondle of His

d) Purkinje fibers

Correct Answer - A
Ans. A. SA node
[Ref: Essentials of medicalphysiolog p. 856]

- SA node discharges impulses at fastest rate, hence the rate at which SA node fires determines the heart rate, therefore,
- SA node is normal pacemaker of the heart, i.e., it determines the pace of the heart.

KollegeApply

182. Vibration sense is detected by which type of receptor?

a) Merkel's disc

b) Ruffini's end organ

c) Paccinian corpuscle

d) Meissner's corpuscle

Correct Answer - C
Ans. C. Paccinian corpuscle
[Ref Principles of medical physiology p. 647]

- Tactile (touch) receptors
  - For touch (superficial touch):- Meissner's corpuscle (detect texture of surface, i.e. rough or smooth), Merkel's disc (detect two point discrimination).
  - For pressure (deep touch):- Rufini's end organ (slowly adapting).
  - Vibrations: Detected by Pacinian corpuscle (rapidly adapting).

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183. Vibration sense is detected by ?

a) Nociceptors

b) Deep receptors

c) Superficial receptors

d) None of the above

Correct Answer - D

Ans. D. None of the above

[Ref principles of medical physiology p. 647]

- Vibrations are detected by Pacinian corpuscles which are deep tactile receptors.
- Tactile (touch) receptors
  - Superficial (in epidermis and papillary layer of dermis) > Merkel's disc, meissner's corpuscle.
  - Deep (in dermis and subcutaneous tissue) -+ Ruffini's end organ, Pacinian corpuscle.

KollegeApply

184. Vibrations are detected by which types of receptors?

a) Slowly adapting

b) Rapidly adapting

c) Non-adapting

d) None of the above

Correct Answer - B

Ans. B. Rapidly adapting

- Rapidly adapting touch receptors - Pacinian corpwcle, Meissner's corpuscle.
- Slowly adapting touch receptors - Merkel's disc, Ruffini's end organ.
- No adaptation - Nociceptors (Pain receptors), vestibular receptors, muscle spindle.

KollegeApply

185. Which of the following receptor is stimulated by sustained pressure?

a) Ruffini's end organ

b) Merkel's disc

c) Hair cells

d) Meissner Corpuscles

Correct Answer - A
Ans. A. Ruffini's end organ
[Ref; Ganong23r/e p. I50]

- Pressure (sustained pressure) stimulates Ruffini's end organ,

KollegeApply

186. "Prosopagnosia" is characterized by :

a) Inability to read

b) Inability to identify faces

c) Inability to write

d) Inability to speak

Correct Answer - B

Ans. B. Inability to identify faces

- Prosopagnosia is a recognition deficit in which the patient is unable to recognize familiar faces.
- Face and object recognition deficits are known as prosopagnosia and visual object agnosia respectively.
- The characteristic lesions in prosopagnosia and visual object agnosia consists of a bilateral infarction in the territory of the posterior cerebral arteries and involve lingual and fusiform gyri.

KollegeApply

187. Broca's area is concerned with:

a) Word formation

b) Comprehension

c) Repetition

d) Reading

Correct Answer - A
A i.e. **Word formation**
Wernicke's area -) Site of integration.
Broca's area -+ Motor part of speech.

KollegeApply

188. Broadman's area for motor speech?

a) Area 1,2,3

b) Area 4,6

c) Area 28,29

d) Area 44

Correct Answer - D
Ans. D. Area 44
[Ref Fuller's 4 le p. 10; Ganong 24n le p. 293]

- Motor speech is formed in Broca's area (area44).
- Striate area of cortex is primary visual area (Brodmann's area 17 or VI) and is located on the sides of calcarine fissure.

KollegeApply

189. Maximum density of muscle spindle is found in ?

a) Calf muscle

b) Lumbricals

c) Quadrieps muscle

d) Triceps

Correct Answer - B
Ans. B. Lumbricals
[Ref - Essentials of medical physiology p.786]

- The more refined the function, the greater the concentration of muscle spindles.
- The greatest concentration of spindles is found in the lumbrical muscles of the hand and then in the sub occipital muscles and in the extra ocular muscles.

KolleseApply

190. Function of epinephirine and norepinephine in Fightor-Flight response is ?

a) Increased blood flow to skin

b) Increased blood flow to muscles

c) Bronchoconstriction

d) Bradycardia

Correct Answer - B

Ans. B. Increased blood flow to muscles

[Ref, Understanding medical physiology p.470, 471]

- Both epinephrine and norepinephrine, along with cortisol, are responsible for coordinating the "Fight - or - flight" response in situations of perceived danger or stress.

KalaamApply

191. EPSP is due to ?

a) K' influx

b) Na* efflux

c) Na* influx

d) Ca** influx

Correct Answer - C

Ans. C. Na* influx

- EPSP - Opening of ligand gated Na+ channel resulting in Na+ influx.
- IPSP -
  - Opening of ligand gated Cl- channel resulting in Cl- influx.
- Opening of ligand gated K+ channel resulting in K+ influx

KollegeApply

192. The only excitatory neurons in cerebellar cortex are?

a) Purkinje

b) Basket

c) Golgi

d) Granule cells

Correct Answer - D

Ans. is'd'i.e., Granule cells [Ref BDC Vol. 3 p 92)

- Purkinje cells are the only output cells from cerebellar cortex.
- Purkinje cells send inhibitory efferents to deep cerebellar nuclei.
- Basket cells inhibit body of purkinje cells while stellate cells inhibit dendrites of purkinje cells.
- Granule cells send facilitatory efferents to basket, stellate and purkinje cells through parallel fibers.
- Climbing fibers and parallel fibers stimulate purkinje cells.

CollegeApply

193. Sleep walking is seen in which stage of sleep ?

a) REM

b) Stage 1-2 NREM

c) Stage 2-3 NREM

d) Stage 3-4 NREM

CollegeApply

Correct Answer - D
Ans. is 'd' i.e., Stage 3-4 NREM
<u>Important events occuring during sleep</u>

- Deep sleep/slow wave sleep disorder : - These events occur during stage 3 & 4 of NREM. Important disorders are : ?

1. Somnambulism (Night walking) : - Patient walks during sleep.
2. Sleep terror or night terrors (pavor nocturnes) : - The patient suddenly gets up screaming, with autonomic arousal (tachycardia, sweating). Sleep terrors are rarely remembered in the morning (in contrast to night mares). No treatment is required only reassurance is required. However, in severe cases benzodiazepine can be used.
3. Sleep-related enuresis (Nocturnal enuresis/bed wetting) : - Repetitive voiding occurs during sleep. First line of treatment is behaviour therapy. If behavioral therapy fails, desmopressin (DOC) and Imipramine can be used.
4. Bruxism (Teeth grinding)
5. Sleep-talking (Somniloquy).

- **REM sleep events**

1. Nocturnal penile tumescence : - It is spontaneous occurence of an erection of the penis during sleep. It is a normal phenomenon and occurs for 80-120 minutes per night Nocturnal penile tumescence can be used to differentiate between psychogenic impotence and

organic impotenceas nocturnal penile tumescence is preserved in psychogenic impotence but not in organic cause of impotence.

2. Night mares (dream anxiety disorder) : - They are characterized by fearful dreams occuring in the last one third of night sleep. The person wakes up frightned and remembers the dream vividly (in contrast to night terror).
3. Narcolepsy : - This is characterized by excessive day time sleep, often disturbed night time sleep and disturbances in the REM sleep. Age of onset is between 10-20 years. There is irresistable desire to sleep and bouts of sudden sleep each lasting for 10-30 minutes occuring during day time. In majority of cases narcolepsy is associated with one or more accessory symptoms : ?

- Cataplexy : - It is the most common accessory symptom and is characterized by sudden decrease in muscle tone either, local or generalized.
- Hypnagogic hallucination : - Hallucination occuring just before falling asleep . When hallucination occurs just before awakening it is called hyponopompic hallucinations.
- Sleep paralysis (least common)

Treatment of narcolepsy include stimulant medications (methyphenidate, amphetamines) or modafinil.

KollegeApply

194. Calcium absorption is hampered by

a) Protein

b) Lactose

c) Acid

d) Phytates

Correct Answer - D
Ans. D. Phytates
Calcium absorption is increased by i) Lactose, ii) Proteins, and iii) Acidic environment
Calcium absorption is decreased by i) Phytates, ii) Phosphates, iii) Oxalates; iv) Tetracycline; v) alkaline environment

CollegeApply

195. Suppressor Strip on anterior edge of pre-central gyrus has following function ?

a) Increase extensor tone

b) Pain perception

c) Inhibition of stretch reflex

d) Voluntary movement

Correct Answer - C
Ans. C. Inhibition of stretch reflex
[Ref Ganong 25th/e p.242]

- "Stimulation of the anterior edge of precentral gyrus causes inhibition of stretch reflex.

KollegeApply

196. Doll's eye reflex is used in?

a) Hemiplegic

b) Paraplegic

c) Unconscious patient

d) Cerebral palsy

Correct Answer - C

Ans. C. Unconscious patient

- Doll's eye reflex, also called Oculocephalic reflex, is used to assess brain function in unconscious/Comatose patients.
- It checks the vestibule-ocular reflex in unconscious patients.
- Head is rotated from side to side with eyes kept open.

i) Positive (normal) -

- Eyes move in the direction opposite to that of the head movement.
- It signifies intact brainstem.

ii) Negative (abnormal) -

- Eyes move in the direction of head movement.
- It signifies brainstem damage.

CollegeApply

197.

KollegeApply

Part of sympathetic system which secrete chemical transmitter?

a) Cardiac ganglion

b) Cervical sympathetic chain

c) Adrenal medulla

d) Thoracic sympathetic chain

Correct Answer - C

Ans. C. Adrenal medulla

[Ref: Textbook of Human physiology by sherwood p.681.]

- The Adrenal medulla is actually a modified part of the sympathetic nervous system.
- The adrenal medulla consists of modified postganglionic sympathetic neurons called chromaffin cells.
- Unlike ordinary postganglionic sympathetic neurons, chromaffine cells, do not have axonal fibers that terminate on effector organs.
- Instead, on stimulation by preganglionic fibers, the chromaffine in cells release their chemical transmitter directly into the blood.

CollegeApply

198. Which of the following has direct innervation from sympathetic system but no parasymputhetic supply?

a) Heart

b) Intestine

c) Skin

d) None

Correct Answer - C

Ans. C. Skin

Skin has no parasympathetic supply but has : -

- Sympathetic cholinergic supply - sweat gland
- Sympathetic adrenergic supply - cutaneous blood vessels.

KollegeApply

199. Neuropraxia is ?

a) Damage to axon

b) Damage to endoneurium

c) Damage to epineurium

d) No Structural damage

Correct Answer - D
Ans. D. No Structural damage
[Ref: Apley's 8'h/e p' 231.]

- Neuropraxia – No anatomical disruption; axon & myelin sheath remain intact.
- Axontemesis - Disruption of axon with myelin sheath; Endoneurium is intact.
- Nuerotoemesis - Complete section of nerve; Axon, myelin sheath, endometrium, perimeurium, epineurium all are disrupted.

KollegeApply

200. RMP in smooth muscles?

a) -90 mV

b) -70 mV

c) -150 mV

d) - 40 mV

Correct Answer - D
Ans. D. - 40 mV
RMP FOR VARIOUS EXCITABLE TISSUES:

- Neuron: -70 mV
- Skeletal muscle & Ventricle (cardiac muscle): -90 mV
- SA node: -30 to -40mV
- Smooth muscle: -30 to -50 mV
- Inner ear hair cell: -150 mV
- RBC: -10 mV
- Thyroid gland: -50mV
- Hair cells baseline membrane potential: - 60mV

KollegeApply

201. **Which of the following statement is TRUE about Bohr's effect?**

a) Decreased affinity of Hb to 02 is associated with decreased pH & increased C02

b) Decreased affinity of Hb to 02 is associated with increased pH & decreased C02

c) Decreased affinity of Hb to 02 is associated with decreased pH & C02

d) Decreased affinity of Hb to 02 is associated with increased pH & C02

Correct Answer - A

- The decrease in O2 affinity of hemoglobin when the pH of blood falls is called the **Bohr effect.**
- It is closely related to the fact that deoxygenated hemoglobin (deoxyhemoglobin) binds H+ more actively than does oxygenated hemoglobin (oxyhemoglobin).
- The pH of blood falls as its CO2 content increases, so that when the PCO2 rises, the curve shifts to the right and the P50 rises.

Ref: Barrett K.E., Barman S.M., Boitano S., Brooks H.L. (2012). Chapter 35. Gas Transport & pH. In K.E. Barrett, S.M. Barman, S. Boitano, H.L. Brooks (Eds), Ganong's Review of Medical Physiology, 24e.

KollegeApply

202. Halden Effect is ?

a) CO_2 delivery by increased 02

b) 0_2 delivery by increased CO2

c) CO_2 delivery by increased CO2

d) 0, delivery by increased CO

Correct Answer - A

Ans. A. CO_2 delivery by increased 02

[Ref: Ganong 24n/e p. 644 & 23'd/e p. 612]

Because deoxyhemoglobin binds more H+ than oxyhemoglobin does and forms carbamino compounds more readily, binding of O2, to hemoglobin reduces its affinity for CO2, (Haldane effect).

Kollegeapply

203. Total surface area of respiratory membrane ?

a) 25 cm'

b) 50 cm'

c) 25 m^2

d) 100 m2

Correct Answer - D
Ans. D. 100 m2
[Rel Principles of medical physiology p.340]

- Thickness of respiratory membrane is about 0.5 pm and its total surface area in two the lungs equals about 100 m2.

KolleeApply

204. Damage to pnemotaxic center along with vagus nerve causes which type of respiration?

a) Chyne stoke breathing

b) Deep and slow

c) Shallow and rapid

d) Inspiratory Spasm

Correct Answer - D

Ans. D. Inspiratory Spasm

[Ref Principles of medical physiology p. 981).

- Damage to pneumotaxic center or mid pontine transection (between upper and lower pons) produces -

1. With vagi intact:- Deep and slow breathing
2. With bilateral vagotomy: Apneustic breathing (apneusis), i.e. sustained inspiratory spasm which is interrupted by brief and inefficient expiration.

CollegeApply

205. **Transpulmonary pressure is the difference between:**

a) The bronchus and atmospheric pressure

b) Pressure in alveoli and intrapleural pressure

c) Atmosphere and intrapleural pressure

d) Atmosphere and intraalveolar pressure

Correct Answer - B

Transpulmonary pressure is the pressure difference between alveolar pressure and intrapleural pressure. Before the start of inspiration or at the end of expiration it is about +5cm H_2O. Positive transpulmonary pressure keeps the alveoli open.

- **Intrapleural pressure** is the pressure between two layers of pleura. It is about -5cm H_2O before the start of inspiration or at the end of expiration.
- **Alveolar pressure** is the pressure within the terminal air spaces. It is the sum of pleural pressure and elastic recoil pressure of the lung. It is atmospheric before the start of inspiration or at the end of expiration.
- **Transthoracic pressure** is the pressure difference between alveolar pressure and pressure at the body surface.

Ref: Fundamentals of Respiratory Physiology By A S Chakrabarty, Page 32

KollegeApply

206. Normal transpulmonary pressure during quiet breathing?

a) + 8 to +5 cm H_20

b) - 8 to - 5 cm H20

c) 0 to + 1 cm **H_20**

d) 0 to -1 cm **H20**

Correct Answer - A

Ans. A. + 8 to +5 cm H_20

- During quiet breathing, transpulmonary pressure is between +8cm (at end of inspiration) and +5 cm (at end of expiration).

KolleseApply

207. **What is the partial pressure of oxygen at 760mmHg atmospheric pressure?**

a) 76

b) 160

c) 120

d) 130

Correct Answer - B

The pressure of a gas is proportional to its temperature and the number of moles per volume.

P= nRT/V, where,

n= number of moles

P= Pressure

R = Gas constant

T= Absolute temperature

V= Volume

The pressure exerted by one gas in a mixture of gases is equal to the total pressure times the fraction of the total amount of gas it represents.

The partial pressure of oxygen in dry air is therefore 0.21 x 760= 160 mm of Hg at sea level.

Ref: Ganong, 23rd Ed, Page 588

KollegeApply

208. What is the partial pressure for oxygen in the inspired air?

a) 116 mm Hg

b) 158 mm Hg

c) 100 mm Hg

d) 0.3 mm Hg

Correct Answer - B
Partial pressure of **O2 in inspired air** (Pi O2) - **158 mm Hg**
Gaseous concentration & its partial pressure in alveoli:
1. Oxygen:
Concentration & partial pressure controlled by,
* Rate of absorption of O2 into blood
* Rate of entry of new O2 into lungs by ventilatory process.
Values:
* Partial pressure of **O2 in inspired air** (Pi O2)
  - 158 **mm Hg**
* Partial pressure of O2 in alveolar air (PA O2)
  - 100 mm Hg
  - Calculated by "Alveolar gas equation".
* Partial pressure of O2 in expired air (PE O2)
  - 116 mm Hg
2. Carbon-di-oxide:
* Partial pressure of CO2 in inspired air (Pi CO2)
  - 0.3 mm Hg
* Partial pressure of CO2 in alveolar blood (PA CO2)
  - 40 mm Hg
* Partial pressure of CO2 in expired air (PE CO2)
  - 32 mm Hg

KollegeApply

KollegeApply

209. Isocapenic buffering is ?

a) Increcased pCO_2 with increased CO2

b) Increcased pCO_2 with decreased CO,

c) Normal pCO, with increased CO2

d) None of the above

Correct Answer - C
Ans. C. Normal pCO, with increased CO2
* During exercise, initially CO2 production and increase in ventilation are proprotionate.
  - So, pCO2 remains the same.
  - This is called isocapnic buffering.
* But, in later stages, ventilation increases more than the rate of CO2 production.
* As a result, PCO2 decreases.

KottegeApply

210. Vital capacity is measured by ?

a) Plethysmography

b) Gas-dilution methed

c) Nitrogen washout technique

d) Spirometer

Correct Answer - D
Ans. D. Spirometer
Spirometry can measure:- Tidal volume (TV), inspiratory reserve volume (IRV), expiratory reserve volume (ERV), vital capacity (VC), forced vital capacity (FVC), FEV.
Spirometry cannot measure:- Residual volume (RV), functional residual capacity (FRC), total lung capacity (TLC).

KollegeApply

211. In patients with emphysematous bullae, total lung volume is best determined by?

a) Spirometry

b) Helium dilution method

c) Plathysmography

d) Any of the above

Correct Answer - B

Ans. B. Helium dilution method

- Total lung capacity (TLC) is determined by helium dilution method which does not measure volume in bullae.
- TLC measured by plethysmography includes the volume of bullae also.
- Thus, gas volume in bullae can be determined by subtracting the TLC determined by helium dilution from the TLC determined by plethysmography.

KolleeApply

212. All are true about compliance of lung except ?

a) Change in Volume per unit change in pressure

b) Total Compliance is 0.2 L/cm

c) A measure of distensibility

d) Decreased in emphysema

Correct Answer - D

Ans. D. Decreased in emphysema

[Ref. Principles of medical physiology p.325,326 ; Ganong 24h/e p. 632]

- The change in volume per unit change in pressure is called 'compliance'. The total compliance of both lungs together in the normal adult human being is about 0.2 L/cm water.
- That is, every time the trans pulmonary pressure increases by 1 centimeter of water, the lung volume will expand 0.2 L (200 ml).
- Compliance is a measure of dispensability.
- Compliance is increased in emphysema.

CollegeApply

213. Normal respiratory compliance is ?

a) 200 ml/cm water

b) 50 ml/cm water

c) 100 ml/cm water

d) 150 ml/cm water

Correct Answer - A
Ans. is 'a' i.e., 200 ml/cm water
The lungs and thoracic cage are both elastic structures. Hence they display a constant relationship between distending pressure and change in volume.
The change in volume per unit change in pressure is called "compliance".
The total compliance of both lungs together in the normal adult human being is about *0·2 L/cm water.*
That is, every time the transpulmonary pressure increases by 1 centimeter of water, the lung volume will expand 0·2 L (200 ml).
Compliance is a measure of distensibility.

CollegeApply

214. In relaxation pressure curve, in chronic smokers at Zero relaxation pressure ?

a) Lung volume increases

b) Lung volume decreases

c) No change in lung volume

d) Any of the above

Correct Answer - A

Ans. A. Lung volume increases

Chronic smoking causes COPD with loss of elasticity of lung and there is hyperinflation of lung.

Combined recoil pressure of lungs and thoracic cage is inwardly directed in hyper inflated lungs.

As lung loses its elasticity, thoracic cage distends (expands) to a higher volume at zero relaxation pressure -+ Functional residual capacity is increased.

CollegeApply

215. Which of the following parameter Indicates elimination of CO_2 from lung ?

a) Pa02

b) pH

c) PaCO2

d) HCO, level

Correct Answer - C
Ans. C. PaCO2
[Ref: Clinical physiology p.712]

- PaCO2 (Partial pressure of arterial CO2) → Reflects the adequacy of the lungs ventilation and CO, elimination (known as respiratory parameter).

KollegeApply

216. In zero gravity V/Q ratio is ?

a) 0.8

b) 1

c) 2

d) 3

Correct Answer - B

Ans. B. 1

- Removal of gravity results in more uniform ventilation and perfusion this V/Q should be 1.
- But, in all recent studies it has been shown, that there are other (non-gravitational) factors which contributes to V/Q mismatch.
- Therefore even at zero gravity, Heterogeneity of perfusion and ventilation occurs.
- Thus, V/Q ratio cannot be 1 at zero gravity.
- But, in given scenario we accept simple gravitational model, in which V/Q ratio must be I' though theoretically.

KollegeApply

217. Normal0_2 extraction ratio of tissues ?

a) 5%

b) 15%

c) 25%

d) 40%

Correct Answer - C
Ans. C. 25%
Normal O2 extraction ratio is 25-30 %

KollegeApply

218. Poiseuille's equation states that?

a) Blood flow is directly proportion to 2^{nd} power of radius

b) Blood flow is directly proportiom to 4^{th} power of radius

c) Blood flow is inversely proportion to 2^{nd} power of radius

d) Blood flow is inversely proportion to 4^{th} power of radius

Correct Answer - D

Ans. D. Blood flow is inversely proportion to 4^{th} power of radius

Minute volume:

- Amount of air breathed in (inspired) or out (expired) by the lungs in one minute. So, minute volume = Tidal volume x Respiratory rate.
- It is at about 6L

KollegeApply

219.

KollegeApply

Aortic valve closure occurs in which part of cardiac cycle?

a) Beginning of isovolumetric contraction

b) Beginning of ventricular ejection

c) Beginning of isovolumetric relaxation

d) During rapid ventricular filling

Correct Answer - B
Ans. B. Beginning of ventricular ejection
Lung capillary volume – 150ml.

KollegeApply

220. Role of ion channels on vascular endothelium is ?

a) Ca^{+} influx

b) K^{+} efflux

c) Na^{+} influx

d) Cl- effux

Correct Answer - D
Ans. D. Cl- effux
O2 therapy is useful in hypoxic hypoxia like hypoventilation (COPD, restrictive disease) and high altitude.
It is not useful in anemic hypoxia (anemia, CO poisoning), stagnant hypoxia (CHF) and histotoxic hypoxia (cyanide poisoning)

KollegeApply

221. Action Potential in cardiac muscles has how many phases?

a) 2

b) 3

c) 4

d) 5

Correct Answer - D
Ans. D. 5
Blood flow (Q) is the volume flow per unit time (cm3/s), whereas velocity of blood flow (V) is displacement of blood per unit time (cm/s).
Increasing the radius two times will decrease the velocity by 4 times.

KollegeApply

222. Poiseuille's equation states that

a) Blood flow is directly proportion to 2nd power of radius

b) Blood flow is directly proportion to 4th power of radius

c) Blood flow is inversely proportion to 2nd power of radius

d) Blood flow is inversely proportion to 4th power of radius

Correct Answer - B
Blood flow is directly proportioned to 4th power of radius.
POISEUILLE'S LAW:
* Also referred as **"Hagen-Poiseille's Law".**
*** Poiseuille's equation states,**
- Q = P1 - P2 * { (Π r4) / (8 η L)}
- Q - Flow rate
- (P1 - P2) - Pressure difference across vessel (provided P1 > P2).
- η - Blood viscosity.
- r - Radius.
- L - Tube length.

* If parameter values remains constant,
- Blood flow is directly proportional to 4th power of radius.
* Resistance of vessel to blood flow can be calculated by combining Ohm's law with Poiseuille's equation.
- By substituting values of Q from Poiseuille's law in Ohm's law.

* Implying, resistance is mainly affected by,
- Blood vessel radius,
- Vasodilatation/vasoconstriction.

* Thus ultimately, if parameter values remain constant,
_ Resistance to blood flow is inversely proportional to 4th power of radius.

KollegeApply

223. Aortic valve closure corresponds to the beginning of:
September 2011

a) Systole

b) Parasystole

c) Isovolumetric relaxation

d) Isovolumetric contraction

CollegeApply

Correct Answer - C
Ans. C: Isovolumetric relaxation
Cardiac Diastole

- It is the period of time when the heart relaxes after contraction in preparation for refilling with circulating blood.
- During ventricular diastole, the pressure in the (left and right) ventricles drops from the peak that it reaches in systole.
- When the pressure in the left ventricle drops to below the pressure in the left atrium, the mitral valve opens, and the left ventricle fills with blood that was accumulating in the left atrium.
- The isovolumic relaxation time (IVRT) is the interval from the aortic component of the second heart sound, that is, closure of the aortic valve, to onset of filling by opening of the mitral valve.
- Likewise, when the pressure in the right ventricle drops below that in the right atrium, the tricuspid valve opens, and the right ventricle fills with blood that was accumulating in the right atrium.
    - During diastole the pressure within the right ventricle is lower than that in aorta, allowing blood to circulate in the heart itself via the coronary arteries.

224. Cerebral blood flow is increased by ?

a) Increase in P02

b) Increase in PCO2

c) Decrease metabolic rate

d) All of the above

Correct Answer - A
Ans. A. Increase in P02
[Ref: www.ncbi.nlm.nih.govl]
One major function of ion channels in endothelial cells is the control of Ca2+ influx either by a direct modulation of Ca2+ influx pathway or by indirect modulation Na+ and Cl channels.

KolleegeApply

225. ST Segment of ECG Corresponds to ?

a) Ventricular depolarization

b) Ventricular repolarization

c) Atrial depolarization

d) AV Conduction

Correct Answer - D
Ans. D. AV Conduction
Action potential in myocardial fibers has 5 phases :0,1,2,3 and 4.

KollegeApply

226. **Cerebral blood flow is regulated by all, EXCEPT:**

a) Intracranial pressure

b) Arterial PC02

c) Potassium ions

d) Cerebral metabolic rate

Correct Answer - C

Factors affecting overall cerebral blood flow include:

- Intracranial pressure
- Local constriction & dilation of cerebral arterioles
- Mean arterial pressure at brain level
- Viscosity of blood
- Mean venous pressure at brain level

The most important extrinsic influences on CBF are respiratory gas tensions particularly arterial PC02. Cerebral blood flow is directly proportional to arterial PC02 between tensions of 20 and 80 mm of Hg.

Ref: Barrett K.E., Barman S.M., Boitano S., Brooks H.L. (2012). Chapter 33. Circulation through Special Regions. In K.E. Barrett, S.M. Barman, S. Boitano, H.L. Brooks (Eds), Ganong's Review of Medical Physiology, 24e.

KollegeApply

227. **In an ECG the cardiac event corresponding to the ST segment is:**

a) Atrial depolarisation

b) Ventricular depolarisation

c) Atrial repolarisation

d) Ventricular repolarisation

Correct Answer - D

PR – Interval corresponds with atrial depolarisation and conduction through AV node
QRS – corresponds with Ventricular depolarisation + atrial repolarisation
QT – corresponds with ventricular depolarisation + ventricular repolarisation

Ref: Review of Medical Physiology by Ganong, 20th Edition, Page 532.

KollegeApply

228. ST Segment of ECG corresponds to which phase of action potential ?

a) Phase 0

b) Phase I

c) Phase II

d) Phase III

Correct Answer - C

Ans. C. Phase II

Relation of ECG with phases of action potential -

- Phase 0 & 1 = QRS comPlex
- Phase 2 = ST segment
- Phase 3 = T wave.

KollegeApply

229. ST Segment of ECG Correspords to which phase of action potential ?

a) Rapid depolarixation

b) Rapid repolarizedtion

c) Find repolarizetion

d) Plateu Phase

Correct Answer - D
Ans. D. Plateu Phase
Phase-2 is plateau Phase.

KollegeApply

230. Baroreeaptors are located in ?

a) Tunica media

b) Tunica intima

c) Tunica adventitia

d) None

Correct Answer - C
Ans. C. Tunica adventitia
Baroreceptors are mechano-receptors that are located in the adventitia of carotid artery and aorta, at specialized Locations called sinuses.

KollegeApply

231. Baroreceptor are ?

a) Carotid body

b) Carotid sinus

c) Aortic body

d) None

Correct Answer - B
Ans. is 'b' i.e., Carotid sinus

- Baroreceptors are *mechanoreceptors* that are located in the adventia of carotid artery and aorta, at specialized locations called sinuses.

1) Carotid sinus is a little bulge at the root of internal carotid artery, located just above the bifurcation of the common carotid artery. It is innervated by the sinus nerve, a branch of glossopharyngeal (IX cranial) nerve.
2) Aortic arch (aortic sinus) also contains mechenoreceptors (stretch receptors) which are similar to carotid sinus receptors. However, their afferent nerve fibers travel in the aortic nerve, a branch of Vagus (X cranial) nerve.
The sinus nerve (from carotid sinus) and aortic nerve/vagal fibers (from aortic sinus) are together called `Sinoaortic nerves'. They, together, are also refered to as 'Buffer nerves' because they are the afferents of cardiovascular reflexes that buffer abrupt changes in blood pressure.

KollegeApply

232. After load is decreased by ?

a) Exercise

b) Anemia

c) Thyrotoxicosis

d) All of the above

Correct Answer - D

Ans. D. All of the above

After load (resistance offered to ventricular pumping action) :

- Left ventricle has to pump out blood against aortic resistance. Increased aortic resistance (e.g., high BP) tends to decrease stroke volume.
- Decreased peripheral resistance increases cardiac output e.g., in exercises, AV fistula or shunt, severe anemia (due to vasodilation by anemic hypoxia), thyrotoxicosis (due to vasodilation caused by increased O2 consumption),andwetberi-beri.

KollegeApply

233. Oxygen saturation of venous blood is ?

a) 30%

b) 50%

c) 70%

d) 90%

Correct Answer - C
Ans. C. 70%
Mixed venous oxygen saturation is the percentage of oxygen bound to hemoglobin in venous blood, i.e, blood returning to right side of heart.
Normal value is 60-80% (average 70 %)
Also know, Arterial oxygen saturation is 95-99 % (average 97 %).

KollegeApply

234. Blood pressure is dependant on?

a) Cardiac output

b) Heart rate

c) Stroke volume

d) All of the above

Correct Answer - D
Ans. D. All of the above
Arterial blood pressure is the product of the cardiac output and the total peripheral vascular resistance (TPR).
Mean blood pressure is the major determinant of adequate blood flow through the tissues.

KollegeApply

235. Organ with dual blood supply?

a) Heart

b) Liver

c) Kidney

d) Lung

Correct Answer - B:D
Ans. (B) Liver (D) Lung
Liver has dual supply - Hepatic artery and portal vein
Lung has dual supply - Pulmonary artery and bronchial artery.

KollegeApply

236. Position of stretch receptors in left atrium?

a) AV septum

b) Interatrial septum

c) Entrance of pulmonary vein

d) None of the above

Correct Answer - C

Ans. C. Entrance of pulmonary vein

[Ref principles of medical physiolog p.753]

Atrial stretch receptors are located at the various venoatrialjunction.

1. Atriocaval receptors are located in the right atrium just at the entrance of SVC and IVC,
2. Pulmonary venoatrial receptors are located in the left atrium just at the entrance of pulmonary vein.

KolleeApply

237. True about Bezold-Jarish reflex?

a) Hypertension

b) Tachycardia

c) Hyperpnea

d) Hypotension

Correct Answer - D
Ans. D. Hypotension
The ventricular baroreceptors are scattered throughout the left ventricle and interventricular septum.
Stimulation of these recePtors by injection of certain drugs (e.g., serotonine, veratibine, or niiotine) into the left coronary artery produces apnea, bradycardia and hypotension.
This is called Bezold-Jarisch reflex or coronary chemo reflex.

KollegeApply

238. True about Coronary circulation ?

a) 250 ml/min

b) Major flow during systole

c) Unifrom flow during full cardiac cycle

d) All of the about

Correct Answer - A
Ans, A. 250 ml/min
The heart receives its blood supply from two coronary arteries right and left which arise from the root of the aorta.
Coronary blood flow, at rest, is about 250 ml per minute (5% of total cardiac output).

KollegeApply

239. Glomerular filteration of a substance depends upon?

a) Lipid solubility of substance

b) Binding capacity to albumin

c) Both of the above

d) None of the above

Correct Answer - B

Ans. B. Binding capacity to albumin

Plasma protein binding of a substance decreases is glomerular filtration.

Only unbound substances are filtered.

Glomerular filtration does not depend on lipid solubility as filtration occurs through the pores in glomerular membrane

(Lipid solubility affects the transport of substance across cellular membrane)

KollegeApply

240. GFR measurement help in determining ?

a) Heart rate

b) Recovery from shock

c) Stage of kidney disease

d) Blood volume

Correct Answer - C
Ans. C. Stage of kidney disease
GFR is a measure of proper functioning of kidney.
Its value determines the stage of kidney disease.

KollegeApply

241. Tubuloglomerular feedback is for regulation of?

a) BP

b) Blood volume

c) Na^+ reabsorption

d) GFR

Correct Answer - D

Ans. D. GFR

- To perform the function of autoregulation, the kidneys have a feedback mechanism that links changes in sodium chloride concentration at the macula densa with the control of renal arteriolar resistance.
- This feedback helps to ensure relatively constant delivery of sodium chloride to the distal tubule and helps prevent spurious fluctuations in renal excretion that would otherwise occur.
- The tubuloglomerular feedback mechanism has two components that act together to control GFR.

KollegeApply

242. Glomerulotubular feedback is for regulation of?

a) BP

b) Blood volume

c) Na^+ reabsorption

d) Renal blood flow

Correct Answer - C

Ans. C. Na^+ reabsorption

Tubulo-glomerular feedback - Regulation of GFR in relation to renal blood flow.

Glomerulo-tubular feedback - Regulation of tubular reabsorption (especially Na+2) in relation to GFR.

KollegeApply

243. Mesangial cell contraction is done by?

a) cAMP

b) Dopamine

c) PAF

d) ANP

Correct Answer - C
Ans. C. PAF
Contraction of mesangial cells is produced by :-Endothelin, angiotensin II, vasopressin, norepinephrine, PAF, PDGF, thromboxane A2, PGF2, Leukotrienes C4 & D4, Histamine.
Relaxation of mesangial cells is produced by ANP, Dopamine, PGE2, cAMP.

KollegeApply

244. Mechamism of secretion of ammonia in distal tubule is?

a) Primary active transport

b) Symport

c) Antiport

d) Passive diffusion

Correct Answer - D
Ans. D. Passive diffusion
Ammonia (NH3) transport involves passive diffusion from tubular cells into the tubular lumen.

KollegeApply

245. A Substance has clearance same as inulin clearance, the Substarce is mainly excreted in urine by ?

a) Tubular Secretion

b) Glomerular filtration

c) Both a & b

d) Vascular leakage

Correct Answer - B

Ans. B. Glomerular filtration

If there be a substance that passes freely across the glomerular membrane but is neither reabsorbed nor secreted by tubular activity, urinary excretion would represent the amount filtered and nothing but the amount filtered.

Hence, its clearance would indicate how much plasma gets filtered every minute.

All these features make it a very suitable substance for estimation of glomerular filtration rate.

Inulin clearance is equal to the GFR, i.e., 126 ml/min.

VoltageApply

246. Normal Uninary pH is ?

a) 5.0 - 6.0

b) 6.5 - 7.0

c) 8.5 - 9.0

d) None

Correct Answer - B
Ans. B. 6.5 - 7.0
Blood pH – 7.4
Interstitial fluid pH – 7.34
Urine pH – 6.5 – 7.0 (4.5 to 8.0)

KollegeApply

247. Increased aldosterone and ADH secretiom following major trauma results in all the following except ?

a) Decreased Na^+ excretion is urine

b) Increased K' excretion in urine

c) Increased osmolarity of urine

d) Increased water excretion

Correct Answer - D

Ans. D. Increased water excretion

After major trauma, secretion of ADH and aldosterone increases.

ADH - Causes increased water reabsorption from collecting duct.

Aldosterone - Causes increase Na+&Cl- reabsorption and increase K+ secretion/excretion.

KollegeApply

248. Which carrier pump is transporting solutes in thick ascending limb of Henle loop?

a) Carrier pump Na-K-2Cl transporter.

b) NaCl- cotransporter

c) Na2+-H+ exchanger

d) Na2+-K+ exchanger

Correct Answer - A
Carrier pump Na-K-2Cl transporter.
REABSORPTION IN THICK ASCENDING LIMB:
Sodium, Potassium & Chloride reabsorption:

- By “Secondary active transport” -
  - Through Na2+-K+-2Cl-- carrier transporter.
  - Transports one Na2+, one K+, & two Cl-.
  - Active sodium absorption occurs.
- 30% filtered Na2+ reabsorbed.

Kotegs Apply

249. Receptive area of stomach?

a) Antrum

b) Pylorus

c) Body

d) Fundus

Correct Answer - D
Ans. D. Fundus
Anatomically the stomach is divided into fundus, body (corpus), antrum and pylorus.
However, functionally, the stomach is divided into a proximal and distal end.
'Proximal stomach' includes fundus and proximal l/3d of the body and 'distal stomach'' includes distal 2/3d of the body and the antrum.
A vasovagal reflex triggered by swallowing a bolus of food causes the lower esophageal sphincter to open and the proximal stomach to dilate (receptive relaxation) to accommodate the swallowed food.
As a result, the internal pressure hardly rises in spite of the increased filling.
Thus, the proximal stomach serves primarily the function of storage.

CollegeApply

250. Inner plexus in GIT is ?

a) Mucosal plexus

b) Submucosal plexus

c) Auerbach's plexus

d) Myenteric plexus

Correct Answer - B
Ans. B. Submucosal plexus
Myenteric plexus (Auerbach's plexus) - External plexus.
Meissner's plexus (submucosal plexus) - Inner plexus.

KollegeApply

251. Function of myenteric plexus is to regulate ?

a) GI secretion

b) Local blood flow

c) Motility

d) All of the above

Correct Answer - C
Ans. C. Motility
Myenteric plexus (Aurbach's plexus) controls GI motility.
Meissner's (submucosal) plexus controls GI secretions and local blood flow.

KollegeApply

252. Chymotrypsinogen is activated into chymotrypsin by:

a) Trypsin

b) Pepsin

c) Renin

d) HCl

Correct Answer - A
Ans. A: Trypsin

- Trypsin is secreted into the duodenum, where it hydrolyzes peptides into its smaller building blocks, namely amino acids. Trypsin catalyzes the hydrolysis of peptide bonds.
- Trypsins have an optimal operating pH of about 8.
- Trypsins are considered endopeptidases, i.e., the cleavage occurs within the polypeptide chain rather than at the terminal amino acids located at the ends of polypeptides.
- Trypsin is produced in the pancreas in the form of inactive trypsinogen.
- It is then secreted into the small intestine, where the enzyme enteropeptidase activates it into trypsin by proteolytic cleavage. The resulting trypsins themselves activate more trypsinogens (autocatalysis), chymotrypsinogen, Elastase/ proelastase, Carboxypeptidase A and B, Colipase and Phospholipase A2.

CollegeApply

253. Example of exopeptidase is ?

a) Trypsin

b) Chymotrypsin

c) Elastase

d) Carboxy peptidases

Correct Answer - D
Ans. D. Carboxy peptidases

KollegeApply

254. Secretion of bile out of hepactocytes occurs via?

a) Passive diffusion

b) Facilitated diffusion

c) Osmosis

d) Active transport

Correct Answer - D
Ans. D. Active transport
Bile contains substances that are actively secreted into it cross the canalicularmembrane, such as bile acids' phosphatidylcholine, conjugated bilirubin, cholesterol, and xenobiotics.
Each of these enters the bile by means ofa specific canaliculartransPorter.
It is the active secretion of bile acids, however, that is believed to be the primary driving force for the initial formation of canalicular bile.

CollegeApply

255. Absorption of calcium ion is affected mostly by ?

a) Calcitriol

b) Parathormone

c) Glucocorticoids

d) ACTH

Correct Answer - A
Ans. A. Calcitriol
With an average intake of 1000 mg of calcium its net intestinal absorption is only 150-250 mg/day. Calcium is absorbed mainly in the duodenum and jejunum (proximal intestine) by an active transport mechanism regulated by calcitriol.
Parathormone indirectly promotes absorption of calcium by increasing the renal synthesis ofcalcitriol.

KolbeApply

256. Vitamin D absorption is decreased by ?

a) Proteins

b) Acid

c) Lactose

d) Fat malabsorption

Correct Answer - D
Ans. D. Fat malabsorption
Absorption of all fat soluble vitamins is decreased in fat malabsorption.
These fat soluble vitamins are A,D,E and K.

KollegeApply

257. Effect of cholecystokinin on GIT ?

a) Increases gastric acid secretion

b) Increases small intestinal peristlasis

c) Increases gastric motility

d) Relaxes gall bladder

Correct Answer - B
Ans. is 'b' i.e., Increases small intestinal peristalsis

KollegeApply

258. Small intestinal peristalsis is controlled by :

a) Myentric plexus

b) Meissners plexus

c) Vagus nerve

d) Para sympathetic system

Correct Answer - A
A i.e. Myentric plexus
Myenteric (Auerbach's) plexus is situated b/w and innervates *outer longitudinal & middle circular muscular* layers and is *primarily concerned with motor controlQ.* Submucosal (meissner's) plexus situated between middle circular layer and mucosa is primarly concerned with *control of intestinal secretionQ* as it innervates glandular epithelium, intestinal endocrine cells & submucosal blood vessels.

KollegeApply

259. How is folic acid absorbed in proximal jejunum?

a) Facilitated diffusion

b) Active transport

c) Passive transport

d) Both active & passive transport

Correct Answer - D
Ans D. Both active & passive transport
Folates are Present in natural foods and tissues as polyglutamates because these forms serve to keep the folates within cell.
In plasma and urine, they are found as monoglutamates because this is the only form that can be transported across membranes.
Enzymes in the lumen of the small intestine convert the polyglutamate form to the monoglutamate form of the folate, which is absorbed in the proximal jejunum via both active and passive transport.

CollegeApply

260. **Colipase is:**

a) Is secreted by Oxyntic cells

b) Is secreted in the active form

c) Helps gastric lipase

d) Encoded by the gene CLPS

Correct Answer - D

Colipase is a small protein cofactor needed by pancreatic lipase for efficient dietary lipid hydrolyisis. It is secreted as an inactive form procolipase by the pancreas and in the intestinal it is converted to the active form by trypsin. Efficient absorption of dietary fats is dependent on the action of pancreatic triglyceride lipase. Colipase binds to the C-terminal, non-catalytic domain of lipase, thereby stabilising as active conformation and considerably increasing the overall hydrophobic binding site. It is encoded by the gene CLPS.

Ref: Ganong's Review of Human Physiology, 21st Edition, Page 476

Kollegeapply

261. **Cholecystokinin is produced from:**

a) Hepatocyte

b) Gastric mucosa

c) Duodenal mucosa

d) Epithelial cells of distal common bile duct

Correct Answer - C

The major factor controlling the contraction of the gallbladder is the hormone cholecystokinin (CCK), which is released from the duodenal mucosa (I cells) in response to the ingestion of fats and amino acids.

Reference:

Harrisons Principles of Internal Medicine, 18th Edition, Page 2616

KollegeApply

262. Somatomedin - C deficiency causes?

a) Achondroplasia

b) Cretinism

c) Growth retardation

d) Juvenile DM

Correct Answer - C
An.s. C. Growth retardation
Effects of growth hormone on skeletal growth is mediated by somatomedins.
Deficiency of somatomedins causes growth retardation and dwarfism.

KollegeApply

263. All are about adiponectin except ?

a) Secreted by adipose tissue

b) Lowers glucose

c) Increases FFA oxidation

d) Positive Correlation with BMI

Correct Answer - D
Ans. D. Positive Correlation with BMI
Adiponection is a hormone secreted by adipose tissue.
It lowers glucose and FFA levels.
Adiponectin has negative correlation with BMI, and more negatively with visceral fat than subcutaneous fat.
Adiponectin has inszlir sensitizing action and its levels correlate with insulin sensitivity. By insulin sensitizing action, adiponectin reduces tissue TG content, increase FFA oxidation, and increase glucose uptake by tissue.
Adiponectin also inhibits adhesion molecules (E-selectin, VEAM) and macrophages (decrease uptake of oxidized LDL).
Adiponectin receptors are found in liver and skeletal muscles.
Recently, receptors are also found in pancreas p -cells.
Adiponectin secretion is hormone regulated. Decreased levels with insulin and glucorticoids are seen.
Adiponection levels are low in obesity, type 2DM, ischemic heart disease (IHD) anit metabolic syndrome.
Adiponectin gene is located on chromosome 3.

KollegeApply

264. Hormone responsible for galactopoiesis ?

a) Growth hormone

b) Insulin

c) Oxytocin

d) Prolactin

Correct Answer - D
Ans. D.Prolactin
Galactokinesis

- Also called milk ejection or milk letdovn.
- It is brought about by oxytocin which stimulates contraction of the myoepithelial cells in the mammary alveoli and ducts ie.contraction of lactiferous ducts and sinuses.
- Oxytocin s released when the nipple is stimulated during suckling.

CollegeApply

265. Ionotropic effect of thyroid hormone is by ?

a) Membrane receptors

b) cAMP

c) Potentiation of Catecholamines

d) cGMP

Correct Answer - C
Ans. C. Potentiation of Catecholamines
[RelGanong 24th/e p.j49l
The thyroid hormones increase the heart rate, cardiac contractility, stroke volume and cardiac output, and consequently also the systolic BP.
But the diastolic BP may fall due to vasodilatation in several vascular beds with decrease in peripheral vascular resistance.
The cardiovascular effects of thyroid hormones are partly mediated by potentiation of effects of catecholamines.

CollegeApply

266. 3 - subumit of insulin receptor binds to ?

a) Guanylyl cyclase

b) Adenylyl cyclase

c) IP3-DAG

d) Tyrosine kinase

Correct Answer - D
Ans. D. Tyrosine kinase
Insulin receptors
The insulin receptor is a combination of 4 subunits held together by disulfide linkages - Two Alpha subunits and two Beta subunits,
Alpha subunits lie entirely outside the cell membrane and function as insulin binding site.
Beta subunits Penetrate through cell membrane and protrude into the cytoplasm which has attached local tyrosine kinase.
Thus insulin receptor is an example of an enzyme - linked receptor (insulin k a group IID hormone).

CollegeApply

267. Relationship between insulin and glucose concentration?

a) Linear

b) Hyperbola

c) Sigmoidal

d) Bell Shaped

Correct Answer - C
Ans. C. Sigmoidal
'The Relationship between glucose concentration and insulin secretion is sigmoidal.
The glucose-insulin response curve come from the discovery that insulin secretion did not respond as a linear function of glucose concentration.

KottegeApply

268. Insulin mediated transport of glucose is ?

a) Seen in adipose tissue

b) Via GLUT-2

c) Main Mechanism in RBCs

d) All are true

Correct Answer - A

Ans. A. Seen in adipose tissue

Insulin stimulates the uptake of glucose by myocytes (skeletal muscle, cardiac muscles), adipocytes (adipose tissue) and hepatocytes .

Tissues that do not depend on insulin for glucose uptake include brain, erythrocytes (RBC), the epithelial cells of kidney & intestine, Liver, and Cornea & lens of eye.

The mechanism through which insulin increases glucose uptake is different in different tissues. In the muscle and adipose tissues, insulin increase facilitated diffusion by increasing glucose transporter (GLUT-4) on the cell membrane.

CollegeApply

269. Not a content of sperm ?

a) Golgi apparatus

b) Mitochondria

c) Lysosome

d) Endoplasmic reticulum

Correct Answer - D
Ans. D.Endoplasmic reticulum
Spermatozoan (sperm) has following parts :
1. Head
2. Middle piece
3. Principal piece
4. End piece (tail)

KollegeApply

270. Acrosome reaction is seen in?

a) Spermatogenesis

b) Oogenesis

c) Fertilization

d) Mensturation

Correct Answer - C

Ans. C. Fertilization

To fertilize the ovum the sperms undergo-

1. Capacitation
2. Acrosome reaction

Acrosome reaction:

- It follows the capacitation of the sperm.
- It occurs in ampulla.
- Sperm binds to zonapellucidaàZona protein -3 (ZP-3) of zonapellucida helps in attachment as well as in inducing acrosomal reaction.
- Acrosome releases lysomal enzymes, especially proacrosin which has high affinity for zonapellucida.
- Proacrosin has hydrolytic action that degrades zonapellucida in the very local region where the sperm cell is attached.
- This allows spermatozoa to swim their way to the vitelline membrane of the ovum.
- After this fertilization takes place.

KollegeApply

271. Iron is conserved by?

a) Hemopexin

b) Hepicidin

c) Hemomedins

d) None

Correct Answer - A

Ans. A. Hemopexin

[Ref: Vasudevan 3n/e p. 196]

- Human body has mechanisms to conserve iron and prevent its loss from body-

i) When RBC is lysed, hemoglobin enters into circulation.

- Being small molecular weight substance hemoglobin will be lost through urine.
- To prevent this loss, Hb is immediately taken up by haptoglobin.

ii) When the globin part is removed from Hb, the heme is produced, and is released ito circulation.

- In order to prevent its excretion through urine, heme is bound with hemopexin.

KottageApply

272. Most important intracellular buffer ?

a) Bicarbonate

b) Albumin

c) Phosphate

d) Ammonia

Correct Answer - C
Ans. C. Phosphate
Blood buffers: Hemoglobin, Plasma proteins, Bicarbonate.
Intracellular buffers: Phosphates (H_2PO_4), intracellular proteins.
Urinary buffers - Bicarbonate, Phosphate, ammonia.

KollegeApply

273. **Primitive red cells first originates in the early embryonic life is in:**

a) Liver

b) Yolk sac

c) Bone marrow

d) Spleen

Correct Answer - B

During embryogenesis, hematopoiesis occurs in extraembryonic yolk sac, the fetal liver, the thymus, and the preterm marrow. The origin of hematopoietic cells is closely tied to gastrulation, the formation of mesoderm cells, and to the emergence of the endothelial lineage. *Hematopoiesis is first established soon after implantation of the blastocyst, with the appearance of primitive erythroid cells in blood islands of the yolk sac beginning at day 18 of gestation.*

"Primitive" red cells derived from the yolk sac constitute a distinct transient erythroid lineage that differs from "definitive" red cells that subsequently mature in the fetal liver and marrow.

Ref: Palis J., Segel G.B. (2010). Chapter 6. Hematology of the Fetus and Newborn. In J.T. Prchal, K. Kaushansky, M.A. Lichtman, T.J. Kipps, U. Seligsohn (Eds), *Williams Hematology,* 8e.

KollegeApply

274. Converging point of both pathway in coagulation is at:

a) Factor VIII

b) Stuart factor X

c) Factor IX

d) Factor VII

Correct Answer - B
Answer is B (Stuart factor X)
The extrinsic and Intrinsic pathways in coagulation converge at the Stuart factor X.

KollegeApply

275. Penile erection is mediated by?

a) Parasympathetic system via muscarinic receptors

b) Parasympathetic system via nicotinic receptors

c) Sympathetic system via a-receptors

d) Sympathetic system via (3-receptors

Correct Answer - A
Ans. A.Parasympathetic system via muscarinic receptors
[Ref Ganong 24'h/e p.339-342, Ganong 23d/e p.341]
Erection of penis → Muscarinic effect of parasympathetic system.
Ejaculation - alpha-receptor ofsympathetic system

Kollegeapply

276. Inhibition of heart by vagus is mediated by which receptors -

a) M_1

b) M_2

c) N_N

d) NM_2

Correct Answer - B

Ans. B. M_2

Effect of parasympathetic system on heart are through M2 receptors.

KollegeApply

277. Inhibition of heart by vagus by M_2 receptors is medicated by which mechanism?

a) cAMP

b) Cat'

c) DAG

d) None

Correct Answer - A
Ans. A. cAMP
Muscarinic receptors (cholinergic receptors) in heart are M2 type.
These are responsible for vagus mediated bradycardia.
M2 mediated actions are through cAMP

KollegeApply

278. Glucagon activates which enzyme ?

a) Pepsinogen

b) Trypsinogen

c) Adenylyl cyclase

d) None

Correct Answer - C
Ans. C. Adenylyl cyclase
Glucagon acts through cAMP by activating adenylyl cyclase.

KollegeApply

279. Size of platelets is ?

a) 1 A°

b) 2 A°

c) 1µm

d) 2µm

Correct Answer - D
Ans. D. 2µm
Platelet = 2-3 micrometer.

KollegeApply

280. Respiratery quotient is the Ratio of -

a) CO_2 consumed to 0_2 released

b) 0_2 released to CO_2 consumed

c) Co, released to 0_2 consumed

d) 0_2 consumed to Co, released

Correct Answer - C

Ans. C. Co, released to 0_2 consumed

RQ is the ratio of the amount of CO2 released to the amount of O2 consumed.

RQ of Carbohydrate is 1.00, for fat is 0.70 and for proteins it is about 0.82.

KollegeApply

281. Intercalated disc is present in:

a) Cardiac muscle

b) Smooth muscle

c) Skeletal muscle

d) All

Correct Answer - A
A. i.e. Cardiac muscle

KollegeApply

282. If HbAl C is 8%, What will be the value of blood glucose [mg/d1] ?

a) 100

b) 150

c) 200

d) 300

Correct Answer - C
Ans. C. 200
Mean blood glucose (mg /dl) = (35.6 x HbA1C) - 77.3 = (35.6 x 8) - 77.3 = 207.5
Mean blood glucose (m moUL) = (1.98 x HbA1C) - 4.29

KollegeApply

283. Preaccelerin is ?

a) Eater II

b) Facter V

c) Facter VII

d) Facter X

Correct Answer - C
Ans. is 'c' i.e., Facter VII

KollegeApply

284. Conversion of prekallikrein to kallikrein requires which clotting factor -

a) XIII

b) XII

c) XI

d) X

Correct Answer - B
Ans. is'b'i.e., XII
[Rel Essential of medical physiology p. 612]

- Initiation of intrinsic coagulation pathway occurs when factor XII is exposed to negatively charged surface.
- This leads to activation offactor XII to XIIa.
- Factor XIIa can then hydrolyze prekallikrein to kallikrein, which in turn activates more XII to XIIa.

KollegeApply

285. Caisson's disease is associated with?

a) Rapid descend in aircraft

b) Rapid descend of deep sea divers

c) Underwater construction workers

d) All of the above

Correct Answer - C

Ans. C. Underwater construction workers

Caisson's disease, (also called decompression sickness, Bends, Diver's Paralysis, Dysbarism) is a particular form of gas embolism, which occurs when individuals are exposed to sudden lowering of atmospheric pressure like- rapid ascend of scuba and deep sea divers , individual in unpressurized aircraft in rapid ascent (e.g., in pilots), underwater construction workers and extra-vehicular activity from spacecraft.

KalingaApply

286. Regarding Caisson's disease which statement among the following is CORRECT?

a) Lung damage is caused by air embolism

b) Pain in the joints is due to nitrogen bubbles

c) Tremors are seen due to nitrogen narcosis

d) High pressure Nervous syndrome can be prevented by using mixtures of Oxygen & Helium

Correct Answer - B

Ans. is. B. ain in the joints is due to nitrogen bubbles

[REF: Ganong 22ed chapter 37, http://en.wikipedia.org/wiki/Decompression_sickness]

Decompression Sickness:

As a diver breathing 80% N2 ascends from a dive, the elevated alveolar PN2 falls. N2 diffuses from the tissues into the lungs along the partial pressure gradient. If the return to atmospheric pressure (decompression) is gradual, no harmful effects are observed; but if the ascent is rapid, N2 escapes from solution. Bubbles form in the tissues and blood, causing the symptoms of decompression sickness (the bends, caisson disease). Bubbles in the tissues cause severe pains, particularly around joints, and neurologic symptoms that include paresthesias and itching

Lung damage causes air embolism and not vice versa. The problem of nitrogen narcosis can be avoided by breathing mixtures of 02 and helium, and deeper dives can be made. However, the high-pressure nervous syndrome (HPNS) develops during deep dives with such mixtures. Tremors are symptoms of high pressure Nervous syndrome

CollegeApply

syndrome

Signs and symptoms of decompression sickness

DCS type	Bubble location	Signs & symptoms (clinical manifestations)
Musculoskeletal	Mostly large joints (elbows, shoulders, hip, wrists, knees, ankles)	Localized deep pain, ranging from mild to excruciating. Sometimes a dull ache, but rarely a sharp pain, Active and passive motion of the joint aggravates the pain, The pain may be reduced by bending the joint to find a more comfortable position, If caused by altitude, pain can occur immediately or up to many hours later.
Cutaneous	Skin	Etching, usually around the ears, face, neck, arms, and upper torso, Sensation of tiny insects crawling over the skin (formication), Mottled or marbled skin usually around the shoulders, upper chest and abdomen, with itching, Swelling of the skin, accompanied by tiny scar-like skin depressions (pitting edema)
Neurologic	Brain	Altered sensation, tingling or numbness paresthesias, increased sensitivity hyperesthesia, Confusion or memory loss (amnesia), Visual abnormalities, Unexplained mood or behaviour changes, Seizures, unconsciousness
Neurologic	Spinal cord	Ascending weakness or paralysis in the legs, Girdling abdominal or chest pain, Urinary incontinence and faecal incontinence
Constitutional	Whole body	Headache, Unexplained fatigue, Generalised malaise, poorly localised aches

KolleGeApply

		localised aches
Audiovestibular	Inner ear	Loss of balance, Dizziness, vertigo, nausea, vomiting, Hearing loss
Pulmonary	Lungs	Dry persistent cough, Burning chest pain under the sternum, aggravated by breathing, Shortness of breath

KollegeApply

287. Following is true about oculocardiac reflex except ?

a) It is also called aschner phenomenon

b) It is mediated by occulomotor and vagus nerve

c) It is characterized by bradycardia following traction on extra-ocular muscles

d) Reflex is more sensitive in neonates

Correct Answer - B

Ans. is 'b' i.e., It is mediated by occulomotor and vagus nerve

Oculocardiac reflex

- Oculocardiac reflex, is also known as Aschner phenomenon, Aschner reflex, or Aschner-Dagnini reflex, o It is characterized by decrease in pulse rate (bradycardia) associated with traction applied to extraocular muscles and/or compression of the eyeball.
- The reflex is mediated by nerve connections between the ophthalmic branch of the trigeminal cranial nerve via the ciliary ganglion, and the vagus nerve of the parasympathetic nervous system.
- This reflex is especially sensitive in neonates and children, particularly during strabismus correction surgery. However, this reflex may also occur with adults.
- Bradycardia, junctional rhythm and asystole, all of which may be life-threatening,can be induced through this reflex.

CollegeApply

288. In CO poisoning, immediate emergency treatment:
Jharkhand 10

a) 5% CO_2 inhalation

b) 10% CO_2 inhalation

c) High flow O_2

d) Nitroglycerine

Correct Answer - C
Ans. High flow O_2

KollegeApply

289. Blood testis barrier in testis is formed by?

a) Sertoli cells

b) Leydig cells

c) Granulosa cells

d) None

Correct Answer - A
Ans. A. Sertoli cells
[Ref Ganong 23'd/e p. 402]

- Junction between adjacent sertoli cells form blood-testis barrier.

KollegeApply

290. Which of the following is false about peripheral nerve injury?

a) Neuropraxia is irreversible

b) Epineurium is intact in axonotmesis

c) Neurotmesis is the most severe form of injury

d) Wellerian generation starts in axonotmesis

Correct Answer - A

Ans. A. Neuropraxia is irreversible

Neuropraxia (Class I)

- This is the least severe form of nerve injury, with complete recovery. In this case, the axon remains intact, but there is myelin damage causing an interruption in conduction of the impulse down the nerve fiber.
- Most commonly, this involves compression of the nerve or disruption to the blood supply (ischemia).
- No Wallerian degeneration is seen.

CollegeApply

291. First to occur after a sharp nerve cut ?

a) Chromatolysis

b) Polymorphic arrangement

c) Increased protein synthesis

d) Macrophage activation

Correct Answer - A

Ans. A. Chromatolysis

- Within 6 hours of injury, the nucleus migrates to the periphery of the cell where Nissl's granules and rough endoplasmic reticulum break up and disperse.
- This phenomenon is called chromatolysis.
- The part of nerve distal to the point injury undergoes 'secondary or Wallerian degeneration', the proximal part undergoes "primary or retrograde" degeneration up to a single node Ranvier.

KollegeApply

292. LDH has how many isoenzymes

a) 3, based on B and M polypeptide subunits

b) 5, based on B and M polypeptide subunits

c) 7, based on H and M polypeptide subunits

d) 5, based on H and M polypeptide subunits

Correct Answer - D

Ans. is 'd' i.e., 5, based on H and M polypeptide subunits

lRef: Dinesh puri 3'd/e p. 1221

- LDH is a tetramer with two types of polypeptide units : (H) (for heart) and M (for muscle).

It has five isoenzymes:

- LDH 1 (HHHH), LDH 2 (HHHM), LDH3 (HHMM), LDH 4 (HMMM), and LDH s (MMMM).
- LDH-I and LDH-2 are the predominant isozymes in myocardium, therefore these are raised in MI (LDHf > LDH2),
- LDH-f is more specific for myocardium (as it has 4H) than LDH-2.
- The predominent isoenzyme in liver is LDH5; Hence LDH5 is raised in liver diseases like viral hepatitis.
- Normal LDH pattern on electrophoresis is LDH2 > LDHI > LDH 3 > LDH 4 > LDH5.
- In MI LDHI is raised more thar LDHz, So, pattern becomes LDHI > LDH2 > LDH3 > LDH4 > LDH5.
- Increase in total LDH level is also seen in hemolytic anemia, hepatocellular damage, muscular dystrophies, leukemia,
- carcinomas, cerebrovascular accident, pancreatitis, kidney disease, intestinal and pulmonary infarction, megaloblastic anemia and infectious mononucleosis. Therefore study of specific

KollegeApply

isozyme is more significant.

KollegeApply

293. Which of the following is known as suicidal enzyme?

a) Lipoxygenase

b) Cyclooxygenase

c) Thromboxane synthatase

d) 5' nucleotidase

Correct Answer - B

Suicidal enzyme is one, which undergoes self-destruction in order to terminate its own acitivity, e.g. Cyclooxygenase.
Suicidal Inhibition is conversion of a substrate by the enzyme into a metabolite, which is a potent inhibitor of the enzyme; example: Xanthine oxidase converts allopurinol to alloxanthine (oxypurinol), which is a more potent inhibitor of allopurinol.
Cycloorygenase is known as suicide enzyme because it catalyzes its own destruction.

CollegeApply

294. Rate limiting enzyme in bile acid synthesis ?

a) Desmolase

b) 21 α-hydroxylase

c) 7α-hydroxylase

d) 12α-hydroxylase

Correct Answer - C
Ans. is 'c' i.e., 7α-hydroxylase
About half of the cholesterol in the body is ultimately metabolized to bile acids.
The primary bile acids are synthesized from cholesterol in liver. These are cholic acid and chenodeoxycholic acid.
Rate limiting enzyme in primary bile acids synthesis is 7α - *hydroxylase (cholesterol* 7α - *hydroxylase).*
This enzyme is inhibited by bile acids and induced by cholesterol.
Thyroid hormones induce transcription of 7a-hydroxylase, thus in patients with hypothyroidism plasma cholesterol tends to rise (because of inhibition of 7α-hydroxylase which in turn inhibits conversion of cholesterol to bile acids).

CollegeApply

295. Enzyme activity is expressed as:

a) Millimoles /lit?

b) Milli gm/lit?

c) Mg/ dl

d) Micromoles/min

Correct Answer - D
Ans. is. D. Micromoles/min

KollegeApply

296. Example of allosteric inhibition

a) Inactivation of glycogen synthase by phosphorylation

b) Decreased synthesis of glucokinase by glucagon

c) Inhibition of PFK-1 by citrate

d) All of the above

Correct Answer - C

Answer-Ans. is 'c' i.e., Inhibition of PFK-l by citrate [lRef, Dinesh puri 3d/e p. 1161]

Enzyme:-Phosphofructokinase I

Pathway:- Glycolysis

Stimulator:- AMP, ADP, fructose-6-phosphaie, fuctose-2,6-bisphophate.

Inhibitor:- ATP, citrate, Ca2+, Mg+

KollegeApply

297. Lysyl oxidase requires which cofactor -

a) Zn

b) Cu

c) Se

d) Fe

Correct Answer - B

Ans. is'b'i.e., Cu [Rel Harper 27t'/e p. 546]

metal	**metalloenzymes**
Calcium	Lipase, Lecithinase
Copper	Cytochrome oxidase, Tyrosinase, Lysyl oxidase, Superoxide dismutase, Ascorbic acid oxidase, Ferroxidase (ceruloplasmin)
iron	Cytochrome oxidase, Xanthine oxidase, Catalase, Peroxidase
Zinc	Carbonic anhydrase, alkaline phosphatase, RNA polymerase, alcohol dehydrogenase, Carboxypeptidase, Prophobilinogen synthase, glutamate dehydrogenase, lactate dehydrogenase, Superoxide dismutase
Magnesium	Hexokinase, phosphofructokinase, glucose-6-phosphatase, enolase, creatinine kinase, Phosphatases, kinase
Manganese	Arginase, Pyruvate carboxylase, phosphoglucomutase, Glycosyl transferase, Hexokinase, Enolase
Potassium	Pyruvate kinase
Selenium	Glutathione peroxidase
Nickel	Urease
molybodnum	Xanthine oxidase

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molybdenum xanthine oxidase

KollegeApply

298. Mechanism of conversion of trypsinogen to trypsin -

a) Hydrolysis

b) Phosphorylation

c) Removal of part of protein

d) Removal of Carboxyl group

Correct Answer - C

Ans. is'c'i.e., Removal of part of protein [Ref: Dinesh puri 3'd/e p- 1181

- All zymogens (including trypsinogen) are activated by removal of a small length of protein (few amino acids) from one end of the molecule.
- Trypsinogen → → Trypsin + peptide fragent
- Pepsinogen → → pepsin +peptide fragment

CollegeApply

299. Immediate source of energy is ?

a) Cori's cycle

b) HMP

c) ATP

d) TCA cycle

Correct Answer - C
Ans. is 'c' i.e., ATP
There are three energy systems to provide energy for muscular activities.

- Immediate energy system : Energy is provided by stored ATP and creatine phosphate.
- Anaerobic glycolytic system (lactic acid system) : Energy is generated by utilization of glucose or glycogen by anaerobic glycolysis. This energy is also generated early.
- Aerobic or oxidative system : Energy is generated by utilization of glucose/glycogen, and fatty acids through oxidative pathways, e.g. TCA cycle.
- These three energy systems operate as a continuum; each system is always functioning, even at rest. o What varies is the relative contribution each system makes to total ATP production at any given time.

	Immediate energy system	An erobic glycolytic system	Oxidative (aerobic) system
Substrates	ATP, creatine phosphate	Glucose or glycogen	Glucose or glycogen, fatty acids
Energy production	Very fast	Fast	Slow

CollegeApply

Peak at	0-30 sec.	20-180 sec.	>3 min
Limiting factor	Depletion of CrP, ATP	Lactic acid as_. vitiation	Glycogen depletion
Activity example	Powerlifting & weight	Longer sprints	Endurance events
	lifting, *short sprints*	Middle distance team sports	Team sports
	Jumping, throwing	Ball games (Soccer, rugby)	Ball games (Soccer, field hockey)

KollegeApply

300. **The mechanism of action of uncouplers of oxidative phosphorylation involves:**

a) Inhibition of ATP synthase

b) Stimulation of ATP synthase

c) Disruption of proton gradient across the inner membrane

d) Disruption of proton gradient across outer membrane

Correct Answer - C

Uncouplers are protein carriers that can freely pass through the inner mitochondrial membrane.
It allows translocation of the protons into the intermembranous space during the electron transport in the respiratory chain but blocks the formation of proton gradient across the inner mitochondrial membrane.

Thermogenin a protein present in the inner mitochondrial membrane of adipocytes is an example of physiologic uncouplers of oxidative phosphorylation.

Examples of uncouplers are: 2,4 dinitrophenol, pentachlorophenol, nigericin, thyroxin and thermogenin.

Ref: Jaypee's Review of Med. Biochemistry By S. M. Raju page 102.

Kottege Apply

301. True about NADP -

a) Acts as coenzyme form of Niacin

b) Involved in HMP shunt

c) Not involved in glycolysis

d) All are true

Correct Answer - D

Ans. is'd'i.e., All are true

- Niacin, in the form of nicotinamide, is incorporated into the structure of two coenzymes: nicotinamide adenine dinucleotide
- (NAD+) and nicotinamide adenine dinucleotide phosphate (NADP+)
- NADP is involved in HMP shunt and NAPDH is produced.
- In glycolysis NAD is involved (not NADP).

KollegeApply

302. In malate shuttle, NADH Produces how many ATPs

a) 1

b) 1-5

c) 2

d) 2.5

Correct Answer - D

Ans-is'd'i.e., 2.5 (Ref : Harp* 2*/e p. 129-130)

- In glycerophosphate shuttle, the mitochondrial ennlme is linked to respiratory chain (ETC) via a flavoprotein, So only l.5 mol of ATP are produced (According to older calculations,2 ATP mol of ATP are produced).
- In malate shuttle, the mitochondrial enzyme is linked to ETC via NAD, so 2.5 mol of ATP are produced (according to older calculations 3 mol of ATP are produced).

CollegeApply

303. Not a substrate for gluconeogenesis -

a) Glycerol

b) Leucine

c) Lactate

d) Propionate

Correct Answer - B
Ans. is 'b' i.e., Leucine
Substrates for gluconeognesis ?
1. Lactate
2. All amino acids except leucine and lysine
3. Pyruvate
4. Propionate
5. Glycerol
6. Intermediates of citric acid cycle

Alanine is the most important gluconeogenic amino acid.

KollegeApply

304. Pyruvate dehydrogenase requires all cofactors except

a) Thiamin

b) Riboflavin

c) Niacin

d) Pyridoxin

Correct Answer - D

Ans. is 'd' i.e., Pyridoxin [Ref Harper 29thle p. 176]

- Pyruvate dehydrogenase catalyses oxidative decarboxylation of pyruvate to acetyl CoA.

The coenzyme required by PDH are :-

1. Thiamine pyrophosphate
2. Riboflavin(FAD)
3. CoA
4. Niacin (NAD)
5. Lipoic acid

KollegeApply

305. Lactate produced anaerobically is used by

a) Gluconeogenesis & Glycolysis

b) Cori cycle & gluconeogenesis

c) TCA cycle & Glycogenolysis

d) Cori cycle only

Correct Answer - B

Ans. is 'b'i.e., cori cycle & gluconeogenesis [Ref Lehninger 4h/e p. 523,53g-391

Cori cycle or lactic acid cycle

- Anaerobic glycolysis in muscles results in the production of lactate, which cannot be converted into glucose, as gluconeogenesis does not occur in muscles.
- Through blood, Lactate is transported to the liver where it is oxidized to pyruvate. pynrvate so produced, is converted to glucose by gluconeogenesis, which is then transported to the muscle.
- The glucose thus reformed from lactate again becomes available for energy purpose in skeletal muscle.

KollegeApply

306. Citrate synthase is inhibited by -

a) ATP

b) ADP

c) Insulin

d) Glucagon

Correct Answer - A

Ans. is'a'i.e., ATP [Ref Chatterjee & Shinde Vh/e p. 171,166-180; Harper 28th/e p. 145-147

KollegeApply

307. Fumarate is formed from which amino acid

a) Methionine

b) Valine

c) Histidine

d) Tyrosine

Correct Answer - D

Ans. is 'd' i.e., Tyrosine [Ref Harper 29th/e p. 166-67]

All major members of the citric acid cycle from citrate to oxaloacetate are glucogenic and therefore, are involved in gluconeogenesis. Some glucogenic amino acids enters the TCA cycle after transamination e.g.:

1. Histidine, proline, glutamine and arginine are converted to glutamate which is then transaminated to a-ketoglutarate.
2. Isoleucine, methionine and valine enter by conversion into succinyl CoA. Propionate (a short chain fatty acid) also enter at this level.
3. Tyrosine, and phenylalanine enter by conversion into fumarate.
4. Tryptophan is converted to alanine which is then transaminated to pyruvate.
5. Hydroxyproline, serine, cysteine, threonine and glycine enter by conversion into pyruvate.

KnowledgeApply

308. The major role of 2, 3 bisphosphoglycerate in RBCs is -

a) Acid-base balance

b) Reversal of glycolysis

c) Release of oxygen

d) Binding of oxygen

Correct Answer - C

Ans. is 'c' i.e.,Release of Oxygen [Ref Lehninger ilthie p. 171]

Rapoport Luebering cycle (Bisphosphoglycerate shunt)

- This cycle occurs in erythrocytes (ABCs).
- In this production of ATP by substrate phosphorylation from 1,3-BPG is bypassed by taking diversion pathways, i.e., side reaction of glycolytic pathway.
- In this cycle, 1,3-BPG is converted to 2,3 BPG by an enzyme bisphosphoglycerate mutase. Then 2,3 BPG is converted to 3-phospholycerate by 2,3-bisphosphoglycerate phosphatase.

Kotes Apply

309. Enzyme deficient in Hers disease -

a) Muscle phosphorylase

b) Liver phosphorylase

c) Acid maltase

d) Debranching enzyme

Correct Answer - B

Ans. is B' i.e., Liver phosphorylase [Ref Harper 250/e p. 181]

Type		Enzyme deficiency	Organ (s) affected
I	von Gierke's disease	Glucose 6-phosphatase	Liver, kidney
II	Pompe's disease	alpha (1 → 4) Glucosidase (acid maltase)	All organs
III	Cori's disease/Forbe's disease	Debranching enzyme	Muscle, liver
IV	Andersen's disease	Branching enzyme	Liver, myocardium
V	McArdle's disease	Phosphorylase	Muscle
VI	Hers' disease	Phosphorylase	Liver
VII	Tarui's disease	Phosphofructokinase	Muscle, RBCs
VIII		Phosphorylase kinase	Liver

KollegeApply

310. Immediate metabolic products during conversion of Fructus 1-6 bisphosphate to 2 molecules of pyruvate -

a) Glyceraldehyde-3-phosphate and 1,3-bisphosphoglycerate

b) Dihydroxyacetone phosphate and 1,3 bisphosphoglycerate

c) Glyceraldehyde-3-phosphate and dihydroxy-acetone phosphate

d) 3-phosphoglycerate and 1,3 bisphosglycerate

Correct Answer - C

Ans. is 'c' i.e., Glyceraldehyde-3-phosphate and dihydroxyacetone phosphate (Ref: Harper 29h/e p. 170-177).

KolleseApply

311. In conversion of glucose to glucose-6-phosphate in glycolysis true is

a) Glucokinase has low km

b) Hexokinase is found only in liver

c) Glucokinase is induced by insulin

d) Hexokinase is not specific for glucose

Correct Answer - C:D

Ans. is 'c' i.e., Glucokinase is induced by insulin & 'd' i.e., Hexokinase is not specific for glucose (Ref: Harper 29h/e p. 170-177; Vasudevan #/e p. 98)

- Hexokinase is not specific for glucose metabolism. It is found in most tissues except glucose.
- Glucokinase has high KM. It is induced by insulin.

KollegeApply

312. Major carbohydrate store in the body -

a) Blood glucose

b) Glycogen in adipose tissue

c) Hepatic glycogen

d) None of the above

Correct Answer - C

Ans. is 'c' i.e., Hepatic glycogen (Ref: Harper 29/e p. 161; Dinesh puri 3d/e p. 320)

- Major Carbohydrate source of body is hepatic glycogen.
- Humans carry supplies of fuel within their body. Calories are stored in the body as fat (triglycerides), glycogen and some protein.

KollegeApply

313. Most abundant source of fuel in starvation -

a) Liver glycogen

b) Muscle glycogen

c) Adipose tissue

d) Blood glucose

Correct Answer - C

Ans. is 'c' i.e., Adipose tissue [Ref Harper 29thle p. 161 & 28th le p. 134, 140; Vasudevan 6th/e p. 84, 85]

- Fat (triglycerides) in the adipose tissue is the largest store of energy of the body.

KolleGe Apply

314. Major metabolism of saturated fatty acids in the mitochondria is called as -

a) β-oxidation

b) α-oxidation

c) ω-oxidation

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., β-oxidation [Ref Harper 29"'/e p. 208]

- β-oxidation is the principal pathway for catabolism of saturated fatty acids. P-oxidation mainly occurs in the mitochondrial matrix (whereas fatty acid synthesis occurs in cytosol).

KolleegeApply

315. Bile acids are synthesized from ?

a) Heme

b) Cholesterol

c) Ribulose

d) Arachidonic acid

Correct Answer - B

Ans. is 'b' i.e., Cholesterol

- Primary bile acids are *cholic acid* and *chenodeoxycholic acid,* which are synthesized from cholesterol in liver.
- In the intestine some of the primary bile acids are converted into secondary bile acids, i.e., *deoxycholic acid* (formed from cholic acid) and *lithocholic acid* (derived from chenodexoxycholic acid).
- Glycine and taurine conjugates of these bile acids are called as bile salts.
- For example, cholic acid is a bile acid, and its glycine conjugate (glycocholic acid) is a bile salt.
- Bile salts help in digestion and absorption of fat by emulsification and micelles formation.
- Bile salts act as detergents, i.e., they have surface tension lowering action.
- Detergent action is due to amphipathic nature of bile salts (Note : Amphipathic molecules are molecules that contain both hydrophobic non-polar as well as hydrophilic-polar ends).

KalingaApply

316. Which method is used to separate a mixture of lipids -

a) Electrophoresis

b) Chromatography

c) Isoelectric focusing

d) PAGE

Correct Answer - B

Ans. is 'b' i.e., Chromatography [Ref Clinical biochemistry p. 719]

- Extracted lipids are separated into individual class by chromatography.
- Chromatography can separate a complex mixture of lipids into simpler group.

Various types of chromatography, used to separate, lipids are -

- Adsorption (solid-liquid) chromatography
- Partition (liquid-liquid) chromatography
- Thin layer chromatography (TLC)
- Gas chromatography (GC)
- High performance liquid chromatography (HPLC) -› method of choice if available.

CollegeApply

317. Transport of lipids from the intestine to other tissues is by -

a) Chylomicrons

b) LDL

c) HDL

d) VI DL

Correct Answer - A
Ans. is 'a' i.e., Chylomicrons
Transport of lipids
o There are two pathways of lipid transport in the body ?
1. Transport of dietry lipid (Exogenous pathway)
* It is the transport of 1 ipid from *intestine to liver.*
- *Chylomicrons transport the dietry lipid from intestine to liver.*
* In Diet the major lipids are triglyceride and Aolesterol.
* Cholesterol is absorbed as such in proximal small intestine and is esterified to cholesteryl ester (ChE). o Triglycerides are hydrolysed by lipases to glycerol and fatty acids which are absorbed in intestine.
o Inside intestinal cells triglyceride is synthesized by fatty acids.
- *Chylomicrons* are synthesized in the small intestine that contain triglyceride, cholesteryl ester, cholesterol, phospholipids and apoprotein B-48 (apo B-48).
* These chylomicrons are secreted in the intestinal lymph and reach the systemic circulation via thoracic duct.
- In the circulation Apo E and Apo C are transfered to chylomicrones by HDL, so now chylomicrons contain Apo B-48, Apo E, & Apo C.
* In the circulation, Triglycerides of chylomicrones are hydrolysed

by *lipoprotein lipase (LPL)* present on endothelial cells of vessels of *skeletal muscles, adipose tissue* and *heart.*
* The released fatty acids are utilized locally by these tissues.
* The chilomicron particle progressively shrinks in size by action of LPL and, cholesterol, phospholipids and apo C are transferred to HDL, creating *chylomicron remnants* that contains more cholesterol, less triglycerides, apo E & apo B-48.
*Chylomicron remnants are removed by liver by the *LDL receptors* that require apo E as ligand.
Note - Apo C-II, that is transfered from HDL to chylomicrons act as a cofactor for lipoprotein lipase. Apo A-V promotes LPL mediated triglyceride lipolysis in VLDL and chilomicrons.
2. Transport of Hepatic lipids (Endogenous pathway)
* *VLDL* is synthesized *in liver* that contains high triglyceride, ChE, cholesterol, phospholipid and Apo B-100.
* (VLDL particles resembel chylomicrones in composition except that VLDL contains Apo B-100 instead of ApoB-48).
* VLDL particles are secreted in the plasma and as with chylomicron, Apo E and Apo C are transferred from HDLto VLDL. Now VLDL contains Apo B-100, Apo E and Apo C.
* In plasma, triglycerides of VLDL are hydrolysed by same lipoprotein lipase (see above) and apo C is transferredto HDL and the remmants are called *IDL.*
* 40-60% of IDL is removed by liver via *LDL receptor* mediated endocytosis, this process require *Apo E* which*acts as ligand for LDL receptors.*
* Remaining 1 DL is remodeled by hepatic lipase to form *LDL* that contains *maximum cholesterol.*
* 70% of LDL is removed by liver via LDL receptor and 30% is utilized by peripheral tissues as a source ofcholesterol.

318. Chylomicrons core is formed by ?

a) Triglyceride

b) Triglyceride and Cholesterol

c) Triglyceride, Cholesterol and Phospholipids

d) Free fatty acids

Correct Answer - B

Ans. is 'B' i.e., Triglyceride and Cholesterol [Ref Harper 27th/e p. 218; Lehninger 4th/e p. 633]

The surface is a layer of phospholipids, with head groups facing the aqueous phase. Triacylglycerols sequestered in the interior make up more than 80% of the mass.

Several apolipoproteins that protrude from the surface (B-48, C-III, C-II) act as signals in the uptake and metabolism of chylomicron contents.

The diameter of chylomicrons ranges from about 100 to 500 nm.

Core: It's made up of neutral lipids like triacylglycerols and cholesterol/cholesterol esters. Shell: composed of apolipoproteins, phospholipids.

KolegeApply

319. (β-oxidation of palmitic acid yields

a) 3 acetyl CoA

b) 129 ATP net

c) 131 ATP net

d) 16 Acetyl CoA

Correct Answer - B
B i.e. 129 ATP net

KollegeApply

320. All are true about Niemann- Pick disease except -

a) Due to deficiency of sphingomyelinase

b) CNS symptoms in type A

c) Histiocytes showing PAS positive inclusions and Type B is less severe

d) None

Correct Answer - D

Ans. is D. None [Ref Clinical biochemistry 4th/e p. 786]

- Niemann-Pick disease is an autosomal recessive `lysosomal storage disease due to deficiency of sphingomyelinase.
- Characteristic histopathological feature is histiocytes showing PAS positive diastase resistant inclusions which on microscopy shows concentric or parrallel lamellar arrangement.

Clinical cases are divided into -

1. Type A: These are more common with more severe deficiency of sphingomyelinase. There is visceral and CNS involvement. Symptoms may present since birth and death usually occurs before the age of 4 years.
2. Type B : There is less severe deficiency of sphingomyelinase. Patient's have only visceral involvement but no CNS involvement. Patients present by the age of 3-4 years with organomegaly and may remain reasonably healthy.

PulseApply

321. Plasminogen domain resembles

a) Fibrinogen

b) LDL receptor

c) Apolipoprotein (a)

d) Prothrombin

Correct Answer - C
Apolipoprotein (a) REF:
http://onlinelibrary.wiley.com/doi/10.1002/pro.5560031222/pdf,http://ww
Phylogeny of the serine proteinase domains and analysis of intron-exon boundaries and Kringle sequences indicate that hepatocyte growth factor/scatter factor (HGF/SF), hepatocyte growth factor-like/macrophage stimulating protein (HGFVMSP), plasminogen, and apolipoprotein (a) have evolved from a common ancestral gene. The name Kringle comes from the Scandinavian pastry that these structures resemble.

KnowledgeApply

322. Acetyl CoA Carboxylase is stimulated by -

a) Starvation

b) Glucagon

c) Citrate

d) All of the above

Correct Answer - C

Ans. is 'c' i.e., Citrate [Ref Harper 29th/e p. 219]

	Activator	**Inhibitor**
Allosteric (palmitoyl CoA)	Citrate	Long chain acyl-CoA
Covalent	Insulin	Glucagon, epinephrine

KollegeApply

323. Which of the following enzyme is not a component of fatty acid synthase complex?

a) Acetyl Co-A carboxylase

b) Ketoacyl synthase

c) Enoyl reductase

d) Acetoacetyl

Correct Answer - A

The Fatty Acid Synthase Complex Is a Homodimer of Two Polypeptide Chains Containing Six Enzyme Activities and the Acyl Carrier Protein.

The 6 enzymes are-

- *Ketoacyl synthase*
- *Ketoacyl reductase*
- *Malonyl transacylase*
- *Dehydratase*
- *Enoyl reductase*
- *Thioesterase*

Acetyl Co-A carboxylase is the rate-limiting enzyme of fatty acid synthesis and is an enzyme, which is not a component of fatty acid synthase complex.

KolleseApply

324. Cholesterol is not a precursor for synthesis of -

a) Vitamin D

b) Progesterone

c) Bile acids

d) Lipocortin

Correct Answer - D
Ans. is 'd' i.e., Lipocortin
Cholesterol is an important precursor for the synthesis of :-
1. Steroid hormones:- Progesterone, estrogen„ androgens, glucocorticoids, mineralocorticoids
2. Vitamin D
3. Bile acids

KolleegeApply

325. HDL is called good cholesterol because -

a) Removes cholesterol from extrahepatic tissues

b) Causes transport of cholesterol to extrahepatic tissues

c) Stimulate hepatic TGs synthesis

d) Activates lipoprotein lipase

Correct Answer - A

Ans. is 'a' i.e., Removes cholesterol from extrahepatic tissues

- The HDL particles are referred to as scavengers because their primary role is to remove free (unesterified) cholesterol from extrahepatic tissues, which is then excreted through bile. This is a crucial mechanism that prevents the inappropriate accumulation of cholesterol in peripheral tissues. Because accumulation of cholesterol in tissues is strongly associated with the development of atherosclerosis, the level of HDL in serum is inversely related to the incidence of MI (myocardial infarction). Thus, HDL is cardioprotective and anti-atherogenic in nature, and is referred to as "good cholesterol".
- Therefore, HDL-Cholesterol appears to be the best independent predictor of coronary artery disease (inverse relationship) than any other known risk factor. That means low HDL is a much stronger predictor of coronary artery disease than increased LDL cholesterol or increased total cholesterol.

KollegeApply

326.

KollegeApply

Amide group is present in which part of protein -

a) Amino-terminal

b) Carboxy-terminal

c) Peptide bond

d) Disulfide bond

Correct Answer - C

Ans. is 'c' i.e., Peptide bond [Ref Text book of biochemistry by Talwar - p. 30]

- A peptide bond is a chemical bond that connects amino acids to each other.
- A peptide bond essentially results from a dehydration synthesis reaction.
- It is formed between two amino acids when the carboxyl group of one amino acid reacts with the amino group of the other, releasing a molecule of water (H20).
- Peptide bond is the resulting CO-NH bond and the resulting molecule is an amide.
- The four-atom functional group - C (=0) NH- is called an amide group or peptide group.
- Peptide bond is a partial double bond.
- Partial double bond nature renders the amide group planar and rigid, making all the atoms that are involved in the peptide bond lie in a flat plane.

CollegeApply

327. Non- essential amino-acids are all except -

a) Basic amino acids

b) Acidic amino acids

c) Neutral amino acids

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Basic amino acids [Ref Harper 29th/e p. 266]

- There, are three basic amino acids (Arginine, Histidine and lysine), all of them are essential amino acids
- Essential amino acids (PVT. TIM. HALL) : Phenylalanine, valine, threonine, tryptophan, isoleucine, methionine, histidine, arginine, lysine, leucine.
- Among these, arginine and histidine are semiessential amino acids.
- Nonessential amino acids : alanine, aspartic acid, aspargine, cysteine, glutamine, glutamic acid, glycine, proline, tyrosine, serine.
- Neutral amino acids: Alanine , asparagine, cysteine, glycine, glutamine, isoleucine, leucine, methionine, proline, phenylalanine, serine, threonine, tyrosine, tryptophan, valine.
- Acidic amino acids (negatively charged or anion) : Aspartic acid (aspartate), glutamic acid (glutamate).
- Basic amino acids (positively charged or cation) : Arginine, histidine, lysine.

Kotics Apply

328. Amino acid which can be used in both gluconeogenesis and ketogenesis -

a) Threonine

b) Valine

c) Tyrosine

d) Arginine

Correct Answer - C

Ans. is 'c' i.e., Tyrosine [Ref Chatterjee 5''/e p. 448]

Amino acids which can be used both in gluconeogenesis and ketogenesis (Both glucogenic & ketogenic amino acids) are :-

1. Tyrosine
2. Phenylalanine
3. Tryptophan
4. Isoleucine.

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329. In phenylketonuria, diet restriction is advised for -

a) Tyrosine

b) Phenylalanine

c) Maize

d) All

Correct Answer - B
Ans. is 'b' i.e., Phenylalanine, The main treatment is a phenylalanine restricted diet for life.

KolleggeApply

330. Guanidinium group is associated with -

a) Tyrosine

b) Arginine

c) Histidine

d) Lysine

Correct Answer - B

Some amino acids contain a special functional group in their side chain which provides some specific functions to that amino acids. These are

.. Hydroxyl group in serine and threonine
2. Indole ring in tryptophan
3. Amide group in aspargine and glutamine
4. 13-Carboxyl in glutamic acid
5. Thioether in methionine
6. Imidazole in histidine
7. Sulfhydryl in cysteine
8. Phenol in tyrosine
9. y-carboxyl in glutamic acid
0. Pyrrolidine in proline
.. Guanidinium in arginine
2. c-amino in lysine
3. Benzene in phenylalanine

KollegeApply

331. Creatinine is formed from -

a) Glycine

b) Lysine

c) Leucine

d) Histamine

Correct Answer - A

Ans. A. Glycine

Creatinine and creatine are synthesized from glycine, arginine, and methionine.

Synthesis of creatine and creatinine

- Creatine and creatinine are not amino acids, but specialized products of amino acids. Creatine is synthesized from glycine, arginine, and methionine. The synthesis starts with the formation of guanidinoacetate from glycine and arginine in the kidney. Further reactions take place in the liver and muscle.

CollegeApply

332. Coenzyme for phenylalanine hydroxylase is -

a) Tetrahydrofolate

b) Pyridoxal phosphate

c) S-adenosyl methionine

d) Tetrahydrobiopterin

Correct Answer - D

Ans. is 'd' i.e., Tetrahydrobiopterin

- Phenylalanine metabolism is initiated by its oxidation to tyrosine which then undergoes oxidative degradation

KolleegeApply

333. Glycine is required in formation of all except ?

a) Heme

b) Purines

c) Glutathione

d) Thyroxine

Correct Answer - D
Ans. is 'd' i.e., Thyroxine
Glycine

- lycine is a nonessential amino acid which is *synthesized from serine.* Glycine is metabolized by following three pathways -
- It can be converted to serine, a reaction that require tetrahydrofolate (derivative of folic acid and pyridoxal phosphate as coenzyme. Further serine is metabolized by serine dehydratase into pyruvate and NH 4+.
- The major pathway of glycine degradation is oxidative cleavage into CO, and NH: by *glycine cleavage complex* of liver. H_4 folate is required which is converted to N^5, N^{10}-methylene H_4 folate. Thus folic acid is required for glycine metabolism.
- Glycine may be oxidatively deaminated by *glycine oxidase* to glyoxylic acid.
- Glycine is necessary for the formation of following products:- Heme, purine ring, bile acids conjugation (formation of glycocholic acid, and glyco-chenodeoxycholic acid), creatine, glutathione, glucose (by gluconeogenesis).

KollegeApply

334. Which of the following is required in the synthesis of acetylcholine -

a) Inositol

b) Carnitine

c) Glycine

d) Choline

Correct Answer - D
Ans. is 'd' i.e., Choline [Ref Principles of medical physiology p. 96]
Acetylcholine is synthesized in the cytosol of nerve terminal from acetyl-CoA and choline, in the presence of choline-0-acetyltransferase

KollegeApply

335. Most important factor which causes lactic acidosis in alcoholics -

a) Pruduction of NADH

b) Formation of acetaldehyde

c) Production of acetate

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Production of NADH [Ref Pankaj Naik 3rd/e p. 351]

- Excess intake of alcohol leads to excessive production of NADH with a concomitant decrease in NAD..
- The increased availability of NADH favours the reduction of pyruvate to lactate and oxaloacetate to malate and decreasing its availability for gluconeogenesis and decrease synthesis of glucose. This results in Hypoglycemia.
- Excess of lactate production leads to lactic acidosis

CollegeApply

336. Respiratory quotient of carbohydrate is:

a) 0.5

b) 0.8

c) 0.75

d) 1

Correct Answer - D
Ans: D. 1

- The **respiratory quotient** (or **RQ** or **respiratory coefficient**), is a dimensionless number used in calculations of basal metabolic rate (BMR) when estimated from carbon dioxide production. It is calculated from the ratio of carbon dioxide produced by the body to oxygen consumed by the body. Such measurements, like measurements of oxygen uptake, are forms of indirect calorimetry. It is measured using a respirometer.
- The respiratory quotient (**RQ**) is the ratio:
RQ = $CO_{2\ \text{eliminated}}$ / $O_{2\ \text{consumed}}$

CollegeApply

337. Insulin dependant cells are -

a) Pituitocytes

b) Myocytes

c) Adipocytes

d) RBCs

Correct Answer - B:C

Ans. is 'b' i.e., Myocytes & 'c' i.e., Adipocytes [Ref Ganong 24th/e p. 435]

- Insulin stimulates the uptake of glucose by myocytes (skeletal muscle, cardiac muscle), adipocytes (adipose tissue) and hepatocytes. Tissues that do not depend on insulin for glucose uptake include brain, erythrocytes (RBC), the epithelial cells of kidney & intestine, Liver, and Cornea & lens of the eye.
- In the liver, insulin stimulates glucose entry into hepatocytes indirectly by induction of glucokinase so that the glucose entering the liver cells is promptly converted to glucose - 6 - phosphate (glucose trapping). This keeps the intracellular glucose concentration low and favours entry of glucose into the liver. Thus, though the liver do not depend on insulin for glucose uptake, insulin stimulates glucose entry into hepatocytes. That means glucose entry can occur in liver without the action of insulin, but this is facilitated by insulin. On the other hand, myocytes (skeletal and cardiac muscles) and adipocytes (adipose tissue) are dependent on insulin for glucose uptake.

CollegeApply

338. Epinephrine increases free fatty acid level by causing -

a) Increased fatty acid synthesis

b) Increasing lipolysis

c) Increasing cholesterol catabolism

d) All of the above

Correct Answer - B

Ans. is 'b' i.e., Increasing lipolysis [Ref Pankaj Naik %tale p. 248]

Epinephrine and glucagon accelerate lipolysis in adipose tissue by activating hormone sensitive lipase. In starvation and diabetes, glucagon is high (and insulin is low), leading to enhanced lipolysis.

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339. Energy source used by brain in later days of Starvation is

a) Glucose

b) Ketone bodies

c) Glycogen

d) Fatty acids

Correct Answer - B
B i.e. Ketone bodies

KollegeApply

340. Which of the following enzyme activity decreases in fasting?

a) Hormone sensitive lipase

b) Glycogen phosphorylase

c) Acetyl CoA Carboxylase

d) Phosphofructokinase I

Correct Answer - D
Ans: D. Phosphofructokinase I
Ans: D. Phosphofructokinase I

- Phosphofructokinase 1 (PFK1) provides the first enzymatic step at which a glucose molecule becomes committed to glycolysis and therefore is subject to regulation (Nelson & Cox, 2008). **PFK1 activity depends on the concentrations of AMP, ADP, and ATP with allosteric activation by AMP and ADP and allosteric inhibition by ATP.**
- In the fasting state, glucagon causes the liver to mobilize glucose from glycogen (glycogenolysis) and to synthesize glucose from oxaloacetate and glycerol (gluconeogenesis).
- Glucagon stimulates an increase in cAMP, leading to an increase in phosphorylation by protein kinase A.
- The wave of phosphorylation that spreads through the liver cell activates enzymes such as glycogen phosphorylase that are involved in glycogen degradation while simultaneously inhibiting glycogen synthesis.
- Inhibition of glycogen synthase prevents futile resynthesis of glycogen from glucose 1-phosphate (G1P) via UDP-Glc. Glucose-6-phosphatase (G6Pase), a gluconeogenic enzyme that is present in the liver but not in muscle, then converts G6P to glucose for release

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into the blood.
Ref: Harper's illustrated biochemistry,3a,ed., pg. I88 and Lippincott's illustratet! reviewsr 6't' ed., pg. 107

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341. Vitamin formed in the body -

a) B 1

b) B 3

c) B 6

d) B 12

Correct Answer - A:B:D

Ans. is 'b > a & d' i.e., B3 > B1 & B12

- This question is confusing one (Read text below).
- Niacin (Vitamin B3) is synthesized from tryptophan inside the body(endogenous).
- Some vitamins are also formed by bacterial activity in colon :-

1. Vitamin K
2. Riboflavin (Vitamin B2)
3. Vitamin B12
4. Biotin (Vitamin B7)
5. Thiamin (Vitamin B1)

Thus, options a, b & d all are correct here. But the best answer among these is niacin as it is the only vitamin which is synthesized by proper anabolic metabolism.

KollegeApply

342. Which of the following is not seen in 12 days of fasting -

a) Gluconeogenesis

b) Ketogenesis

c) Lipolysis

d) Glycolysis

Correct Answer - D

Ans. is i.d.e., Glycolysis [Ref Harper 28'Ve p. 140; Dinesh purl 3'/e p. 414]

Duration	Early stage	Intermediate stage (3-24 d)	Late state {> 24 d}
Pathways enhanced	Glycogenolysis Gluconeogenesis Lipolysis Ketogenesis↑ Protein degradation ↑	Gluconeogenesis Lipolysis↑ Ketogenesis ↑ Ketone body oxidation ↑↑	Ketone body oxidation By brain ↑↑ By other tissues↑↑↑ Fatty acid utilization↑↑ Gluconeogenesis ↑↑
Pathways slowed		Protein degradation Protein synthesis	Glycolysis TCA Protein synthesis and degradation Glycogen synthesis and degradation

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343. Pyridoxine is required in -

a) Glycolysis

b) TCA cycle

c) Glycogenesis

d) Glycogenolysis

Correct Answer - D

Ans. is 'd' i.e., Glycogenolysis [Ref Dinesh puri p. 187; Harper 29th/e p. 180 & 27th/e p. 159-160]

- PLP is a cofactor for glycogen phosphorylase, hence it favors glycogenolysis.

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344. Pruritis [Itching] is caused by deficiency of -

a) HMB synthase

b) 5-ALA dehydratase

c) Uroporphyrinogen - I synthase

d) Uroporphyrinogen - III synthase

Correct Answer - D

Ans. is 'd' i.e., Uroporphyrinogen - III synthase [Ref Rooks 7th/e p. 12.7, 12.8]

- Cutaneous (erythropoietic) porphyrias cause skin manifestations like photosensitivity, rash and pruritus.
- Among the given options, Uroporphyrinegen III synthase deficiency causes cutaneous porphyria (Congenital erythropoietic porphyria).

KollegeApply

345. Vitamin acting on intranuclear receptors -

a) Vitamin K

b) Vitamin D

c) Vitamin E

d) Vitamin E

Correct Answer - B

Ans. is 'b' i.e.,Vitamin D [Ref Understandings medical physiology p. 408]

Two vitamins are considered as hormones which act on intranuclear receptors (steroid receptor family). There are :-

1. Vitamin A (retinoic acid)
2. Vitamin D

KollegeApply

346. Which of the following has antioxidant property?

a) Selenium

b) Copper

c) Zinc

d) All

Correct Answer - D

Ans. is 'd' i.e., All

- The activity of the antioxidant enzymes depends on supply of minerals *:?*

1. Manganese
2. Copper
3. Zinc
4. Selenium

- Manganese, copper and zinc are required for the activity of superoxide dismutase.
- Selenium is required for the activity of glutathione peroxidase.

KollegeApply

347. Niacin acts as coenzyme -

a) TPP

b) FAQ

c) NAD

d) NAD

Correct Answer - C
Ans. is 'c' i.e.,NAD
Niacin, in the form of nicotinamide, is incorporated into the structure of two coenzymes : nicotinamide adenine dinucleotide (NAD*) and nicotinamide adenine dinucleotide phosphate (NADI)*).

KollegeApply

348. Coenzyme not required in formation of glutamate-

a) Thiamine pyrophosphate

b) Pyridoxial phosphate

c) Niacin

d) None of the above

Correct Answer - A
Ans. 'A' Thiamine pyrophosphate
NAD+ is derived from nicotinic acid, a member of the vitamin B complex, used in the synthesis of GABA.
During transamination reaction glutamate is formed. Pyridoxal Phosphate acts as a coenzyme.

KollegeApply

349. Not a metabolic product of urea cycle -

a) Citrulline

b) Ornithine

c) Alanine

d) Arginine

Correct Answer - C

Ans. is 'c' i.e., Alanine

- Metabolic products in urea cycle are carbamoyl phosphate, ornithine, citrulline, argininosuccinate, arginine and fumarate.
- Biosynthesis of urea occurs in five steps

1- Carbamoyl phosphate synthetase-I (CPS-I), a mitochondrial enzyme, catalyzes the formation of carbamoyl phosphate by condensation of CO, and ammonia.

2- Ornithine transcarbamoylase catalyzes the formation of citrulline from carbamoyl phosphate and ornithine.

3- Argininosuccinate synthase catalyzes the formation of argininosuccinate from citrulline and aspartate. This reaction requires !ATP,

4- Argininosuccinate lyase (arginosuccinase) catalyses the cleavage of argininosuccinate into arginine and fumarate. Fumarate enters TCA cycle.

5-) Arginase catalyses the formation of urea from arginine by hydrolytic cleavage of arginine to yield urea and ornithine. Ornithine is thus regenerated and can enter mitochondria to initiate another round of the urea cycle.

KollegeApply

350. Which amino acid is not involved in transamination -

a) Alanine

b) Aspartate

c) Lysine

d) Histidine

Correct Answer - C

Ans. is 'c' i.e.,Lysine

- Most amino acids undergo transamination reaction except lysine, threonine, proline and hydroxyproline.

KolleegeApply

351. Boiled cabbage or rancid butter smelling urine is seen in

a) Phenylketonuria

b) Tyrosinemia

c) Isovaleric Acidaemia

d) Multiple carboxylase deficiency

Correct Answer - B
Tyrosinemia
REF: Sapira's art & science of bedside diagnosis - Page 138, Textbook of Pediatric Emergency Medicine by Gary R. Fleisher, Stephen Ludwig Page 1566
Tyrosinaemia is an error of metabolism, inherited, in which the body cannot effectively break down the amino acid tyrosine, found in most animal and plant proteins. It is an autosomal recessive, which means two copies of an abnormal gene must be present in order for this to develop. There are three types of tyrosinemia, each with distinctive symptoms and caused by the deficiency of a different enzyme. One of the symptoms of Tyrodinaemia type 1 is an odor like cabbage or rancid butter.

CollegeApply

352. Apo B48 is synthesized in -

a) Liver

b) Kidney

c) Intestine

d) RBCs

Correct Answer - C
Ans. is 'c' i.e.,Intestine

- It mediate uptake of LDL by LDL receptors of liver,

KollegeApply

353. Allantoin is the end product of metabolism of ?

a) Glycogen

b) Purine

c) Pyrimidine

d) Histidine

Correct Answer - B

In non-primate mammals, end product of purine metabolism is allantoin due to presence of enzyme uricase. Uricase convertes uric acid to allantoin.
Humans lack the enzyme uricase. Therefore, end product of purine catabolism in humans is uric acid.

KollegeApply

354. True about sigma factor?

a) Subunit of 50s ribosome

b) Subunit of DNA polymerase

c) Subunit of RNA polymerase

d) Initiates DNA replication

Correct Answer - C

Ans- 'C' Subunit of RNA polymerase

- The basic DNA-dependent RNA polymerase of the bacterium Escherichia coli exists as an approximately 400-kDa core complex consisting of two identical α subunits, two large β, and β′ subunits, and a ω subunit. The core RNA polymerase, ββ′α2ω, often termed E, associates with a specific protein factor (the sigma [σ] factor) to form holoenzyme, ββ′α2σ, or Eσ.
- Sigma factors have a dual role in the process of promoter recognition; σ association with core RNA polymerase decreases its affinity for non-promoter DNA, while simultaneously increasing holoenzyme affinity for promoter DNA.

KollegeApply

355. Replication and transcription are similar processes in mechanistic terms because both :

a) Use RNA primers for initiation.

b) Use deoxyribonucleotides as precursors.

c) Are semi conserved events

d) Involve phosphodiester bond formation with elongation occurring in the 5' - 3' direction

Correct Answer - D
D i.e. Involve phosphodiester bond formation with elongation occurring in the 5'- 3' direction.
In both DNA and RNA synthesis, the general steps of *initiation, elongation and termination occur in* 5'- 3' *direction with the formation of phosphodiester bondsQ.*

CollegeApply

356. What are okazzaki fragments -

a) Long pieces of DNA on lagging strand

b) Long pieces of DNA on leading strand

c) Short pieces of DNA on lagging strand

d) Short pieces of DNA on leading strand

Correct Answer - C

Ans. is 'c' i.e., Short pieces of DNA on lagging strand [Ref: Lippincott's 5thie p. 399, 401, 406]

- DNA polymerases responsible for copying the DNA templates are only able to "read" the parental nucleotide sequence in 3' - 5' direction, and they synthesize the new DNA strands only in 5' - 3'direction.
- Therefore, 2 newly synthesized chains must grow in opposite directions :?

.. The DNA chain which runs in the 3'45' direction towards replication fork as *continued strand* is called the leading strand. This requires only one RNA primer

2. The DNA chain which runs in the 5'43' direction away from the replication fork is called lagging strand. It is synthesized discontinously and requires numerous RNA primers. As the replication fork moves, RNA primers are synthesized at specific intervals. These RNA primers are extended by DNA polymerase III into short pieces of DNA called Okazaki fragments.

KollegeApply

357. First purine nucleotide, which is synthesized in purine biosynthesis ?

a) AMP

b) GMP

c) IMP

d) UMP

Correct Answer - C

The biosynthesis of purine begins with ribose-5-phosphate, derived from pentose phosphate pathway (PPP).
First intermediate formed in this pathway, 5-phosphoribosyl-pyrophosphate (PRPP), is also an intermediate in purine salvage pathway.

KolleApply

358. C4, C5, N7 in purine ring are derived from -

a) Aspartate

b) Glutamine

c) Glutamine

d) CO

Correct Answer - C

Ans. is 'c' i.e., Glycine [Ref Harper 29th/e p. 332]

- In de novo synthesis, purine ring is formed from a variety of precursors is assembled on ribose-5-phosphate. Precursors for de novo synthesis are ?

1. Glycine provides C4, C5 and N7
2. Aspartate provides NI
3. Glutamine provides N3 and N9
4. Tetrahydrofolate derivatives furnish C2 and G
5. Carbon dioxide provides C6

CollegeApply

359. Most important tool used in genetic engineering

a) Halicase

b) Topoisomerase

c) DNA Ligase

d) Restriction endonuclease

Correct Answer - D

Ans. is 'd' i.e., Restriction endonuclease*[Ref Satyanarayan p. 579]*

- Genetic engineering simply means manipulation of genetic material to achieve the desired goal in a predetermined way.
- Most important molecular tools in genetic engineering are enzymes used in recombinant DNA technology. (also called genetic engineering).
- Most important of these enzymes is restriction endonuclease.
- At the heart of genetic engineering is the ability to cut DNA molecules at precisely defined sites.
- This is usually done with purified bacterial enzyme, the restrication endonuclease.

CollegeApply

360. If content of A is 15%, what is the amount of G in DNA according to Chargaff s rule?

a) 15%

b) 85%

c) 35%

d) 70%

Correct Answer - C

Ans. is 'c' i.e., 35% [Ref Harper's Illustrated biochemistry 27th/e p. 311-313]

Chargaff's rule:

Amount of purine = Amount of pyrimidine (A + G = T + C) Also A+G+T+C= 100

Since A = T, Therefore 15 + G + 15 + C = 100

Since G = C, Therefore 30, + 2G = 100

2G = 70 4 G = 35

KollegeApply

361. The gaps between segments of DNA on the lagging strand produced by restriction enzymes are rejoined sealed by:

a) DNA Ligases

b) DNA Helicase

c) DNA topoisomerase

d) DNA phosphorylase

Correct Answer - A
A i.e. DNA Ligases

KollegeApply

362. cDNA from RNA is synthesized by -

a) Helicase

b) DNA dependent DNA polymerase

c) Topoisomerase

d) Reverse transcriptase

Correct Answer - D

Ans. is 'd' i.e., Reverse transcriptase [Ref Satyanarayan 4th/e p. 550]

- The enzyme RNA dependent DNA polymerase (reverse transcriptase) is responsible for the formation of DNA from RNA.
- This DNA is complementary (c DNA) to viral RNA and can be transmitted into host DNA.

KollegeApply

363. Which is not a chaperon protein -

a) Calnexin

b) Protein disulfide isomerase

c) Calreticulin

d) Calbindin

Correct Answer - D

Ans. is 'd' i.e., Calbindin [Ref Harper 29thle p. 598-599 & 28th/e p. 497]

Some Chaperones and Enzymes Involved in Folding that are Located in the Rough Endoplasmic Reticulum:-

- BiP (immunoglobulin heavy chain binding protein)
- GRP94 (glucose-regulated protein)
- Calnexin
- Calreticulin
- PDI (protein disulfide isomerase)
- PPI (peptidyl prolyl cis-trans isomerase)

KollegeApply

364. All are functions of glycosaminglycans except -

a) Lubrication

b) Wound healing

c) Anticoagulant

d) Transport of lipids

Correct Answer - D

Ans. is 'd' i.e., Transport of lipids [Ref Pankaj Naik 4th/e p. 29]

KollegeApply

365. Bile salts help in absorption of fat by -

a) Micelles formation

b) Activation of transporter protein

c) Creation of concentration gradient

d) All of the above

Correct Answer - A

Ans. is 'a' i.e., Micelles formation [RefGangong24th le p. 465]

- Emulsification is the process which breaks down ingested fats (mainly triglycerides) into smaller droplets so that they can be digested more efficiently. Thus emulsification mainly helps in digestion of ingested fats.
- Micelles formation is the process in which digested fats (FFAs and monoglycerides) are incorporated into much smaller droplets (micelles) so that they can be absorbed more efficiently. Thus, micelles formation helps in absorption of digested fats.
- Detergent action of bile salts is necessary for both emulsification and micelles formation.

Collegeapply

366. a-aminolevulinic acid is a metabolic product in synthesis of -

a) Tryptophan

b) Collagen

c) Glycosaminoglycans

d) Heme

Correct Answer - D

Ans. is 'd' i.e., Heme

- Heme synthesis takes place in all cells, but occurs to greatest extent in bone marrow and liver. The first step in the synthesis of heme is the condensation of glycine and succinyl Co-A to form 6-aminolevulinic acid (6-ALA), which occurs in mitochondria. This reaction is catalyzed by 6-ALA synthase which requires pyridoxal phosphate (PLP) as cofactor. This is the rate limiting step in heme synthesis.

KalpaApply

367. Which is an inhibitor of ferrochelatase ?

a) Lead

b) Mercury

c) Iron

d) Arsenic

Correct Answer - A

Ans. is 'a' i.e., Lead [Ref Essentials of biochemistry 4thie p. 919]

- Ferrochelatase, also called heme synthase, catalyses the last reaction in heme synthesis.
- Lead inhibits **ALA dehydratase.** Therefore, lead poisoning causes inhibition of heme synthesis and excessive amount of 6-ALA is excreted in urine. Lead can also inhibit **ferrochelatase (heme synthase).**

KollegeApply

368. Bile acids consist of all except -

a) Lithocholic acid

b) Taurocholic acid

c) Deoxycholic acid

d) Chendeoxycholic acid

Correct Answer - B

Ans. is 'b' i.e., Taurocholic acid [Ref Ganong 22na le ch. 26]

- Taurocholic acid is bile salt (not bile acid).
- Bile acids are mainly presents as sodium or potassium salts which are conjugated with glycine or taurine to form bile salts.
- Primary bile acids are cholic acid and chenodeoxycholic acid, which are synthesized from cholesterol in liver. In the intestine some of the primary bile acids are converted into secondary bile acids, i.e., deoxycholic acid (formed from cholic acid) and lithocholic acid (derived from chenodexoxycholic acid).
- Glycine and taurine conjugates of these bile acids are called as bile salts. For example, cholic acid is a bile acid, and its glycine conjugate (glycocholic acid) is a bile salt.

Kollegeapply

369. True about cAMP and cGMP -

a) Second messengers

b) Act on membrane receptors

c) Act by post-translational modification

d) All of the above

Correct Answer - D

Ans. is 'd' i.e.,All of the above

Second messengers

- Second messengers are molecules that relay signals from the membrane receptors to target molecules inside the cells. In above described receptors second messengers are cAMP, cGMP, Phosphatidylinositol, diacylgleceral, IP3, Ca.
- Secondary messengers of membrane receptors act by posttranslation modification, i.e., modification of proteins (e.g., enzymes) after they have already formed (i.e., after translation).

CollegeApply

370. Spectroscopy is used for interaction of -

a) Electromagnetic radiation

b) Protons

c) Alpha particles

d) Positrons

Correct Answer - A
Ans. is 'a' i.e.,Electromagnetic radiation
Spectroscopy is the study of the structure of atoms/molecules from studying their interaction with electromagnetic radiation.

KollegeApply

371. Abnormal proteins which are bound to ubiquitin are degraded in -

a) Proteosomes

b) Golgi apparatus

c) Smooth ER

d) Lysosomes

Correct Answer - A

Ans. is 'a' i.e.,Proteosomes [Ref Harper 25^{0}/e p. 560-561 & 28th/e p. 498-99]

- Ubiquitin plays major role in degradation of proteins and is particularly associated with disposal of misfoldedproteins.
- It is small, highly conserved protein that plays a key role in marking various proteins for subsequent degradation in proteosomes

KollegeApply

372. Enzyme degradation is caused by -

a) Ubiquitin

b) RNAse

c) Zymase

d) Chaperone

Correct Answer - A
Ans. is 'a' i.e., Ubiquitin [Ref Harper 29thie p. 560-561]
Degradation of defective (misfolded) proteins (including enzymes) is caused by ubiquitin

KollegeApply

373. G1cNAc-P-P- oligosacharride is -

a) Proteoglycan

b) Glycoprotein

c) Collagen

d) Phospholipid

Correct Answer - B
Ans. is 'b' i.e., Glycoprotein [Ref Medical Biochemistry by Bhagvan p. 312]
Dolichol plays a role in post-translational modification of protein by glycosylation to form glycoproteins.
It acts in the form of Dolichol pyrophosphate (Dolichol PP) and transfer Oligosaccharide from dolichol to glycoproteins
N-acetylgalactosamine-P-P-Dolichol (GLc NAc-P-P-dol) compound formed in the bionsynthesis of lipid-linked oligosaccharides.
Dolichol -P-P acts as a carrier of oligosaccharide and transfer it to glycoprotein.

KollegeApply

374. Prolyl hydroxylase require which cofactor -

a) Sc

b) Vitamin C

c) Mo

d) Vitamin K

Correct Answer - B
Ans. is 'b' i.e., Vitamin C [Ref Harper 29'Ve p. 590-593]
Hydroxylation of proline and lysine residue takes place during post-translational modification in rough ER. The enzyme catalyzing the reactions are prolyl hydroxylase (for proline) and lysyl hydroxylase (for lysine). Both these enzymes are dioxygenases using molecular oxygen (0_2) and cofactor for both these enzymes is vitamin C (ascorbic acid). a-Ketoglutatrate is a coreductant, which is oxidized to succinate.

Police Apply

375. Side chain linkage in proteoglycons -

a) Covalent

b) Hydrogen bond

c) Electrostatic bond

d) Van-der Waal's force

Correct Answer - A

Ans. is 'a' i.e.,Covalent [Ref Essentials of biochemistry p. 712]

Among the given options two bonds are involved in proteoglycan structure :

.. Covalent - In proteoglycon monomer, i.e. between central core protein and side chain of repeated disaccharides

2. Electrostatic → In proteoglycan aggregates between proteoglycan monomer and hyaluronic acid.

KollegeApply

376. Which of following is not a free radical -

a) H202

b) (M?

c) Superoxide anion

d) HOC1-

Correct Answer - D

Ans. is 'd' i.e., $HOC1^{-}$ [Ref Principles in medical pathology p. 391]

Free radicals are chemical species that have a single unpaired electron in the outer orbit. Most of these are partially reduced reactive oxygen forms that are produced as an unavoidable byproduct of mitochondria! respiration - also known as reactive oxygen species.

The most important are hydrogen peroxide (11_20), Superoxide anion (02) and hydroxyl radical (OH).

KollegeApply

377. Not an irreversible injury-

a) Pyknosis

b) Pyknosis

c) Karyolysis

d) Bleb formation

Correct Answer - D
Answer- D. Bleb formation
Damage to nucleus can be of three forms-

- Pkynosis- nuclear shrinkage & chromatin condensation and clumping.
- Karyorrhexis- Nuclear fragmentation.
- Karyolysis- decreased basophilia due to dissolution of nucleus.

KollegeApply

378. Hypertrophy is -

a) Increase in cell number

b) Increase in cell size

c) Decrease in cell number

d) Decrease in cell size

Correct Answer - B
Ans. is 'B' i.e., Increase in cell size
Hypertrophy
* Hypertrophy refers to an *increase in the size of cells* without increase in the number, resulting in an increase in the size of tissue.
* Hypertrophy involves cell enlargement without cell division.
* So, hypertrophied organ has just larger cells, but no new cells (by contrast, in hyperplasia there is increase in number of new cells without increase in size).
* Nuclei in hypertrophied cells have a higher DNA content than in normal cells because the cells arrest in the cell cycle without undergoing mitosis.
* *Myocardium* (heart muscle) and *skeletal muscle* undergo hypertrophy.
* The most common stimulus for hypertrophy is increased workload.
Mechanism of hypertrophy
* The increase in cell size is due to *synthesis of more structural proteins.*
* The genes that are induced during hypertrophy include those encoding transcription factors (C-fos, C-jun), growth factors (TGF-(3, TGF- 1, FGF); and vasoactive agents (a-agonists, endothelin-1, angiotensin II).
* There may also be a switch of contractile proteins from adult to

fetal or neonatal forms, e.g., during myocardial hypertrophy, the a-myosin heavy chain is replaced by 13-form of the myosin heavy chain, which leads to decrease myosine ATPase activity and a slower, more energetically economical contraction.

* In addition, some genes that are expressed only in embryonic life are re-expressed in hypertrophied myocardium, e.g., in the embryonic heart, the gene for Atrial natriuratic peptide (ANP) is expressed in both atrium and ventricle. After birth, ventricular regulation of the gene is down regulated. Myocardial hypertrophy is associated with reinduction of ANF gene expression. ANP induces salt excretion by kidney L blood volume & pressure, decrease work load.

Why do these changes occur ?

* As already explained, the most common stimulus for myocardial hypertrophy is increased workload.
* All the above morphological changes that occur in hypertrophy either increase muscle activity (to handle the increased workload) or decrease the workload to heart.

KollegeApply

379. Hyaline degeneration is found in -

a) MI

b) Parkinson's' disease

c) Yellow fever hepatitis

d) Basophilic cell of pituitary

Correct Answer - C
Answer- C. Yellow fever hepatitis
1) Intracellular hyaline :councilman bodies in yellow fever
2) Extracellular hyaline :n Corpora amylacea are round masse of hyaline seen in prostate in elderly, brain and spinal cord of old people and old infarcts of lung.

KollegeApply

380. Programmed cell death is known as-

a) Cytolysis

b) Apoptosis

c) Necrosis

d) Proptosis

Correct Answer - B
Ans. is 'b' i.e., Apoptosis
* Programmed cell death is apoptosis.
* But remember this important fact that not all apoptosis are programmed cell death (read text below) Apoptosis
* Apoptosis is pathway of cell death that is induced by a tightly regulated intracellular program in which cell destined to die activate enzymes that degrade the cell's own nuclear DNA, and nuclear & cytoplasmic proteins.
* Apoptosis generally involves single cells in contrast to necrosis that usually involve a group of cells. o Apoptosis may be of two types ?
A. Physiological (most of the time) Programmed cell death.
B. Pathological Unprogrammed cell death.
A.Physiological apoptosis
* Death by apoptosis is a normal phenomenon that *serves to eliminate cells that are no longer needed.* o It is important in the following physiologic situation :?
.. The programmed destruction of cells during embryogenesis, including implantation, organogenesis, and metamorphosis.
2. Hormone dependent involution in adult, e.g., endometrial cell breakdown during menstural cycle, ovarian follicular atresia in the

menopause, the regression of lactating breast after weaning, and prostatic atrophy after castration.

3. Cell deletion in proliferating cell population in order to maintain a constant number, e.g., intestinal crypt epithelium.
4. Death of host cells that have served their useful purpose, such as neutrophils after an acute inflammatory response, and lymphocytes at the end of an immune response.
5. Elimination of potentially harmful self-reactive lymphocytes in thymus.
6. Cell death induced by cytotoxic T cells to eliminate virus infected and neoplastic cells. Same mechanism occurs in graft versus host disease.

B.Pathological apoptosis

* Apoptosis may also be pathological.
* When cells are damaged beyond repair, especially when the damage affects the cell's DNA, the *irreparably damaged cells are eliminated :* ?

1. Cell death produced by injuries stimuli —> *Radiation* and *cytotoxic anticancer drugs* damage DNA, and if repair mechanisms cannot cope with the injury, the cell kills itself by apoptosis. In these situations, elimination of the cell may be a better alternative than risking mutations and translocations in the damaged DNA which may result in malignant transformation.
2. Cell injury in certain viral diseases, e.g., in viral hepatitis.
3. Pathologic atrophy in parenchymal after duct obstruction, such as occurs in pancreas, parotid gland.
4. Cell death in tumors.

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381. Which is activated for nuclear fragmentation in apoptosis -

a) Caspases

b) Apaf - 1

c) Oxygen free radicals

d) All

Correct Answer - A

Ans is 'a' i.e., Caspases

- Caspases and endonuclease cause chromatin fragmentation in apoptosis.
- They are inactive, so first they should be activated.
- Cytochrome 'c' binds with Apaf-1 and this complex activates caspases.
- Caspases cause fragmentation of chromatin and also activate endonuclease.

About option 'b'

- Though Apaf-1 helps in activation of caspases, it has no role in chromatin framentation and It does not have two seprate forms active or inactive. It just forms complex with cytochrome 'C' to activate caspases.

KottageApply

382. In cell death, myelin figures, are derived from-

a) Nucleus

b) Cell membrane

c) Cytoplasm

d) Mitochondria

Correct Answer - B
Ans. is 'b' i.e., Cell membrane

- *Myeline figures* are *cytoplasmic* bodies composed of concentric whorls of membranes, **derived from damage cell membrane.** *Myelin figures appear during reversible injury but they are more pronounced in irreversible injury.*

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383. Lipofuscin is

a) Wear and tear pigment

b) Fat deposits

c) Blood pigment

d) Form of calcification

Correct Answer - A

Answer- A. Wear and tear pigment

- It is an insoluble pigment, also known as I and wear or tear or aging pigment. Lipofuscin is not injurious to the cell or its functions.
- Its importance lies in being the tell-tale sign of free radical injury and lipid peroxidation.

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384. Antiapoptotic gene

a) FLIP

b) P53

c) BAX

d) BIM

Correct Answer - A

Answer- A. FLIP

- Proapoptotic genes : Apaf-1, Cytochrome C, Bak, Bax, Bim, AIF, P53, Caspases, TNFRI, FAS (CD95), FADD, BH3 only proteins (Bim, Bid, Bad), Smac/DIABLO.
- Antiapoptotic genes : BCL-2, BCL-X, Mcl-1, IAPs, FLIP

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385. In apoptosis which is/are involved -

a) Apaf-1

b) Bc12

c) Caspases

d) All

Correct Answer - D
Ans. is 'a' i.e., Apaf-1; 'b' i.e., BCl2; 'c' i.e., Caspases

- *Proapoptotic genes :* Apaf-1, Cytochrome C, Bak, Bax, Bim, AIF, P53, Caspases, TNFRI, FAS (CD95), FADD, BH3 only proteins (Bim, Bid, Bad), Smac/DIABLO.

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386. Not a apoptotic gene

a) P53

b) Bax

c) Mcl-1

d) n-myc

Correct Answer - D
Answer- D. n-myc
Proapoptotic genes : Apaf-1, Cytochrome C, Bak, Bax, Bim, AIF, P53, Caspases, TNFRI, FAS (CD95), FADD, BH3 only proteins (Bim, Bid, Bad), Smac/DIABLO.

KollegeApply

387. Fat necrosis is common in -

a) Omentum

b) Breast

c) Retroperitoneal fat

d) All of the above

Correct Answer - D
There are 2 Types of Fat Necrosis
1. Enzymatic fat necrosis
* This is due to action of *lipase* on adipose tissue.
* It occurs most frequently in *acute pancreatitis* due to leakage of lipase.
* Depending on the severity of acute pancreatitis, fat necrosis may occur in :
  - *Adipose tissue contiguous to pancrease, i.e., retroperitoneal fat.*
  - Adipose tissue in *anterior mediastinum.*
  - *Bone marrow*
  - *Omental and abdominal fat*
2. Nonenzymatic or Traumatic fat necrosis
* Occurs due to trauma
* Is seen in *subcutaneous tissue of breast, thigh,* and *abdomen.*

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388. Caseating necrosis occurs in

a) Brain

b) liver

c) kidney

d) lung

Correct Answer - D
Answer- D. lung
Gaseous necrosis, a variant of coagulative necrosis can be encountered in any organ where cell death is attributable to certain organisms e.g., mycobacterium tuberculosis (TB), syphilis and fungi (Histoplasma, Coccidioidomycosis).
Pulmonary tuberculosis is the most common cause of caseous necrosis. Therefore answer should be "lung".

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389. Liquefactive necrosis is seen in:

a) Heart

b) Brain

c) Lungs

d) Spleen

Correct Answer - B
Brain

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390. Spread of infection causes

a) Fibrinoid necrosis

b) Fat necrosis

c) Liquifactive necrosis

d) Coagulative necrosis

Correct Answer - C
Answer- C. Liquifactive necrosis
Liquefactive or colliquative necrosis occurs due to lysosomal permeability and enzymes of leukocytes digest the tissue transforming the tissue into liquid viscous mass.
Tissue architecture is lost.
Examples are- Infarct brain and abscess cavity.

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391. MI is a type of -

a) Coagulative necrosis

b) Liquefactive necrosis

c) Caseous necrosis

d) Fat necrosis

Correct Answer - A
Ans. is 'a' i.e., Coagulative necrosis
Coagulative necrosis
* This is *most common type of necrosis.*
* This type of necrosis is most frequently caused by sudden cessation of blood flow (ischemia) in organs such as *heart (MI), Kidney (ATN), adrenal gland, and spleen.*
Note : Brain is the only exception, i.e.,. It is the only solid organ in which ischemia leads to liquifactive necrosis not coagulative necrosis.
* It is also seen with other types of injury e.g., *liver necrosis in viral hepatitis, Coagulative necrosis of skin after burns (Thermal injury).*
* Why there is predominant protein denaturation and no enzymatic digestion ?
Hypoxia causes intracellular acidosis (has been explained earlier) — > .t pH results in denaturation ofproteins which includes not only structural proteins hut also enzymes
So, there is no enzymatic digestion. o The necrotic cells retain their cellular outline for several days.
Liquefactive necrosis
* It is the necrotic degradation of tissue that rapidly undergo *softening and liquefaction* because of the *action of hydrolytic enzymes.*
* It occurs after

* It occurs after
1.Infection i.e., suppurative inflammation (most common).
2.Ischemic necrosis in brain.
Note : Brain lacks any substantial supportive stroma, so ischemic necrosis in brain is liquifactive unlike other organs where it is coagulative.
***** *Mechanism of liquefactive necrosis* —> Microbes stimulates accumulation of inflammatory cells and these cells release lysosomal enzymes.

Caseous necrosis

* It is a *variant of coagulative necrosis.*
***** It is most commonly encountered when cell death is attributable to certain organisms e.g., *mycobacterium tuberculosis (TB)* and fungi *(Histoplasma, Coccidioidomycosis).*

Why is it called caseous necrosis, not coagulative necrosis ?

* In contrast to coagulative necrosis where tissue architecture is maintained, in caseous necrosis, the tissue architecture is completely obliterated. So, it has been called caseous because of its cheesy white appearance of the area of necrosis.

Kollegeapply

392. Diabetic foot is associated with following type of gangrene -

a) Dry gangrene

b) Wet gangrene

c) Gas gangrene

d) Fournier's gangrene

Correct Answer - B

Answer- B. Wet gangrene

- When overlying skin of dry gangrenous tissue is devitalized, bacterial infection is superimposed and the coagulative necrosis
- is modified by liquifactive necrosis. More commonly due to venous occlusion then arterial occlusion.
- Occurs in diabetic foot and bed sores

KollegeApply

393. Unfolded protein metabolism is associated with

a) Endoplasmic reticulum

b) Golgi apparatus

c) Mitochondria

d) None of the above

Correct Answer - A
Answer- A. Endoplasmic reticulum
The unfolded protein response (UPR) is a cellular stress response related to the endoplasmic reticulum (ER).
Diseases amenable to UPR inhibition include Creutzfeldt-Jakob disease, Alzheimer's disease, Parkinson's disease, and Huntington's disease.

KollegeApply

394. Most reactive free radical is:

a) Peroxide

b) Carboxyl

c) Hydroxyl

d) Superoxide

Correct Answer - C
Ans: C. Hydroxyl
(Ref Robbins 9/e p480)

- Hydroxyl radical (*OH) is the most potent reactive oxygen species.
- Most reactive oxygen-derived free radical.
- Principal ROS responsible for damaging lipids proteins & DNA.

KollegeApply

395. Not an example of excess tissue growth

a) Granulation tissue

b) Neoplasia

c) Hyperplasia

d) Fibrosis

Correct Answer - A
Answer- A. Granulation tissue
Granulation tissue is a hallmark of healing. It is characterized by formation of new small blood vessels (angiogenesis or neovascularization) and proliferation of fibroblasts

KollegeApply

396. 1st mediator of inflammation to be released is

a) Nitric oxide

b) PAF

c) Histamine

d) IL-1

Correct Answer - C

Answer- C. Histamine

- Vasoactive amines are present in preformed stores in cells and are therefore among the first mediators to be released during inflammation
- The two amines are especially important. These are :- (i) Histamine and (ii) Serotonin

KollegeApply

397. Rolling of leucocytes on endothelial cells is mediated by

a) ICAM-1

b) (3, integrin

c) IL-8

d) P- selectin

Correct Answer - D
Answer- D. P- selectin
Rolling & adhesion-

- It is brought by- P selectin or CD 62
- PECAM- 1 involved in leucocyte migration from endothelial surface.

KollegeApply

398. Perioperative shock is an example of

a) Hypovolemic shock

b) Septic shock

c) Cardiogenic shock

d) Neurogenic shock

Correct Answer - A
Answer- A. Hypovolemic shock
"Most common cause of hypovolemic shock is hemorrhage which may be intraoperative or postoperative."

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399. Substance playing a role in tumor metastasis cascade is

a) Collagenase IV

b) TNF-alpha

c) CD99

d) NM23

Correct Answer - A

Ans is 'a' i.e. Collagenase IV

Various steps of metastasis and molecules involved

1. Detachment of tumor cells - Down regulation of expression of either E-cadherins or catenins
2. Attachement to ECM (including basement membrane) - Tumor cells express integrins that helps in the attachement.
3. Degradation of ECM - proteolytic enzymes (most important proteases are metalloproteinases (MMPs) including collegenase IV).
4. Vascular dissemination and homing of tumor cells - Among adhesion molecule CD44 is of particular interest.

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400.

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Which of the following is not a part of ECM ?

a) Lectin

b) Fibronectin

c) Laminin

d) Proteoglycans

Correct Answer - A
Answer- A. Lectin
Basement membrane (BM):- PAS positive amorphous structure which lie underneath epithelia of different organs and endothelial cells. Components of BM are laminin, fibronectin, tenascin, collagen type IV, enatactin (nidogen), proteoglycan & perlecan (heparan sulphate).

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401. Which of the following is derived from fibroblast cells ?

a) TGF-13

b) MMP2

c) Collagen

d) Angiopoietin

Correct Answer - C
Answer- C. Collagen
Fibroblasts produce the glycosaminoglycans, collagens, elastic fibers, reticular fibres and glycoproteins that can be seen in the extracellular matrix. They also produce cytokineTSLP.

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402. Chemotaxis is mediated by-

a) Histamine

b) Leukotriene B4 and C5a

c) Leukotriene C4 and C3a

d) Bradykinin

Correct Answer - B
Ans. is 'b' i.e., Leukotriene B4 and C5a

- Chemotaxis is unidirectional locomotion of leukocytes towards the site of injury, oriented *along a chemical gradient.* This chemical gradient is created by substances called chemoattractants (chemotactic agents), which may be exogenous (bacterial products) or endogenous (C5a, *LTB-4, IL-I, TNF, IL-8).*
- C5a *is* the most powerful chemo-attractant (chemokine).

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403. Which of the following enhances acute phase response ?

a) a-2 microglobulin

b) Transferrin

c) Albumin

d) Retinal binding protein

Correct Answer - A

Answer- A. a-2 microglobulin

a) Positive acute phase proteins

- These proteins are increased during inflammation. Important examples are C-reactive protein : CRP (f31- globulin),
- a-1 antitrypsin,fibrinogen, ferritin, serum amyloid A, hepatoglobulin, ceruloplasmin, and a-2 microglobulin.

b) Negative acute phase proteins

- These proteins are decreased during inflammation. Important examples are albumin, prealbumin, transferrin, transcortin, transthyretin and retinal binding protein.
- Generally, positive acute phase proteins are considered as acute phase proteins.

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404. Interleukin responsible for Pyrexia is:

a) IL1

b) IL3

c) IL4

d) IL8

Correct Answer - A
IL1

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405. Interleukin 2 is produced by

a) T helper cells 1

b) T helper cells 2

c) Natural killer cells

d) Basophils

Correct Answer - A
Ans. is 'a' i.e., T helper cells 1

A) T helper - 1 (T_F,') secretes 4 IL-2 and interferon - y

B) T helper - 2 (T_0^2) secretes -> IL-4, IL-5, IL-6, IL-13

KollegeApply

406. **Process of migration of leukocytes through the endothelium is through:**

a) Phagocytosis

b) Pinocytosis

c) Diapedesis

d) Apoptosis

Correct Answer - C

The next step in the process of leukocyte recruitment is migration of the leukocytes through the endothelium, called **transmigration** or **diapedesis.**

Transmigration of leukocytes occurs mainly in post-capillary venules.
Chemokines act on the adherent leukocytes and stimulate the cells to migrate through interendothelial spaces toward the chemical concentration gradient, that is, toward the site of injury or infection where the chemokines are being produced.

Ref: Robbins 8th edition, Chapter 2.

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407. IFN-gamma is produced by

a) Neutrophills

b) Macrophages

c) T - cells

d) B - cells

Correct Answer - C

Answer- C. T - cells

- Activated T-cells (helper) produce IFN-y, the major cytokine of granulomatous inflammation.

IFN-y

- Helper T-cells are activated by IL-2 and produce IFN-y, the major cytokine of granulomatous inflammation
- Finally there is formation of granuloma induced by IFN-y.

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408. Extremities are warm in which type of shock

a) Hypovolemic shock

b) Neurogenic shock

c) Anaphylactic shock

d) Cardiogenic shock

Correct Answer - B
Answer- B. Neurogenic shock
In hyperdynamic stage of septic shock and in neurogenic shock, extremities are warm due to vasodilatation.

KollegeApply

409. Serum amyloid associated protein, found in ?

a) Alzheimer's disease

b) Chronic inflammatory states

c) Chronic renal failure

d) Malignant hypertension

Correct Answer - B
Ans. is 'b' i.e., Chronic inflammatory states
a) *Chronic inflammatory conditions* like RA (most common), TB & leprosy, osteomyelitis, *ankylosing spondylitis,* IBD (Crohn's disease, UC), bronchiectasis.
Some tumors like Renal cell carcinoma (hypernephroma), Hodgkins lymphoma

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410. HLA-Cw6 is associated with

a) Myatshenia gravis

b) Behcet's disease

c) Pemphigus vulgaris

d) Psoriasis vulgaris

Correct Answer - D
Answer- D. Psoriasis vulgaris
HLA association in psoriasis

- Psoriasis vulgaris - Cw6, B13, B17, DRB1*0701/2, B37
- Psoriatic arthritis - B27
- Generalized pustular psoriasis and acrodermatitis continua of Hallopeau- B27, B8
- Pustolosis of palms and soles - Aw19, Bw35

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411. Following injection of lymphokines, the same class of immunoglobulin are produced. This is to be referred as -

a) Group switching

b) Clonal selection

c) Hybridisation

d) Class switching

Correct Answer - B

Ans. is 'b' i.e., Clonal selection

* B-cells are able to make a specific antibody against a specific antigen.
* It is due to present of specific receptor on B-cells - B-cell receptor (BCR), that is usually an immunoglobulin Ig M or Ig D.
* An antigen interacts with B-cell that shows best fit by virtue of its BCR.
* The antigen binds to this receptor, and the B-cell is stimulated to divide and form a clone (clonal selection).
* This clone of cells will become plasma cells that will secretes antibody of a particular specificity and same class.
* Although, B-cells are the major source of antibodies (after their conversion into plasma cells), Helper - T cells are alsoimportant.
* Helper T-cells activate B-cells by secreting *cytokines (lymphokines).* o *In antibody formation T-cells are involved earlier than B-cells.*

Antigen exposure

Antigen presenting cells present this antigen to helper T cells

T cells are activated

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Secretion of lymphokine by T-cells
B-cells that carry BCR specific to that antigen are, stimulated (clonal selection)
B-cells proliferate and differentiate in to plasma cells
Plasma cells synthesize an immunoglobulin of same specificity as that carried by the B-cell precursors

Also know
Class switching
* *Isotype or class switching* is a biological process that changes an antibody from one class to another. For example from Ig M (in primary response) to Ig G (in secondary response).

KollegeApply

412. Shrinking Lung Syndrome is seen in:

a) SLE

b) Rheumatoid Arthritis

c) Scleroderma

d) Sarcoidosis

Correct Answer - A
Answer is A (SLE):
Shrinking lung syndrome refers to a condition typical of SLE that consists of a purely restrictive respiratory disease with normal lung parenchyma and markedly decreased lung volumes.

Shrinking lung syndrome

Shrinking lung syndrome refers to a condition typical of SLE that consis
respiratory disease with normal lung parenchyma and markedly decrea

Pathogentic Mechanism

Diaphragmatic dysfunction has been advocated as the main pathogene
shrinking lung syndrome

Clinical Presentation

Shrinking lung syndrome usually manifests as exertional dyspnea of va
progress over a period of weeks or months. (Orthopnea attributed to dia
may also occur).

Pleuritic chest pain is reported frequently, and a previous history of pleu
common.

Physical examination is remarkably normal.

Investigations

Chest radiography typically shows elevated hemi-diaphragms, althougl
finding and its absence does not exclude the diagnosis. Pleural effusion
atelectasis may be also evident on plain films or CT scans.

Pulmonary function tests show a marked restrictive pattern, with decrea

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(FVC).
Carbon monoxide diffusion corrected by lung volumes is typically norma
Anti-Ro antibodies may be present, although they do not offer an additi

Prognosis

The prognosis of this syndrome is usually good (Most patients show lor

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413. MHC-2 is present in all except

a) Cortical macrophages

b) Medullary m acrophages

c) Cortical epithelial cells

d) Medullary epithelial cells

Correct Answer - B
Answer- B. Medullary m acrophages
Cortical macrophages, epithelial cells and dendritic cells express high level of class II MHC molecule. Medullary macrophages express only class I MHC, while medullary epithelial cells and dendritic cells express both class I & II MHC molecules.

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414. B cells are located in which region of lymph nodes

a) Paracortical region

b) Cortical follicles

c) Medullar sinuses

d) Subcapsular region

Correct Answer - B
Answer- B. Cortical follicles
Location of immune cells in lymph node :
1. T-cells : Paracortical area.
2. B-cells : Cortical follicles, germinal centers, medullary cords.

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415. PSGN is an example of which type of hyper sensitivity

a) Type -1 hypersensitivity

b) Type -2 hypersensitivity

c) Type -3 hypersensitivity

d) Type -4 hypersensitivity

Correct Answer - C
Answer- C. Type -3 hypersensitivity
Glomerulonephritis (PSGN : Post-streptococal GN) is a type III hypersensitivity.

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416. Number of criteria for HLA matching are

a) 10

b) 4

c) 16

d) 22

Correct Answer - A
Answer- A. 10
At least 8 HLA markers for these minimum requirements: two A markers, two B markers, two C markers, and two DRB1 markers. Sometimes an additional marker, called DQ, is also matched making it 10 markers.

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417. Organ with least chance of rejection

a) Blood

b) Kidney

c) Heart

d) Liver

Correct Answer - D
Answer- D. Liver
HLA matching play a very minimal role in liver transplant therefore immune rejection is less common in liver transplant.

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418. Mc type of graft rejection is

a) Hyperacute

b) Acute

c) Chronic

d) Acute on chronic

Correct Answer - C
Answer- C. Chronic
"Acute graft rejection is the most common form"

KollegeApply

419. True about serum sickness is

a) Type 2 hypersensitivity

b) Can lead to leukocytoclastic vasculitis

c) Hypercomplementemia

d) Can occur due to homologous antigen

Correct Answer - B

Answe- B. Can lead to leukocytoclastic vasculitis

Serum sickness is a type III hypersensitivity (immune complex mediated) reaction that results from the injection of heterologous or foreign protein or serum.

When an antiserum is given, the human immune system can mistake the proteins present for harmful antigens. The body produces antibodies, which combine with these proteins to form immune complexes. These complexes precipitate, enter the walls of blood vessels, and activate the complement cascade, initiating an inflammatory response and consuming much of the available complement component 3 (C3). The result is a leukocytoclastic vasculitis.

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420. Most lethal combination is

a) Autosomal monosomy

b) Chromosomal monosomy

c) Autosomal trisomy

d) Chromosomal trisomy

Correct Answer - A
Answer- A. Autosomal monosomy
Autosomal monosomies (loss of one autosome) are incompatible with fetal development and are not found in live births. Only monosomy compatible with live birth is due to involvement of sex chromosome, i.e. Turner syndrome (45 X).

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421. All of the following are true about Down syndrome except

a) Incidence of Robertsonian translocation is 1:1000

b) Extra chromosome is of maternal origin

c) Most common cause is trisomy 21

d) Mosaicism 21 has no association with maternal age

Correct Answer - A

Answer- A. Incidence of Robertsonian translocation is 1:1000

Cytogenetics in Down's syndrome

1. Trisomy 21 : It is most common (95%) cause. Extra chromosome is maternal in origin.
2. Robertson tronslocations (t 22:21; t 14:21; t 15:21) : This accounts for 3% (3:100) of cases.
3. Mosaicism of 21 : This accounts for 2% of cases
4. Partial trisomy : Very-very rare

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422. Hypophosphatemic rickets is

a) AR

b) AD

c) XR

d) XD

Correct Answer - D
Answer- D. XD
X-linked dominant disorders

- Vitamine D resistant (X-linked hypophosphatemic) Rickets.
- Familial hypophosphatemia.
- Fragile X-syndrome.
- Incontinentia pigmenti.
- Rett syndrome.

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423. Chromosomal instability syndrome is

a) Fanconi syndrome

b) Ataxia Telangectasia

c) Bloom syndrome

d) All of the above

Correct Answer - D

Ans. is 'd' i.e., All of the above *[Ref Talwar G P p. 855]*

- Chromosomal instability syndromes are a group of disorders characterized by chromosomal instability and breakage.

There are :

1. Xeroderma pigmentosa
2. Bloom syndrome
3. Fanconi syndrome
4. Ataxia telangectasia

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424. Structure of chromosomes is studied by?

a) C-banding

b) G-banding

c) Q-banding

d) Brd V-staining

Correct Answer - B

Answer- B. G-banding

Metaphase cells are then fixed with methanol/glacial acetic acid mixture and stained by one of the several banding techniques :-

G-Banding (Giemsa banding) : It is used most commonly.

Other banding techniques : Q-Banding (Quinacrine banding), C-Banding (Constitutive banding), and R-Banding (Reverse staining Geimsa banding).

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425. Location of gene on chromosome is identified by

a) Karyotyping

b) Genetic mapping

c) Microarray

d) Genomic imprinting

Correct Answer - B
Answer- B. Genetic mapping
A map of the human genome allows to understand where genes are located.

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426. Tyrosine kinase receptor is associated with proto¬oncogene -

a) RAS

b) MYC

c) RET

d) RB

Correct Answer - C
Answer- C. RET
It is a growth factor receptor (receptor tyrosine kinase). RET protein is a receptor for glial cell lined derived neurotrophic factor. RET is normally expressed in parafollicular 'C' cells of thyroid, adrenal medulla andparathyroid cell precursons.
Point mutation in RET protooncogenes is associated with MEN-2A, MEN-2B, medullary thyroid carcinoma and Hirschsprung disease.

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427. Reversible change from on cell type to other is known as -

a) Hyperplesia

b) Hypertrophy

c) Metaplesia

d) Dysplasia

Correct Answer - C

Ans. is 'c' i.e., Metaplesia *[Ref: Robbin's 9th/e p. 376,stye p 10]*

- Metaplasia is an adaptive change in which one adult (mature) cell type is replaced by another adult (mature) cell. It is completely reversible

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428. Which is not a tumor suppressor gene ?

a) WT-1

b) Rb

c) p53

d) RAS

Correct Answer - D

RAS *[Ref. Robbins 7th/e p 295]*

RAS is not a tumour suppressor gene, it is an oncogene.

Normal growth and cell division is under the control of two types of genes:

(i) Protooncogenes

(ii) Tumour suppressor genes

- Protooncogenes are the genes that normally control how often a cell divides and the degree to which it differentiates. They allow cell division at a controlled rate.
- When a protooncogene mutates into, an oncogene it becomes permanently "turned on" or activated even when it is not supposed to be. When this occurs, *cell divides too quickly which causes cancer.*
- Tumour suppressor genes are normal genes that *slow* cell division.
- A tumour suppressor gene is like the brake pedal on a car, it normally keeps the cell from dividing too quickly just as a brake keeps *a* car from going too fast.
- When it mutates, cell division can get out of control.

Functions of tumour suppressor gene:-

- *Repression* of genes that is essential for the continuing of the cell cycle.
- An important function of tumour suppression gene is *repairing DNA*

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damage.

- Every time a cell prepares to divide into 2 new cells it must duplicate its DNA. This process is not perfect and *copying error sometimes occurs.*
- Fortunately, cells have *DNA repair genes* which make proteins that *proofread DNA.*
- But if the genes responsible for the repair are faulty then the DNA can develop abnormalities that may lead to cancer.
- If there is too much damage to a cell's DNA to be fixed by the DNA repair genes, the tumour suppressor gene is responsible for destroying the cell by a process called *Apoptosis.*
- If the tumour suppressor gene is not working. cells with DNA damage will continue to grow and can eventually become cancerous.

Examples of Tumour suppressor gene

Gene	Cancer associated
• TGF Preceptor	Carcinoma of stomach
• E-cadherin	Carcinoma of colon
• NF-1	Neuroblastomas
• NF-2	Schwannoma and meningiomas
• APC/13 catenin	Carcinoma of stomach colon, pancreas, melanoma
• PTEN	Endometrial and prostate carcinoma
• SMAD 2 and • SMAD 4	Colon, pancreas tumour
• RB	Retinoblastoma, osteosarcoma carcinoma of breast, colon and Lung.
• P 53	Most human cancers
• WT-1	Wilms Tumour
• P16	Pancreatic, breast and

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	esophageal cancers
• BRCA 1 and • BRCA 2	Unknown
• KLF 6	Prostate

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429. Which of the following has tumor promoting effect?

a) BRAC

b) RB

c) MYC

d) p16

Correct Answer - C
Answer- C. MYC
RAS, Mitogen-activated protein kinase kinase, VEGF, or Akt

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430. CEA is

a) Hormone

b) Glycoprotein

c) Enzyme

d) Tumor associated protein

Correct Answer - B
Answer- B. Glycoprotein
Carcinoembryonic protein (CEA) is a glycoprotein.

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431. CEA is increased in which non-neoplastic condition

a) Hemolytic anemia

b) Pancreatitis

c) BPH

d) Pregnancy

Correct Answer - A:B
CEA-Carcinoembryonic antigen (CEA): CEA is also a glycoprotein normally synthesized in embryonic tissue of the gut, pancreas, and liver.
Their serum levels are high in cancers of the gastrointestinal tract, pancreas, ovarian cancer and breast.
CEA levels are also elevated in certain non-neoplastic conditions e.g. in ulcerative colitis, Crohn's disease, hepatitis, and chronic bronchitis, Alcoholic cirrhosis, smoking, pancreatitis, hemolytic anemia

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432. Carcinoma originating from glands is called

a) Basal cell carcinoma

b) Squamous cell carcinoma

c) Adenocarcinoma

d) Fibrosarcoma

Correct Answer - C
Answer- C. Adenocarcinoma
Benign tumor of glands → Adenoma.
Malignant tumor of gland → Adenocarcinoma.

KollegeApply

433. Hematological carcinoma is commonly linked to

a) Nicotine

b) Benzene

c) Lithium

d) Alcohol

Correct Answer - B
Answer- B. Benzene
Benzene exposure is associated with leukemia.

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434. Major contribution to cachexia with advanced cancer?

a) Clathrin

b) Histamine

c) Interferon

d) Tumor-necrosis-factor (TNF)

Correct Answer - D
Ans. is 'd' i.e., Turnor-necrosis factor (TNF)

- Patients with cancer commonly suffer progressive loss of body fat which is accompnied by profound weakness anorexia, and anemia. This wasting syndrome is referred to as cachexia.
  o TNF produced by macrophages or some tumor cells is the most important mediator of cachexia.

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435. Elastic fibers of tunica media are secreted by

a) Fibroblast

b) Endothelium

c) Smooth muscle

d) External lamina

Correct Answer - C

Amswer- C. Smooth muscle

- The blood vessels are made of three layers, called from the luminal side outward, the tunica intima, the tunica media and the tunica adventitia.
- The tunica intima consists of an endothelium and any sub-endothelial connective tissue. It is separated from tunica media by internal elastic lamina.
- The tunica media is the layer of concentrically-arranged smooth muscle. Smooth muscle cells have secretory capabilities and the tunica media contains varying amounts of collagen fibers, elastic fibers, elastic lamellae, and proteoglycans secreted by the smooth muscle cells.

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436. Level of which of the following is not elevated in heart disease

a) LDH

b) 5-nucleotidase

c) SGOT

d) ALP

Correct Answer - B
Answer- B. 5-nucleotidase
5-nucleotidase is elevated in liver disease, bone disease and pregnancy.
ALP (alkaline phosphatase) is raised in congestive heart failure

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437. Which protein is defective in dialated cardiomyopathy?

a) Myosin

b) Troponin

c) Tropomysoin

d) Dystrophin

Correct Answer - D
Answer- D. Dystrophin
Dialated cardiomyopathy occus due to defective cytoskeleton proteins. Most important protein inovolved is dystrophin. Other proteins affected are : (1) Desmin; (2) MLP Protein and (3) aP crystalline proteins

KolleegeApply

438. Lines of Zahn are seen in -

a) Heart

b) Lung

c) Liver

d) Kidney

Correct Answer - A
Answer- A. Heart
Lines of Zohn → Characteristic of thrombi that is formed in heart or aorta. They have visible and microscopic laminations produced by alternating pale layer of platelets mixed with fibrin and darker layer containing red blood cells.

KollegeApply

439. Small vessel vasculitis are -

a) Classical PAN

b) Wegner's granulomatosis

c) Giant cell arteritis

d) All

Correct Answer - B

Ans. is `b' i.e., Wegner's granulomatosis

- Inflammation of vessel wall is called vasculitis.

o Of these systemic necrotizing vasculitis, several types affect the aorta and medium sized vessels, but most affect small vessels, such as arterioles, venules, and capillaries —> small vessel vasculitis.

Large vessel vasculitis Medium vessel vasculitis Small vessel vasculitis

o Giant cell arteritis (Temporal arteritis) o Takayasu arteritis o Cogan syndrome

o Polyarteritis nodosa o Kawasaki disease o Bechet's syndrome o Buerger's disease o Hypersensitivity o Churg strauss syndrome o Urticarial vasculitis o Drug induced

ANACA positive ANCA negative

o Wegner's granulomatosis o Microscopic polyangitis

Following information have been added in Pie of Robbins

o Following are *small vessels vasculitis* and are immune-complex mediated :

1. SLE
2. *Henoch schonlein purpoura*
3) Cryoglobulinemia
4) Good-pasture disease

o Following *small vessel vasculitis* are pauci-immune, i.e. there is paucity of immune complexes:

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1. Microscopic polyangitis syndrome 2. Wegener granulomatosis	3. Chrug-strauss

KollegeApply

440. Heart failure cells are

a) Neutrophils

b) Macrophages

c) Lymphocytes

d) Basophils

Correct Answer - B
Answer- B. Macrophages
Heart failure cells are Hemosiderin laden alveolar macrophages.
Heart failure cells are a manifestation of pulmonary congestion and edema (as seen in heart failure).
Rupture of dilated and congested capillaries may result in minute intra-alveolar hemorrhages. The breakdown of erythrocytes liberates haemosiderin pigment which is taken up by alveolar macrophages, so-called heart failure cells, seen in the alveolar lumina.

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441. Heart failure cells are seen in -

a) Pulmonary edema

b) Pulmonary infarction

c) Pulmonary abscess

d) PulmonaryTB

Correct Answer - A
Answer- A. Pulmonary edema
Pulmonary edema & pulmonary infarction can be differentiated by the presence of heart failure cells in pulmonary edema.
Heart failure cells are Hemosiderin laden alveolar macrophages.
Heart failure cells are a manifestation of pulmonary congestion and edema (as seen in heart failure).

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442. Obliterative endarteritis in vasa vasorum is seen in -

a) Hypertension

b) Tuberculosis

c) Syphilis

d) SLE

Correct Answer - C
Answer- C. Syphilis
Obliterative endarteritis that involves vaso vasorum of aortais seen in the tertiary stage of syphilis. It may lead to syphilitic aneursym (leuetic aneurysm).
It usually affects the proximal ascending aorta, particularly the aortic ring. Syphilitic aortitis may occasionaly involve the aortic arch or descending aorta.

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443. Concentric hypertrophy of left ventricle is seen in -

a) Cong. bicuspid aortic valve

b) MS

c) AR

d) HOCM

Correct Answer - A
Ans. is 'a' i.e., Cong-Bicuspid aortic valve
Aortic stenosis causes pressure overload that results in concentric hypertrophy.
o Congenital bicuspic aortic valve causes valvular aortic stenosis.

KollegeApply

444. Which type of artery is most commonly involved in PAN?

a) Muscular

b) Pulmonary

c) Skin

d) GIT

Correct Answer - A
Answer- A. Muscular
Polyarteritis nodosa or classical polyarteritis nodosa is systemic necrotizing vasculitis of medium sized muscular arteries, but does not involve small vessels i.e., arterioles, venules or capillaries.
It typically spares the pulmonary circulation.
Renal artery involvement is the major cause of death.

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445. Amount of blood loss in Stage I of hemorrhagic shock is -

a) <10%

b) <20%

c) <30%

d) <40%

Correct Answer - B
Answer- B. <20%
Mild hypovolemia (stage 1)(< 20% volume loss) : Only mild tachycardia is there with normal BP
Rapid loss of up to 20% of the blood volume, or slow losses of even larger amounts, may have little impact in healthy adults; greater losses, however, can cause hemorrhagic (hypovolemic) shock

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446. hL/h blood group-

a) lacks H- antigen

b) lacks A-antigen

c) lacks B- antigen

d) Alloftheabove

Correct Answer - D
Answer- D. Alloftheabove
In Bombay blood group(h/h or Oh blood group) the precursor antigen (H antigen) is absent, consequently A and B antigens which are derived from modification of H antigen are not formed. Thus, Bombay blood group lacks H, A and B antigen.

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447. Normal Myeloid - erythroid ratio is -

a) l:l

b) 2:l

c) 3:l

d) 4:1

Correct Answer - C
Answer- C. 3:l
Bone marrow is the major source of all hematopoietic cells (proginator hematopoietic cells) in post-natal life. In normal adults, ratio of fat cells to hematopoietic cells is 1:1. Ratio of myeloid to erythroid is 3 : 1. Ratio of fat cells to erythroid cells is 4: I.

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448. Distinguishing feature of reticulocyte is -

a) Constitute 10% of the red cells

b) No nucleus

c) Smaller in size then RBCs

d) Mature in lymPh nodes

Correct Answer - B
Answer- B. No nucleus
Reticulocytes are immature red blood cells
Reticulocytes do not have a nucleus.

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449. Life span of neonatal RBC ?

a) 60-90 days

b) 90-120 days

c) 120-150 days

d) 150-200 days

Correct Answer - A
Ans. is 'a' i.e., 60-90 days

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450. What is true about sickle cell -

a) Sickling occurs both in heterozygous and homozygous state

b) Fetal hemoglobin facilitates Sickling

c) Sickling is reversible with oxygenation

d) Sickling Leads to decreased MCHC

Correct Answer - C

Answer- C. Sickling is reversible with oxygenation

Sickling of red cells is reversible initially, i.e., with oxygenation, HbS depolymerizes and cell shape normalizes.

Repeated episodes of deoxygenation and sickling, membrane damage occurs and cells become irreversibly sickled, and retain their abnormal shape even when full oxygenated.

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451. Warm antibody in AIHA is -

a) IgE

b) IgM

c) IgG

d) IgD

Correct Answer - C
Answer- C. IgG
Warm antibody autoimmune hemolytic anemia is the most common form of autoimmune hemolytic anemia.
Most causative antibodies are of the IgG class, sometimes IgA antibodies are culprit.

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452. Osmotic fragility test is commonly used for -

a) Iron deficienry anemia

b) Megaloblastic anemia

c) Hereditary spherocYtosis

d) Aplastic anemia

Correct Answer - C
Answer- C. Hereditary spherocYtosis
Increased Osmotic fragility-

- Hereditary spherocytosis
- Hemolytic anemia (acquired immune)
- Malaria
- Severe pyruvate kinase dificiency

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453. **Which of the following findings is diagnostic of iron deficiency anemia?**

a) Increased TIBC, decreased serum ferritin

b) Decreased TIBC, decreased serum ferritin

c) Increased TIBC, increased serum ferritin

d) Decreased TIBC, increased serum ferritin

Correct Answer - A

Iron deficiency anemia is associated with increased Total iron binding capacity (TIBC) and decreased serum ferritin (storage form of iron)

Ref: Harrison's Principles of Internal Medicine, 17th Edition, Page 631, 663; Davidson's principles and practice of Medicine, 20th Edition, Chapter 24, Page 1025-1027 &1030

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454. Ristocetin testing von Willebrand disease shows?

a) Increased agglutination

b) Decreasedagglutination

c) Normalagglutination

d) No agglutination

Correct Answer - B
Answer- B. Decreasedagglutination
Adding ristocetin at a final concentration of 1.25 g/1 to platelet rich plasma (PRP) of a patient with von Willebrand disease (VWD) almost invariably results in a reduced agglutination of the platelets compared to a normal PRP.

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455. Shelf life of platelets to blood bank is

a) 5 days

b) 7 days

c) 10 days

d) 21 days

Correct Answer - A

Answer- A. 5 days

- Platelets are approved by FDA for stored upto 5days at 20-24 (RoomTemperature) because of risk of bacterial contamination.

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456. Routine Rh typing includes testing?

a) A antigen

b) B antigen

c) C antigen

d) D antigen

Correct Answer - D
Answer- D. D antigen
After ABO, the most important antigen in transfusion practice is D. The D antigen is a member of the Rh system.

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457. Following are seen in polycythemia vera except:

a) Most common cause of polycythemia

b) Increased erythropoietin

c) Erythropoietin independent growth of red cell progenitors

d) Intrinsic abnormality of hematopoietic precursors

Correct Answer - B

Polycythaemia vera (PV) is a clonal disorder characterized by increased production of all myeloid elements resulting in pancytosis (i.e increased red cells, granulocytes, platelets) in the absence of any recognizable cause.

- The term ‘polycythemia vera’ or ‘polycythemia rubra vera’ is used for primary or idiopathic polycythemia only and is the most common of all the myeloproliferative disorders.
- Secondary polycythemia or erythrocytosis, on the other hand, may occur secondary to several causes e.g. high altitude, cardiovascular disease, a pulmonary disease with alveolar hypoventilation, heavy smoking, inappropriate increase in erythropoietin (renal cell carcinoma, hydronephrosis, hepatocellular carcinoma, cerebellar hemangioblastoma, massive uterine leiomyoma);

clinical features:

- headache, vertigo, tinnitus, visual alterations syncope or even coma.
- Increased risk of thrombosis due to accelerated atherosclerosis.
- Increased risk of hemorrhages due to increased blood volume and intrinsic platelet dysfunction e.g. epistaxis, peptic ulcer disease
- Splenomegaly producing abdominal fullness.
- Pruritus, especially after a bath

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458. Which of the following does not predispose to leukemia?

a) Genetic disorder

b) Alcohol

c) Smoking

d) Chemical exposure

Correct Answer - B
Answer- B. Alcohol
Etiological agents are radiation, chemicals (benzene, ethylene oxide), smoking and drugs (alkylating agents, topoisomerase II inhibitors).

KollegeApply

459. 'Hairy cell leukemia' is a Neoplastic proliferation of :

a) T. cells

b) B. cells

c) Myeloid cells

d) Macrophages

Correct Answer - B
Answer is B (B Cells)
Wain' Cell is a rare hut distinctive B-cell neoplasm.
Hairy cell leukemia review :
***Presentation* is with a triad of :**
1. Splenomegaly Q :often massive. However hepatomegaly is less common while lymphadenopathy is rare.
2. Pancytopenia Q and thereby, resulting infections.
3. Vasculitis like syndrome Q :Erythema nodosum and cutaneous nodules due to perivasculitis and PAN.

Course : Hairy cell leukemia follows an indolent course.Q

CollegeApply

460. AML best prognosis is seen with ?

a) Acute myelo monocytic leukemia.

b) Acute monocytic leukemia.

c) Acute promyeloblastic lukemia (M.3).

d) Erythro leukemia

Correct Answer - C
Ans. is 'c' i.e., Acute promyeloblastic leukemia (M.3)
Acute promycloblastic leukemia

- Also known as M-3
- Associated with t(15:17)
- DIC, chloromas common
- Very responsine to retinoic acid combined with anthracylines.
- M.7 (acute megakaryocytic leukemia) mostly seen in down syndrome.
- French-American-British (FAB) Classification of Acute Myelogenous Leukemia

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461. AML causing Gum hypertrophy ?

a) M1

b) M2

c) M3

d) M4

Correct Answer - D
Ans. is 'd' i.e., M4
In acute leukemias the clinical features are primarily seen because of :

- Replacement of normal cells of bone marrow by leukemic cells resulting in anemia, thrombocytopenia, neutropenia. Infiltration of leukemic cell in various extramedullary organs causing, hepalomegaly, splenomegaly. *Gum hypertrophy due to infiltration of gums by leukemic cells is one such feature.* It is characteristically associated with AML-M5 and AML-M4 i.e. (acute monocytic leukemia).

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462. Radiotherapy induced radiation pneumonitis mediated by all of the following except -

a) TNF-c

b) PAF

c) TGF-p

d) NF-kB

Correct Answer - B
Answer- B. PAF
Important mediators of Radiation induced pneumonitis are TNF-a, TGF-I3 and Th2 cells cytokines (IL-4, IL-5, IL-6 & IL-13).
ml response(II,-2, IFN-y) is suppressed during radiation pneumonitis

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463. Most common lung cancer in non-smokers is:

a) Adenocarcinoma

b) Squamous *cell* carcinoma

c) Oat cell carcinoma

d) None of the above

Correct Answer - A
Ans. A: Adenocarcinoma
Adenocarcinoma accounts for 40% of non-small cell lung cancers. It usually originates in peripheral lung tissue. Most cases of adenocarcinoma are associated with smoking; however, among people who have never smoked ("never-smokers"), adenocarcinoma is the most common form of lung cancer.
A subtype of adenocarcinoma, the bronchioloalveolar carcinoma, is more common in female never-smokers, and may have different responses to treatment.

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464. Most common histological form of lung Ca that metastasizes is -

a) Squamous cell CA

b) Adenocarcinoma

c) Alveolar-carcinoma

d) Small cell carcinoma

Correct Answer - A
Answer- A. Squamous cell CA
Small cell carcinomas are the most aggressive of lung tumors, metastasize widely and are virtually incurable by surgical means.

KolleegeApply

465. Most common tnre of renal carcinoma is -

a) Clear cell type

b) Chromophobe type

c) Papillarytype

d) Tubulartype

Correct Answer - A
Answer- A. Clear cell type
Clear cell carcinoma is the most common type of renal cancer accounting for about 70% to 80% of the renal cell cancer.

KolleegeApply

466. Characteristic feature of IgA nephropathy -

a) Serum compliment level is normal

b) More common in old age

c) It is a tFpe of membranoproliferative GN

d) Gross hematuria presents after l0 days

Correct Answer - A
Answer- A. Serum compliment level is normal
Compliment level is normal in IgA nephropathy. It is common in children. Gross hematuria is seen in 1-2 days. It is a type of mesangioproliferative (not membranoproliferative) GN.
It is the most common type of glomerulonephritis world wide.

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467. IgA nephropathyis not associatedwith?

a) Focal Mesengial proliferation

b) Gross hematuria within 1-2 daYs

c) On immunofluorescence deposits contain both IgA and IgG

d) Increased compliment level

Correct Answer - D
Answer- D. Increased compliment level
Compliment level is normal in IgA nephropathy. It is common in children. Gross hematuria is seen in 1-2 days. It is a type of mesangioproliferative (not membranoproliferative) GN.
It is the most common type of glomerulonephritis world wide.

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468. Most common nephropathy associated with malignaneN is:

a) Focal segmental glomerulosclerosis (FSGS)

b) Minimal change disease

c) IgA nephropathy

d) Membranous glomerulonephritis

Correct Answer - D

Ans: D. Membranous glomerulonephritis

- Most common nephropathy associated with malignancy - Membranous glomerulonephritis.
- In 25-30% - Associated with malignancy (solid tumors of breast, lung, colon), infection (hepatitis B, malaria, Schistosomiasis), or rheumatologic disorders like lupus or rarely rheumatoid arthritis.

Histopathology:

- Electron-dense deposits along the epithelial side of the basement membrane with effacement of foot processes overlying deposits.

(Ref Robbins 9/e p917-918; Harrison 19/e p1843).

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469. Irregular scarred kidney with pelvic dilatation is seen with -

a) Chronicpyelonephritis

b) Polycystickidney

c) Renalarterystenosis

d) Tuberculosisofkidney

Correct Answer - A
Answer- A. Chronicpyelonephritis
Pathological changes of chronic pyelonephritis are :
1. Irregular scarring of kidney
2. The hallmarks of chronic pyelonephritis are coarse corticomedullary scars overlying blunted calyces; dilated pelvis and flattening of papillae.

KottegeApply

470. Not true about Alport's syndrome -

a) X-linked

b) Autosomal dominant

c) Nerve deafness

d) Glomerulonephritis

Correct Answer - B
Ans. is 'b' i.e., Autosomal dominant
o Autosomal dominant form also exist, but it is very rare. Thus, among the given options, it is the best answer. o Other three options are classical features of Alport's syndrome (see previous explanations).

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471. Subepithelial deposits in kidney are seen in-

a) MPGN-1

b) GPS

c) PSGN

d) All

Correct Answer - C
Ans. is 'c' i.e., PSGN
Glomerular deposits : *(i) Subepithelial:*
o Acute GN (like PSGN)
o Membranous GN
o Heyman GN
o RPGN
(ii) Sub endothelial :
(iii) Basement membrane :
(iv) Mesangium :

- MPGN (Type- I)
- SLE

o Acute ON (H' 1583)
o MPGN (Type II)
o Good pasture syndrome
o IgA nephropathy, HSP
Remember
o *Anionic antigens form subendothelial deposits* o *Cationic antigens form subepithelial deposits* o *Neutral antigens form mesangial deposits*

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472. NotafeatureofPSGN -

a) HTN

b) Increased urea

c) Increased creatinine

d) Normal C3 level

Correct Answer - D
Answer- D. Normal C3 level
Complement level is decreased in PSGN. Other options are correct.

KollegeApply

473. In follicular carcinoma chromosomal translocation is?

a) PAXS - PPARTI

b) RET - PTC

c) ALK - NMPI

d) IAK - TEL

Correct Answer - A
Answer- A. PAXS - PPARTI
Follicular - PAX8- PPARrl translocation

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474. Tau protein seen in ?

a) Alzhiemer's disease

b) Lewy body dementia

c) Picks disease

d) Amylodosis

Correct Answer - A
Ans. is `a' i.e., Alzheimer's disease
Alzhiemer's disease :?

- There is atrophy of frontal and temporal lobes to variable extent and severity.
- The pattern of atrophy can often be predicted in part by the clinical symptomatology.
- The atrophic regions of cortex are marked by neuronal loss, gliosis, and the presence of tau-containing neurofibrillary tangles

KollegeApply

475. All of the following are features of granulomatous thyroiditis except?

a) Hyperthyroidism

b) Hypothyroidism

c) Painless

d) Giant cells on histology

Correct Answer - C

Answer- C. Painless

Clinical Features-

- Painful enlarged thyroid, fever
- Hypothyroidism
- Malaise
- Sore throat, pain referred to the jaw or ear.
- Subacute thyroiditis is a self-limited thyroid condition associated with a triphasic clinical course of hyperthyroidism, hypothyroidism, and return to normal thyroid function

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476. Sezary cells show which tlpe of nucleus -

a) Pleomorphic

b) Round

c) Eosinophillic

d) Cerebriform

Correct Answer - D
Answer- D. Cerebriform
Sezary cells are neoplastic T-cells found in sezary syndrome (cutaneous T-cell lymphoma).

KollegeApply

477. Prusian blue detects?

a) Ferric iron

b) Ferrous iron

c) Glycogen

d) Lipids

Correct Answer - A
Answer- A. Ferric iron
It is the classic method for demonstrating iron in tissues. The section is treated with dilute hydrochloric acid to release ferric ions from binding proteins

KollegeApply

478. Lysosome with undigested particle inside is known as -

a) Residual body

b) Phagosome

c) Phagolysosome

d) Autophagosome

Correct Answer - A

Answer- A. Residual body

The lysosomes that pinched off from Golgi complex are called primary lysosomes. After a primary lysosome has fused with the vacuole or vesicle containing the material to be digested, it forms the secondary lysosome. After the process of digestion has been completed, a secondary lysosome forms the residual body.

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479. **The predominant isozyme of LDH in Lung is:**

a) LD-1

b) LD-2

c) LD-3

d) LD-5

Correct Answer - C

Isoenzymes of Lactate Dehydrogenase: Lactate dehydrogenase is a tetrameric enzyme and consists of four subunits. These subunits can occurs in two isoforms i.e. H isoform (for heart), M isoform (for muscle).
LDH-1 (4H) - in the heart and RBCs
LDH-2 (3H1M) - in the reticuloendothelial system
LDH-3 (2H2M) - in the lungs
LDH-4 (1H3M) - in the kidneys, placenta, and pancreas
LDH-5 (4M) - in the liver and striated muscle
Normal value of LDH in serum is 100-200 U/L. LDH level is 100 times more inside the RBC than in plasma, and therefore minor amount of hemolysis will result in a false positive test.

Ref: Harper's Illustrated Biochemistry, 26th Edition, Page 57; Textbook of Biochemistry By Vasudevan, 5th Edition, Page 53

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480. Homer rosette is seen in -

a) Neurobastoma

b) Nephroblastoma

c) Hepatoma

d) Ependymoma

Correct Answer - A
Answer- A. Neurobastoma
Homer Wright rosettes

- Homer-Wright rosettes are characteristic of neuroblastomas and medulloblastomas.
- May also be seen in -4 Primitive neuroectodermal tumors (PNET), Pineoblastomas, Retinoblastomas

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481. Neuroblastomas - good prognositc factor is ?

a) N-myc amplification

b) RAS oncogene

c) Hyperdiploidy

d) Translocations

Correct Answer - C
Answer is 'c' i.e. Hyperdiploidy

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482. 'Flare' in Triple response is mediated by :

a) Axon reflex

b) Arteriolar dilation

c) Histamine release

d) Local hormones

Correct Answer - A
A i.e. Axon reflex

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483. HDL receptor is -

a) SR-BI

b) LDLR

c) HDLR

d) SR-82

Correct Answer - A
Answer- A. SR-BI
HDL is removed by HDL receptors scavenger receptor BI (SR-BI), which mediate the selective uptake of cholesterol from HDL.
This receptor is most abundant in liver, ovaries and adrenal glands.

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484. "Citron bodies" boat or leaf shaped pleomorphic organism in an exudate is

a) Cl. welchii

b) Cl. edematiens

c) Cl. septicum

d) Cl. tetani

Correct Answer - C

Ans. is 'c' i.e., Clostridium septicum

- Citron bodies and boat or leaf shaped pleomorphic bacilli with irregular staining suggest CL septicum".

Clostridium

- Clostridial species are :
- Gram positive
- Anaerobic (obligate anaerobe)
- Spore forming
- Bacilli
- Motile by peritrichate flagella except C perfringens and C. tetani type IV which are non motile.
- Non capsulated except C. perfringens and C. butyricum which are capsulated
- Pathogenesis is due to exotoxin not endotoxin.
- Clostridium botulinum causes botulism not gas gangrene.
- Gas gangrene is caused by :

  C. perfringens (80%) → C novyi

  C. septicum → C. histolyticum

KollegeApply

485. Ghon's focus reflects:
September 2005

a) Miliary tuberculosis

b) Primary complex

c) Tuberculous lymphadenitis

d) Post primary tuberculosis

Correct Answer - B
Ans. B: Primary complex
Only a very small percent of Mycobacterium tuberculosis (MTB) infections result in disease, and even a smaller percentage of MTB infections progress to an advanced stage.
The bacilli is engulfed by alveolar macrophages multiply and give rise to a subpleural focus of tuberculous pneumonia, commonly located in the lower lobe or the lower part of the upper lobe.This is known as Ghon focus.
The Ghon focus together with the enlarged hilar lymph node constitutes the primary complex.
Small metastatic foci containing low numbers of MTB may also calcify.
However, in many cases these foci will contain viable organisms. These foci are referred to Simon foci.
The Simon foci are also visible upon chest X-ray and are often the site of disease reactivation.

CollegeApply

486. Calrexin and calreticulin are -

a) Glycoproteins

b) Chaperons

c) Tumor markers

d) Enzymes

Correct Answer - B
Answer- B. Chaperons
Calreticulin & calrexin are major Ca2+ binding (storage) chaperones in the endoplasmic reticulum.

KollegeApply

487. Which of the following is potassium Channelopathy -

a) Hypokalemic periodic paralysis

b) Hyperkalemic periodic paralysis

c) Episodic ataxia I

d) Long QT-syndrome

Correct Answer - A
Answer- A. Hypokalemic periodic paralysis
Dent's disease (X linked proteinuria & Kidney stones)
Osteopetrosis (recessive or dominant)
Barter syndrome type III
Barter syndrome type IV (associated with sensorineural deafness)
Hyperkplexia (startle disease)
Juvenile myoclonus epilepsy
Epilepsy

KollegeApply

488. COXtype 3 is a product of-

a) COX I gene

b) COX2gene

c) COX 3 gene

d) None ofthe above

Correct Answer - A
Answer- A. COX I gene
The COX-3 isozyme is encoded by the same gene as COX-1 (PTGS1 gene), with the difference that COX-3 retains an intron that is not retained in COX-1. It is not functional in humans.

KollegeApply

489. Which of the following is false regarding carcinoid tumor ?

a) Neuroendocrine tumor

b) Most common site is lung

c) Associated with serotonin production

d) Potentially malignant tumor

Correct Answer - B

Answer- B. Most common site is lung

Carcinoid tumors arise from the neuroendocrine cells (Argentaffin cells or Kulchitsky cells).

The majority are foundn GI tract, and more than 40% in small intestine (jejunum & ileum). The tracheobronchial tree and lungs are the next common sites involved.

Carcinoid tumors may rarely arise from the ovary or thymus

Carcinoid tumors are the most common malignancy of the appendix.

All carcinoids are considered to have malignant potential.

About 10% of carcinoids secrete excessive levels of a range of hormones, most notably serotonin (5-HT), leading to carcinoid syndrome. It is characterized by Flushing, Diarrhea, Wheezing, Abdominal cramping, Peripheral edema

CollegeApply

490. Fibrosis associated with liver cirrhosis is mediated by -

a) PDGF

b) IFN-y

c) ICAM-1

d) PcAM-l

Correct Answer - A
Answer- A. PDGF
Most important mediators involved in liver fibrosis - PDGF, PAF, MMPs, TNF-a, TGF-13 ,IL-1.

KollegeApply

491. Solution currently used for liver preservation for transplant is -

a) UW solution

b) IGL solution

c) Kyoto ET solution

d) Ross Marshal Citrate solution

Correct Answer - A
Answer- A. UW solution
UW solution has become the gold standard liver transplantation for many years."

KollegeApply

492. Skin involvement along with collar stud ulceration in intestine on radiography. Diagnosis is -

a) TB intestine

b) Ulcerative colitis

c) Intestinal Amebiasis

d) Crohn's disease

Correct Answer - B

Answer- B. Ulcerative colitis

Skin involvement can occur in Inflammatory bowel disease i.e. both Crohn's disease and Ulcerative colitis.

Collar stud ulceration is radiographical sign of Ulcerative colitis.

ULCERATIVE COLITIS :

PATHOLOGY:

Colonic mucosal inflammation; rectum almost always involved, with inflammation extending continuously (no skip areas) proximally for a variable extent; histologic features include epithelial damage, inflammation, crypt abscesses, loss of goblet cells.

CLINICAL MANIFESTATIONS

Bloody diarrhea, mucus, fever, abdominal pain, tenesmus, weight loss; the spectrum of severity (a majority of cases are mild, limited to rectosigmoid). In severe cases, dehydration, anemia, hypokalemia, hypoalbuminemia.

COMPLICATIONS

Toxic megacolon, colonic perforation; cancer risk related to extent and duration of colitis; often preceded by or coincident with dysplasia, which may be detected on surveillance colonoscopic biopsies.

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biopsies.

DIAGNOSIS

Sigmoidoscopy/colonoscopy: mucosal erythema, granularity, friability, exudate, hemorrhage, ulcers, inflammatory polyps (pseudopolyps). Barium enema: loss of haustrations, mucosal irregularity, ulcerations.

KollegeApply

493. Which of the following markers is specific for gastro-intestinal stomal tumor (GIST) -

a) CD 117

b) CD 34

c) CD 23

d) S-100

Correct Answer - A
Ans. is 'a' i.e., CD 117
Immunohistochemistry
o Following markers are present in GISTs:
i) CD 117 (c kit) —>95%
ii) CD 34 —> 70%
iii) Smooth muscle actin 5%

- *CD 117 (c kit) is considered the most specific marker*

o CD 117 (c kit) immunoreactivity is the best defining feature of GISTs distinguishing them from true smooth muscle tumors (leiomyoma) and tumors arising from neural crest.
o *Although CD 117 (c kit) is considered the most specific marker for GIST, it is not pathognomonic of GIST as other tumors may also express CD 117. These tumors include mast cell tumor, germ cell tumors (seminomas), leukemias, malignant melanoma, angiolipomas, and some sarcomas.*

KollegeApply

494. **Primary hyperparathyroidism, phaeochromocytoma may be associated with which type of thyroid cancer?**

a) Medullary carcinoma of the thyroid

b) Papillary carcinoma of the thyroid

c) Anaplastic carcinoma of the thyroid

d) Follicular carcinoma of the thyroid

Correct Answer - A

It is characterized clinically by medullary thyroid carcinoma (MTC), pheochromocytoma, and hyperparathyroidism. Approximately 70-95% of individuals with MEN 2A develop MTC, 50% develop pheochromocytoma, and 15-30% develop hyperparathyroidism.

Ref: Bailey and Love's Short Practice of Surgery, 24th Edition, Page 802; Harissons Internal Medicine, 18th Edition, Chapter 351.

KollegeApply

495. Feature of microscopic polyangitis is:

a) IgG deposits in kidney

b) Bronchospasm

c) Renal involvement in 80% of cases

d) All of the above

Correct Answer - C

Answer is C (Renal involvement in 80% of cases):

Renal involvement is seen in at least 80% ofpatients with MPA.

Renal involvement is seen in at least 80% of patients with MPA

Renal involvement is seen in at least 80% of patients with MPA - CRDT Glomerulonephritis occurs in atleast 79% of patients – Harrison

Microscopic polyangitis is not associated with IgG Deposits in kidney

Microscopic Polyangitis is a pauci-immune glomerulonephritis. Immunofluorescence and electron microscopy show no immune deposits

Microscopic Polyangitis is not associated with bronchospasm

Asthma (bronchospasm) and Eosinophilia are features of Churg-Strauss Syndrome and are typically absent in microscopic polyangitis.

Features	**H.S. purpura**	**Microscopic Polyangitis**	**Wegner's Granulomatosis**	**Churg-Strauss syndrome**
Deposits in kidney	-- nt (IgA deposits)			-
Bronchospasm (Asthma)	-	-	-	+

Eosinophilia	-	-	-	+
Predominant ANCA	-	p-ANCA	c-ANCA	p-ANCA

KollegeApply

496. First order kinetics is:
September 2005

a) Absorption of the drug is independent of the serum concentration

b) Elimination of the drug is independent of the serum concentration.

c) Elimination of the drug is proportional to the serum concentration

d) Absorption of the drug is proportional to the serum concentration

Correct Answer - C
Ans. C: Elimination of the drug is proportional to the serum concentration.
A 0-order kinetics has a rate which is independent of the concentration of the reactant(s). Increasing the concentration of the reacting species will not speed up the rate of the reaction. Zero-order reactions are typically found when a material that is required for the reaction to proceed, such as a surface or a catalyst, is saturated by the reactants.
With first-order elimination, the rate of elimination is directly proportional to the serum drug concentration (SDC). There is a linear relationship between rate of elimination and SDC. Although the amount of drug eliminated in a first-order process changes with concentration, the fraction of a drug eliminated remains constant. The elimination rate constant (Kel) represents the fraction of drug eliminated per unit of time.

KollegeApply

497. Alkaline diuresis in acidic drug poisoning is not done in ?

a) Aspirin

b) Methotrexate

c) Morphine

d) Phenobarbitone

Correct Answer - C

Ans.C. Morphine

Acidic drugs (barbiturate, methotrexate, salicylate) are more ionized at alkaline urine and are not absorbed from renal tubules if the urine is alkaline, and their excretion in urine is increased.

Therefore, alkalinization of urine is done by NaHCO2 in poisoning of acidic ilrugs.

KottageApply

498. Post marketing surveillance included in which phase of drug clinical trial?

a) I

b) II

c) III

d) IV

Correct Answer - D
Ans. is 'd' i.e., IV
*Surveillance after marketing, i.e. after the drug is out in the market is a part of Phase **IV** of clinical trials. It includes follow-up of patients taking the drug and adverse drug reaction **(ADR)** reporting as well as looking for newer treatment indications*

KollegeApply

499. Permission from DCGI [Drug controller general, India] is needed before which phase of drug trial?

a) Phase 1

b) Phase 2

c) Phase 3

d) Phase 4

Correct Answer - A

Ans,. A. Phase 1

Following are the prerequisites for starting a clinical trial in India:-

1. Permission from DCGI
2. Approval from ethics committee
3. Mandatory registration on the ICMR maintained website wwwctri.in

CollegeApply

500. CYP3A inhibitors is/are -

a) Ritonavir

b) Amiodarone

c) Verapamil

d) a and c

Correct Answer - D
Ans. is 'a' i.e., Ritonavir; 'c' i.e., Verapamil
CYP3A4/3A5 inhibitors are
o Ritonavir o Erythromycin o Itraconazole o Troieandomycin o *Verapamil*
o Clarithromycin o Azamulin o Diltiazem o Ketoconazole
o Grapefruit juice (Furano coumarins)

KollegeApply

501. **Regarding efficacy and potency of a drug, all are true, EXCEPT:**

a) In a clinical setup, efficacy is more important than potency

b) In the log dose response curve, the height of the curve corresponds with efficacy

c) ED50 of the drug corresponds to efficacy

d) Drugs that produce a similar pharmacological effect can have different levels of efficacy

Correct Answer - C

ED50 refers to Effective Dose of a drug needed to produce a particular response in 50% of population. It is a quantitative measure of the potency of a drug. Smaller the ED50 value, more potent is the drug.

Ref: Encyclopedia of Psychopharmacology By Ian P. Stolerman, Volume 2, Page 456

KollegeApply

502. Volume of distribution of a drug is 500 ml and target concentration of drug in blood is 5 g/L. 20% of administered drug is reached to systemic circulation. What will be the loading dose of that drug -

a) 1 gm

b) 5 gm

c) 12·5 gm

d) 25 gm

Correct Answer - C
Ans. C. 12·5 gm
Loading dose = (Target Cp * Vd)/F
Target concentration (Cp) = 5 gm/L
Volume of distribution = 500 ml = 0.5L
F (Fraction of administered drug reaches systemic circulation) = 20Vo = 0.2 5x0.5
So, loading dose = r2.5 gm

CollegeApply

503. Volume of distribution depends upon all except ?

a) Drug dose

b) Plasma concentration

c) Extent of absorption

d) Half life of drug

Correct Answer - D

AnS. D. Half life of drug

After a drug reaches the blood, it may be distributed to various tissues.

This is determined by a hypothetical parameter, volume of distribution.

Volume that would accommodate all the drug in the body, if the combination throughout was the same as in plasma is called volume of distribution.

Or in simple words, it k the fluid volume that would be required to contain all the administered drug in the body with a concentration equal to plasma.

KollegeApply

504. High volume of distribution depends on ?

a) High plasma protein binding

b) Lipid solubility

c) Elimination

d) Half life

Correct Answer - B

Ans. B. Lipid solubility

[Ref: Clinical pharmacology 3d/e p. 31]

- It a drug has high volume of distribution (> 42L), the drug is thought to be distributed to all tissues of the body, especially fatty tissue.

A given drug will have high volume of distribution, if it has:

- High lipid solubility (non-polar drug)
- Low rate of ionization
- Low plasma protein binding

CollegeApply

505. Drugs which is not metabolized by acetylation ?

a) Dapsone

b) Metoclopramide

c) Procainamide

d) INH

Correct Answer - B

Ans. B. Metoclopramide

Drugs metabolized by acetylation:

- Sulfonamides (including dapson) r Procainamide
- INH
- Hydralazine
- PAS
- Clonazepam

KollegeApply

506. True about drug metabolism ?

a) Glucuronidation is phase I reaction

b) Most common enzyme involved is Cyp 3A4/5

c) Reduction is most common reaction

d) Cytochrome p450 is involved phase-II reaction

Correct Answer - B

Ans. is'b'i.e., Most common enzyme involved is Cyp 3A4/5

(Ref: Katzung Ilth/e p. 55)

- Cytochrome p450 enzymes are microsomal enzymes that are involved in phase I metabolism of many drugs.
- Most of the drugs are metabolized by Cyp 3A4 isoform.
- Cyp 3 A 4/5 carryout biotransformation of largest number (nearly 5O%) of drugs.

KollegeApply

507. Which is topical way of drug administration ?

a) Inhaled steroid

b) Transdermal patch

c) Sublingual NTG

d) Rectal diazepam

Correct Answer - A
Ans, A. Inhaled steroid
Inhaled Corticosteroids (used in asthma) have high topical activity. They act locally to reduce inflammation and hyper-reactivity of bronchial tree.
Transdermal patch, sublingual NTG and rectal diazepam are systemic routes of drug administration.

KolegeApply

508. True about transdermal drug delivery system are all except?

a) Applied to chest, abdomen and back

b) Drug is delivered at a constant rate

c) Good option in emergency situations

d) Fentanyl is used

Correct Answer - C

Ans, C. Good option in emergency situations

The micropore membrane in transdermal patch is such that rate of drug delivery to skin surface is less than the slowest rate of absorption from the skin.

This offsets any variation in the rate of absorption according to the properties of different sites. As such, the drug is delivered at a constant and predictable rate irrespective of site of application.

Usually chest, abdomen, upper arm, lowerback, buttock or mastoid region arc utilized.

Transdermal patches of GTN, fentanyl, nicotine and estradiol are available in India, while those of isosorbide dinitrate, hyoscine, and clonidine are marketed elsewhere.

CollegeApply

509. Physiological antagonists are ?

a) Adrenaline and Isoprenaline

b) Histamine and adrenaline

c) Isoprenaline and propranolal

d) All of the above

Correct Answer - B
Ans. B. Histamine and adrenaline
Physiological antagonists are those that produce opposite action by acting on different receptors.
Example
Histamine causes bronchoconstriction via H1 receptors and this action is antagonized by adrenaline which causes bronchodilatation through beta 2 receptors (option d).

KollegeApply

510. Receptor level antagonism is shown by ?

a) Adrenaline and Isoprenaline

b) Histamine and adrenaline

c) Isoprenaline and propranolol

d) All of the above

Correct Answer - C

AnS. C. Isoprenaline and propranolol

Receptor antaoonists (Pharmalogical antaqonists)

Receptor antagonists are those drugs that blocks the action of agonist by acting on same recePtors.

Example

- Isoprenaline is beta1 & beta2 receptor agonist while propranolol has antagonistic action on beta1 & beta2 recePtors (option 'c')

KollegeApply

511. Fastest receptor mediated action is through ?

a) Cell membrane receptors

b) Intrinsic ion channels

c) Enzyme linked receptors

d) Intracellular receptors

Correct Answer - B
Ans. B. Intrinsic ion channels
Fastest acting receptors - Receptors with intrinsic ion channels
Slowest acting receptors – Intracellular receptors (receptors regulating gene expressions/transcription factors) à Cytoplasmic or nuclear receptors.

KolleegeApply

512. Side effects of clonidine are all except ?

a) Xerostomia

b) Sedation

c) Impotency

d) Diarrhea

Correct Answer - D
Ans,. D. Diarrhea
Adverse effects of clonidine are
(i) dryness of mouth (xerostomia), nose' eye, (ii) sedation, (iii) mental depression' (iv) constipation and (v) impotency.
It has no effect on lipid profile.

KollegeApply

513. Lipid insoluble (3-blokcer is -

a) Timolol

b) Carvedilol

c) Pindolol

d) Celiprolol

Correct Answer - D
Ans. D. Celiprolol
Lipid insoluble beta blocker:

- Acebutolol
- Atenolol
- Bisoprolol
- Betoxalol
- Carteolol
- Celiprolol
- Esmolol
- Nodalol
- Sotalol
- Labetalol

KollegeApply

514. Nonselective a + 1 blocker is ?

a) Carvedilol

b) Timolol

c) Pindolol

d) Acebutolol

Correct Answer - A
Ans. A. Carvedilol
Combined alpha & beta blockers:

- Carvedilol
- Labetalol
- Bucindolol
- Bevantolol
- Nipradilol
- Dilevalol
- Medroxalol

KollegeApply

515. Non-selective Beta-blocker with sympathomimetic activity ?

a) Pindolol

b) Acebutalol

c) Nodalol

d) Metoprolol

Correct Answer - A

Ans. A. Pindolol

Beta-blockers with intrinsic sympatheomimetic (partial agonist) activity:

- Acebutolol
- Carteolol
- Pindolol(non-selective beta blocke).
- Bipindolol
- Oxprenolol
- Penbutolol
- Alprenolol
- Labetalol
- Celiprolol

KollegeApply

516. Which of the following is non-selective 3rd generation Beta blocker ?

a) Betaxolol

b) Celiprolol

c) Carteolol

d) Nadolol

Correct Answer - C
Ans. C. Carteolol
Non selective third generation beta-blockers are corteolol, Carvedilol and labetalol.

KollegeApply

517. Dopamine receptor with inhibitory action ?

a) D_5

b) Di

c) D_2

d) None

Correct Answer - C
Ans. is 'c' i.e., **D2**

- Two types of dopamine receptors (D I , D2) were originally described. Three more (D3, D4, D5) have now been identified and cloned. All are G protein coupled receptors and are grouped into two families:
- Dl like: (Dl, D5) are excitatory
- D2 like: (D2,3,4) are inhibitory

KolleseApply

518. Action of M, cholinergic receptors ?

a) Skeletal muscle contraction

b) Acid secretion in stomach

c) Decreased heart rate

d) Salivation and lacrimation

Correct Answer - C
Ans. C. Decreased heart rate
Effect of cholinergic system on heart (e.g. decreased heart rate) is through M2 receptors.

KollegeApply

519. . Beta-blocker should be used with caution in patient of -

a) Hypertension

b) Glaucoma

c) Conduction defect

d) CHF

Correct Answer - C
Ans. C. Conduction defect
Partial and complete heart block
Beta 1 receptors increase conduction in AV node.
Beta blockers decrease conduction by reducing sympathetic drive on beta 1 receptors - Worsening of block.

KottegeApply

520. Antimuscarinic drug used in overactive bladder -

a) Pirenzepine

b) Trospium

c) Tropicamide

d) Atropine

Correct Answer - B
Ans. B. Trospium
Drugs used for overactive bladder:

- Darifenacin, Solefenacin, Tolterodine, Trospium chloride, Oxybutynin, Solifenacin, Flavoxate

KollegeApply

521. Anti-cholinesterase with central action ?

a) Neostigmine

b) Physostigmine

c) Pyridostigmine

d) Edrophonium

Correct Answer - B
Ans. B. Physostigmine
Lipid soluble agents (organophosphates and physostigmine) have more marked muscarinic and CNS effect; and stimulate ganglia but action on skeletal muscle is less prominent.

KolleggeApply

522. Contraindication of antimuscarinic drug ?

a) Glaucoma

b) Asthma

c) Peptic ulcer

d) Urinary incontinence

Correct Answer - A
Ans. A. Glaucoma
Antimuscarinic (e.g.-atropine) drugs are contraindicated in:
1. Glaucoma
2. Benign prostatic hyperplasia

KollegeApply

523. Maximum cycloplegic action of atropine is seen at ?

a) 30-40 minutes

b) 1-3 hours

c) 8-10 hours

d) 1-2 weeks

Correct Answer - B
Ans. B. 1-3 hours
Atropine is a powerful cycloplegic and mydriatic agent.
Most potent cycloplegic available for optometrists.
Maximum mydriasis is reached typically in 30-40 minutes while recovery may take a week or more.
Cycloplegia commences after 30 minutes of application, with marked cycloplegia being reached in 1-3 hours.
The effect may last up to 6-12 days before normal accommodation is restored.

CollegeApply

524. One of the following is not a side effect of atropine?

a) Blurring of vision

b) Diarrhoea

c) Urinary retention

d) Confusion of elderly

Correct Answer - B

Ans. B. Diarrhoea

Side effects and toxicity of atropine

- Dry mouth
- Fever
- Difficulty in swallowing
- Constipation
- Dry, flushed hot skin
- Difficulty in micturition
- Palpitation
- Delirium
- Dilated pupil
- Photophobia
- Blurred vision
- Respiratory depression
- Cardiovascular collapse
- Psychotic behavior
- Convulsion and coma

KollegeApply

525. Longest acting anti-cholinesterase -

a) Pyridostigmine

b) Ambenonium

c) Edrophonium

d) Echothiophate

Correct Answer - D

Ans. D. Echothiophate

There are two basic categories of cholinesterase inhibitors:

1. Reversible inhibitors
2. Irreversible inhibitors

- The reversible inhibitors produce effects of moderate duration, and the irreversible inhibitors produce effects of long duration.
- Echothiophate is irreversible inhibitor à long acting.

KollegeApply

526. Propranolol is used in ?

a) Thyrotoxicosis

b) AV block

c) Cardiac arrest

d) All of the above

Correct Answer - A

Ans. A. Thyrotoxicosis

Uses of beta-blockers:

- Hypertension.
- Cardiac tachyarrhythmias
- Myocardial infarction
- Classical angina pectoris
- CHF
- Dissecting aneurism
- HOCM
- Glaucoma
- Thyrotoxicosis
- Pheochromocytoma
- CNS uses - Anxiety, essential tremor, migraine prophylaxis, alcohol withdrawal.
- Emergency management of symptoms of TOF.
- Prophylaxis of bleeding in portal hypertension.

KollegeApply

527. Maximum potassium loss is caused by which diuretics ?

a) Furosemide

b) Thiazide

c) Acetazolamide

d) Spironolactone

Correct Answer - C
Ans. C. Acetazolamide
For the same degree of natriuresis CAse inhibitors causes most marked kaliuresis compared to other diuretics.

KolleegeApply

528. . Hyoscine is antagonist at which cholinergic receptor?

a) Muscarinic

b) Nicotinic

c) Both

d) None

Correct Answer - A
Ans. A. Muscarinic
Hyoscine (Scopolamine) acts by competitive antagonism of acetylcholine at muscarinic receptors (Non-selective receptors).
It has little effect at nicotinic receptors.

KolleegeApply

529. Fenoldopam is used in the management of ?

a) Hypertensive emergencies

b) Congestive heart failure

c) Migraine prophylaxis

d) Tachyarrhythmias

Correct Answer - A

Ans. A. Hypertensive emergencies

Fenoldopam

- It is peripheral, arteriolar dilator used in hypertensive emergencies and post-operative hypertension.
- It acts as an agonist of dopamine D_1 receptors, resulting in dilatation of peripheral arteries and natriuresis.
- Fenoldopam increases intraocular pressure > should be avoided in patients with glaucoma.

KollegeApply

530. True about cardiac muscle fibers ?

a) Digitalis decreases force of contraction

b) Na+ - Ca+ exchanger requires ATP directly

c) Na+-Ca+ exchanger acts to pump Ca2+ into heart muscle cells

d) All are true

Correct Answer - C

Ans. C. Na+-Ca+ exchanger acts to pump Ca2+ into heart muscle cells

3Na+/1Ca+2 exchanger

- This pump transports Ca+2 in exchange of Na+.
- When Na+ concentration inside the myocyte is high, Na+/Ca+2 exchanger cause efflux of Na+ out of the myocytes and in exchange it causes influx of Ca+2 inside the myocytes.
- Na+/Ca+2 exchanger does not require ATP to function, ions move along their concentration gradient.

KollegeApply

531. Side effects of amiodarone are all except ?

a) Hyperthyroidism

b) Peripheral neuropathy

c) Skin discoloration

d) Hyperglycemia

Correct Answer - D

Ans. D. Hyperglycemia

Adverse effects of Amiodarone

- Thyroid dysfunction (Hypothyroidism or hyperthyroidism)
- Bluish discoloration of exposed skin.
- Peripheral neuropathy
- Myocardial depression
- Pulmonary fibrosis
- Corneal microdeposits
- Photosensitivity
- Hepatitis
- Thrombocytopenia (Major specific side effect).

KollegeApply

532. Which among the following is renin antagonist?

a) Losartan

b) Benazepril

c) Remikiren

d) Imidapril

Correct Answer - C

Ans. C. Remikiren

- Renin inhibitors: Aliskiren, remikiren, enalkiren.
- Aliskiren, remikiren, and enalkiren are the drugs that inhibit the enzyme renin.
- So these drugs decrease the activity of RAAS causing a fall in blood pressure.
- These drugs can be used orally for the treatment of chronic hypertension.

KollegeApply

533. Antihypertensive drug causing erectile dysfunction?

a) Calcium channel blocker

b) ACE inhibitors

c) AT 1 receptor antagonists

d) 13-blockers

Correct Answer - D

Ans. D. 13-blockers

Important drugs causing erectile dysfunction

- Beta-blockers
- Diuretics (especially thiazide)
- Lithium
- Clonidine
- OCPs
- TCAs & SSRIs
- Sedatives/hypnotics

KollegeApply

534. Thiazides cause hypercalcemia by ?

a) Increased Ca" absorption

b) Increased PTH secretion

c) Decreased calcitonin secretion

d) Decreased calcium excretion

Correct Answer - D

Ans. D. Decreased calcium excretion

Thiazides cause hypercalcemia by:-

- Reduced urinary excretion of calcium due to a direct tubular effect or ECF depletion with secondary increase in tubular reabsorption of sodium and calcium, or both.
- Increased bone responsiveness to the resorptive action of vitamin D and PTH.

KollegeApply

535. Drug affecting positive free water clearance without affecting negative free water clearance -

a) Loop diuretics

b) Thiazides

c) Acetazolamide

d) Amiloride

Correct Answer - B

Ans. b. Thiazides

Loop diuretics abolishes the cortico-medullary osmotic gradient and blocks positive as well as negative free water clearance.

Thiazides decrease positive free water clearance without affecting negative free water clearance.

KottageApply

536. Which of the following adverse effect of ACE inhibitors is not due to bradykinin ?

a) Cough

b) Angiodema

c) Hypotension

d) None of the above

Correct Answer - C
Ans. C. Hypotension
Bradykinin and sustance P are substrate for ACE.
ACE inhibitors increase level of these kinins by inhibiting ACE, which is responsible for cough and angiodema.
Cough and angioedema are due to elevated bradykinin, caused by inhibition of bradykinin/srbstance P metabolism in lungs.

KollegeApply

537. Which ACE inhibitor in safe in renal failure ?

a) Captopril

b) Enalapril

c) Benazapril

d) None

Correct Answer - C
Ans. C. Benazapril
Benazapril conferrred substantial renal benefits in patients without diabetes who had advanced renal insuficiency".
Benazapril is considered safe in renal failure.

KolleegeApply

538. Sympathomimetic drug which causes decrease in heart rate ?

a) Adrenaline

b) Isoprenaline

c) Noradrenaline

d) None

Correct Answer - C
Ans. C. Noradrenaline

KollegeApply

539. Following are the side effects of thiazides except?

a) Hypokalemia

b) Hypocalcemia

c) Hepatic coma

d) Impotence

Correct Answer - B

Ans. is 'b' i.e., Hypocalcemia

Following are the side effects of thiazides:

- Hypokalemia
- Acute saline depletion, hemoconcentration and increased risk of peripheral venous thrombosis
- Dilutionsalhyponatremia
- Nausea omitting diarrhea
- Rarely headache, giddiness, weakness, parethesias, impotence
- Hearing loss
- Rashes, photosensitivity
- Hyperuricemia
- Hyperglycemia hyperlipidemia o Hypercalcemia
- Magnesium depletion
- Aggravated renal insufficiency
- Brisk diuresis leading to mental disturbance and hepatic coma

CollegeApply

540. **Spironolactone should NOT be given with the following pharmacological agent:**

a) Chlorothiazide

b) b-blocker

c) ACE inhibitors

d) Amlodipine

Correct Answer - C

Unlike most other diuretics, K+-sparing diuretics reduce urinary excretion of K+ and can cause mild, moderate, or even life-threatening hyperkalemia.

The risk of this complication is greatly increased by renal disease (in which maximal K+ excretion may be reduced) or by the use of other drugs that reduce or inhibit renin (beta blockers, NSAIDs, aliskiren) or angiotensin II activity (angiotensin- converting enzyme inhibitors, angiotensin receptor inhibitors).

Since most other diuretic agents lead to K+ losses, hyperkalemia is more common when K+-sparing diuretics are used as the sole diuretic agent, especially in patients with renal insufficiency.

Ref: Ives H.E. (2012). Chapter 15. Diuretic Agents. In B.G. Katzung, S.B. Masters, A.J. Trevor (Eds), *Basic & Clinical Pharmacology*, 12e.

Kollegeapply

541. Na*- K*- 2Cl- is inhibited by -

a) Thiazides

b) Acetazolomide

c) Furosemide

d) Amiloride

Correct Answer - C

Ans. C. Furosemide

High efficacy (high ceiling or loop diuretics - inhibitors of Na+ - K+-2Cl-)

- Furosemide
- Bumetanide
- Torasemide
- Ethacrynic acid

KollegeApply

542. For activity of antipsychotic, action is required at which receptor -

a) M, muscarinic

b) D1dopaminergic

c) $D_Z$dopaminergic

d) 5HT4 serotonergic

Correct Answer - C

Ans. C. $D_Z$dopaminergic

Typical antipsychotic acts by blocking D2 receptors (D2 antagonists).

KollegeApply

543. Mechanism of action of opioids ?

a) Inhibition of cyclooxylgenase

b) Inhibition of opioid receptors at spinal level

c) Inhibition of opioid receptors at supraspinal level

d) Inhibition of opioid receptors at spinal and supraspinal level

Correct Answer - D

Ans. D. Inhibition of opioid receptors at spinal and supraspinal level

Opioids have both spinal & supra-spinal components for their analgesic effects.

KollegeApply

544. Opioid [morphine] causes ?

a) Increased heart rate

b) Increased muscle tone

c) Mydriaris

d) Respiratory stimulation

Correct Answer - B
Ans. B. Increased muscle tone
Morphine causes both stimulant and depressive effects.
On CNS stimulation (Cortical area and hippocampus) morphine causes muscular rigidity & convulsions.

KollegeApply

545. Beside depression, other use of SSRIs ?

a) Erectile dysfunction

b) Retrograde ejaculation

c) Premature ejaculation

d) Sterility

Correct Answer - A:C

Ans. A. Erectile dysfunction & C. Premature ejaculation

- SSRIs are effectively used in premature ejaculation.
- SSRIs can cause prolongation of preorgasmic plateau and thus delay ejaculation.
- SSRIs can also be used in erectile dysfunction secondary to depression.

Other uses of SSRIs:

- Depression (most common use)
- OCD
- Panic disorder
- Social phobia
- PTSD
- Generalized anxiety disorders
- Pre-menstural dysphoric disorders

Kollegeapply

546. Lithium causes all except-

a) Polyuria

b) Nephropathy

c) Ebstein's anomaly

d) Hyperthyroidism

Correct Answer - D
Ans. is d i.e., Hyperthyroidism

- Lithium is known to exacerbate psoriasis and cause acne.
- It is known to cause Ebstein's anomaly in children.
- It also causes thyroid dysfunction, hypothyroidism and not hyperthyroidism.
- Lithium nephrotoxicity is well known.

KollegeApply

547. Most common renal sequel of lithium toxicity is ?

a) Nephrogenic DM

b) Renal tubular acidosis

c) Glycosuria

d) MPGN

Correct Answer - A

Ans. is 'a' i.e., Nephrogenic DM

Lithium associated renal toxicity

- The use of lithium salts for the treatment of manic-depressive illness may have several renal sequelae, the most common of which is nephrogenic diabetes insipidus manifesting as polyuria and polydipsia.
- Lithium accumulates in principal cells of the collecting duct by entering through the epithelial sodium channel (ENaC), where it inhibits glycogen synthase kinase 3 and down- regulates vasopressin-regulated aquaporin water channels.
- Less frequently, chronic tubulointerstitial nephritis develops after prolonged (greater than 10-20 years) lithium use and is most likely to occur in patients that have experienced repeated episodes of toxic lithium levels.

CollegeApply

548. Drug(s) not given as transdermal patch:

a) Fentanyl

b) Diclofenac

c) Morphine

d) Clonidine

e) Buprenorphine

Correct Answer - B:C
Ans.B,Diclofenac & C,Morphine
[Ref: KDT 7th/476

- Transdermal fentanyl (Durogesic) has become available for use in cancer/terminal illness.
- Butrans skin patches contain buprenorphine an opioid pain medication.
- Clonidine transdermal delivery (patch) systems have been available since the 1980

KollegeApply

549. Antidepressant drug used in nocturnal eneuresis is:

a) Imipramine

b) Fluoxetine

c) Trazdone

d) Sertaline

Correct Answer - A
A i.e. Imipramine
Adverse effects ofTCAs
l. Anticholinergic - Dry mouth, bad taste, urinary retention, blurred vision, palpitation, constiPation.
2. Sedation, mental confusion, weakness.
3. Increased appetite and veigfit gain.
4. Sweating andfinc tremer.
5. Decreased seizure threshold (clomipramine, maprotiline & bupropion).
6. Postural hypotension > Marimum by amitripSline - Goodman & Gillman 11/e p. 4j3.
7. Cardiac arrythmia; Maximum by amitriptyline and dosulpin.

CollegeApply

550. Zonisamide acts on ?

a) GABA receptors

b) T type Ca^{2+} channels

c) Na^{+}Channels

d) Cl^{-} channels

Correct Answer - C

Ans. C. Na^{+}Channels

Anti-epileptics causing prolongation of Na2+ channel inactivation:

- Phenytoin
- Carbamazepine
- Valproate
- Lamotrigine
- Topiramate
- Zonisamide

KollegeApply

551. Buprenorphine partial agonist at which opioid receptor?

a) Mu

b) Kappa

c) Delta

d) Lambda

Correct Answer - A
Ans. is 'a' i.e., Mu
Buprenorphine is partial agonist on mu receptor and antagonist at Kappa receptor.

KollegeApply

552. Dexmedetomidine acts on which receptor for its analgesic action ?

a) $5HT_{2A}$

b) D_2

c) α_{2A}

d) D_5

Correct Answer - C

Ans. 'c' i.e., α_{2A}

- Dexmedetomidine is a centrally active selective alpha (α2) agonist that has been introduced for sedating critically ill ventilated patients in intensive care units.

KollegeApply

553. Adverse effects of phenytoin include all of the following except?

a) Lymphadenopathy

b) Ataxia

c) Hypercalcemia

d) Hirsutism

Correct Answer - C
Ans. is 'c' i.e., Hypercalcemia

- Phenytoin interferes with calcium metabolism by desensitizing target tissue to vit. D, this causes hypocalcemia (not hypercalcemia).
- At therapeutic level (10-20microg/ml) - Gum hypertrophy, hirsutism, hypersensitivity (rashes, lymphadenopathy, DLE, neutropenia), hyperglycemia due to inhibition of insulin release, megaloblastic anemia, pseudolymphoma, hypocalcemia, Vitamin D deficiency and osteomalacia, and teratogenicity (fetal hydantoin syndrome).
- At toxic level (dose-related) cerebellar syndrome (ataxia, vertigo), falling BP, arrhythmias, drowsiness, mental confusion, Gl symptoms (epigastric pain, nausea, vomiting) and local vascular injury by iv injection.

Kopiec Apply

554. **Which of the following drug is not used in the treatment of akathisia?**

a) Benzodiazepam

b) Propranolol

c) Trihexyphenidyl

d) Haloperidol

Correct Answer - D

Akathisia refers to somatic restlessness which occur in patients treated with first generation antipsychotics.

Among the options given haloperidol is an old generation antipsychotic which causes a side effect of akathisia.

Drugs commonly used to treat akathisia are propranolol, benzodiazepines and anticholinergics.

Ref: American Psychiatric Association Practice Guidelines for the treatment of Psychiatric Disorders 2006, page 649

KollegeApply

555. Benzodiazepine binding ste on GABA receptors is on ?

a) y-subunit

b) a-subunit

c) β-subunit

d) δ-subunit

Correct Answer - B
Ans. is'b'i.e., a-subunit
[Ref: Goodman (t Gilman 1I'h/e p. 405, 406; RecEttor subunit & coffiplexes p. 168]

- The exact subunit structures of native GABA receptors are still are unknown, but it is thought that most GABA receptor are composed of alpha, beta & gamma subunits that Coassemble with some uncertain stoichiometry.
- Binding site of GABA is on beta-subunit.
- Benzodiazepine site is located on the a subunit but the stabilization or completion of that site in the assembled. Structure also requires the y subunit.

CollegeApply

556. Which of the following is true?

a) Glucocorticoids upregulate MHC expression

b) Glucocorticoids activate T-helper cells

c) Glucocorticoids activate cytotoxic T cells

d) None of the above

Correct Answer - A
Ans. A. Glucocorticoids upregulate MHC expression
Glucocorticoids both inhibit as well as upregulate MHC expression depending upon cells and species involved.
Dexamethasone increases MHC class 2 expression on human endothelial cells and monocytes whereas it down regulates it on B-cells.
Glucocorticoids have inhibitory effect on both T-Helper cells and cytotoxic T cells.

KollegeApply

557. Beta blockers used in thyroid storm cause ?

a) Quick relief of symptoms

b) Increased metabolism of thyroxine

c) Blockade of thyroxine receptors

d) Decreased synthesis of thyroxine

Correct Answer - A

Ans. A. Quick relief of symptoms

Non-selective beta-blocker:

- Most valuable measure in thyroid storm.
- In thyroid storm most of the symptoms are because of adrenergic overactivity due to increased tissue sensitivity to catecholamines in hyperthyroidism.
- This increased sensitivity is due to increased number of p-receptors. So, quick relief can be obtained by blocking receptors.

CollegeApply

558. **A 47-year-old woman presents with complaints of nervousness and increased sensitivity to hot weather. She is diagnosed with hyperthyroidism and prescribed propylthiouracil. What is the principal mechanism by which this drug acts?**

a) Decreasing the efficacy of TSH binding to the thyroid TSH receptor

b) Decreasing the rate of proteolysis of thyroglobulin

c) Increasing the amount of 3,3',5'-triiodothyronine (reverse T3; rT3)

d) Inhibiting deiodination of thyroxine (T4)

Correct Answer - D

Propylthiouracil works primarily by inhibiting the peripheral conversion of T4 to T3.
The thyroid extracts iodide from the plasma and, in an oxidative process, iodinated tyrosine residues in thyroglobulin molecules. Monoiodotyrosine and diiodotyrosine are formed and then coupled to produce either thyroxine (tetraiodothyronine, T4) or triiodothyronine (T3).

Proteolytic cleavage of thyroglobulin molecules leads to free T3 or T4, which is then released into the circulation; T3 is several times more potent than T4. Peripheral deiodination of T4 at the 5' position leads to T3 formation (mainly in the liver); this step is inhibited by propylthiouracil.
Decreasing the efficacy of TSH binding, decreasing the rate of thyroglobulin proteolysis, increasing the amount of rT3 formation, and inhibiting the uptake of iodide into the thyroid, would all tend to decrease the formation of thyroid hormones in the thyroid itself.

CollegeApply

559. Which of the following is an aromatase inhibitor?

a) Tamoxifen

b) Letrozole

c) Danazol

d) Taxane

Correct Answer - B
Ans. is 'b' i.e. Letrozole
Aromatase inhibitors are of two types
o Type I (steroidal) aromatase inhibitor - They cause irreversible inhibition of aromatase, e.g. Exmestane, formestane. o Type II (non-steroidal) aromatase inhibitor - They cause reversible inhibition of aromatasxe e.g. Anastrazole, Letrozole, vorozale.

KolegeApply

560. Drug which is contraindicated before 2nd stage of labor is:
March 2009

a) Mifepristone

b) Oxytocin

c) Misoprostol

d) Ergometrine

Correct Answer - D
Ans. D: Ergometrine
Drugs used for medical method of induction of labour are:

- Mifepristone
- Oxytocin
- Misoprostol (Prostaglandins El)

Ergometrine is contraindicated in pregnancy, 1st stage of labour, 2nd stage of labour before crowning of the head and in breech delivery prior to crowning.

KollegeApply

561. Which antithyroid drug crosses placenta ?

a) Carbimazole

b) Propylthiouracil

c) Both

d) None

Correct Answer - C
Ans. C. Both
Both propylthiouracil and methimazole/carbimazole cross placenta. But because of high protein binding capacity of propylthouracil is transferred less across Placenta).
Therefore, it is preferred in pregnancy.

KollegeApply

562. Which of the following oral antidiabetic drug is insulin secretagogues?

a) Metformin

b) Pioglitazone

c) Nateglinide

d) Acarbose

Correct Answer - C

Ans. C. Nateglinide

- Nateglinide is an oral antidiabetic drug that causes the release of insulin (insulin secretagogue).
- It is a D-phenylalanine derivative which principally stimulates the 1st phase insulin secretion.
- It is used in type 2 diabetes mellitus along with other antidiabetics, to control the prandial rise in blood glucose

KollegeApply

563. Which of the following antidiabetic drug is insulin secretogogue ?

a) Pramlintide

b) Glucomannan

c) Exenatide

d) None

Correct Answer - C
Ans. C. Exenatide
Among parentralantidiabetic(hypoglycemic) drugs - Enenatide is insulin secretagogue, i.e. stimulate insuline release.

KolleegeApply

564. Oral sore due to inhaled steroids are treated by ?

a) Griseofulfin

b) Amphotericin-B

c) Fusidic acid

d) Muprocin ointment

Correct Answer - B
Ans. B. Amphotericin-B
One of the common side effect of inhaled corticosteroids is oro-pharyngeal candidiasis, which can be treated by,
Topical antifungal (nystatin, clotrimazole, amphoterian B oral suspension).
Systemic oral azoles (fluconazole, itraconazole, posaconazole).

KolleegeApply

565. PGE1 analogue is ?

a) Carboprost

b) **Alprostadil**

c) Epoprostenol

d) Dinoprostone

Correct Answer - B
Ans. B. Alprostadil

- PGI2 analogue - Epoprostenol,treprostinil.
- PGE1 analogue - Alprostadil, Misoprostol
- PGE2 analogue - Dinoprostone.
- PGF2(alpha) analogue - Carboprost, latanoprost, bimatoprost, travoprost.

KollegeApply

566. Long acting 13-2 agonist is ?

a) Formoterol

b) Isoprenaline

c) Salbutamol

d) Ephedrine

Correct Answer - A
Ans. A. Formoterol
Beta-2 agonists:

- Used in asthma.
- Long acting - Salmeterol, formoterol.
- Short acting - Salbutamol, terbutaline.

KollegeApply

567. Triptan taken by nasal route is ?

a) Sumatriptan

b) Rizatriptan

c) Naratriptan

d) Frovatriptan

Correct Answer - A

Ans. A. Sumatriptan

Sumatriptan can also be taken as:

1. Nasalspray
2. Suppository
3. Subcutaneous injection

- Besidesumatriptan,Zolmitriptan can also be used by nasal route.

KollegeApply

568. Acetaminophen [Paracetamol] induced liver toxicity is due to ?

a) N-acetyl cystine

b) NAPQ

c) Co-Q

d) Cytochrome 'C'

Correct Answer - B
Ans. B. NAPQ
Paracetamol is metabolized to N-acetyl-paraaminobenzoquinoneimine (NAPQ) by microsomal enzymes. This metabolite has high affinity for sulf-hydryl groups and can combine with the enzymes andotherbiomolecules resulting in hepatotoxicity.
N-acetyl Cystine is used as an antidote.
It replenishs the glutathione stores of liver and prevents binding of the toxic metabolite to other cellular constituents.

KollegeApply

569. Drugs which are used in acute asthma include?

a) Budesonide

b) Terbutaline

c) Salbutamole

d) Theophylline

e) Sodium cromoglycate

CollegeApply

Correct Answer - B:C:D

Ans. is'b'i.e., Terbutaline,'c'i.e. Salbutamole &'d'i.e. Theophylline

[Ref: KDT Vh/e p. 223]

Treatment of acute asthma:

- The only drugs effective for the treatment of acute attack of asthma are bronchodilators (beta 2-receptor agonists, anticholinergics, and methylxanthines).

Mild attacks:

- For patients with mild attack inhalation of a short acting beta-2 receptor agonist, e.g. salbutamol (albuterol), terbutaline is used.
- An inhaled anticholinergic, e.g. ipratropium may be added if there is no satisfactory response to beta 2- agonists alone.
- In patients who are refractory to inhaled therapies, i.v. aminophylline (theophylline) may be effective.

Severe attacks:

- Oxygen phts continuous administration of aerosolized salbutamol (albuterol) plus systemic steroids, e.g. methylprednisolone, hydrocortisone.

- Recently, MgSO4 has been tried in acute severe asthma by IV or inhalation route.

KollegeApply

570. Maximum effect of bronchodilatation in asthma is caused by ?

a) Corticosteroids

b) Theophylline

c) Anticholinergic

d) β2-Agonist)

Correct Answer - D
Ans. is 'd' i.e., β_2-Agonist

β-agonists in Asthma

- Bronchi have , **β**-adrenergic receptors which cause bronchodilatation → So, the adrenergic drugs used in asthma are selective β_2 agonists.
- **β**-agonists are the most effective bronchodilators
- β_2-agonists have some other effects also on airways (other than bonrchodilatation), that are responsible for beneficial effects in asthma :
  - Inhibition of release of mast cells mediators → mast cells stabilizing action.
  - Inhibition of exudation and airway edema.
  - Increased mucociliary clearance
  - Decreased cough
- β_2-agonists have no effect on inflammation→ no antiinflammatory action.

KollegeApply

571. Atypical side effect montelukast ?

a) Good pasture syndrome

b) Churg - Strauss syndrome

c) Membranous glomerulonephritis

d) Bronchial asthma

Correct Answer - B
Ans. B. Churg - Strauss syndrome
Churg-Strauss syndrome can be ceused by leukotriene antagonists (e.g, Monteleukast).

KollegeApply

572. True about oral iron preparations ?

a) Most commonly used preparation is ferrous gluconate

b) Ferrous fumarate is most efficient

c) Different preparations have different biovailability

d) Ferric preparations are more effective

Correct Answer - C

Ans. C. Different preparations have different biovailability

Preferred route for iron supplementation is oral.

Ferrous salts are inexpensive, have good iron content and are better absorbed than ferric salts.

Most commonly used preparation isferrous sulfute, which is the cheapest and as effective a source of elemental iron as more expensive preparations.

It contains 32% iron in dried salt and 20% iron in hydrated salt.

Other effective and inexpensive preparations are ferrous gluconate (12% lron) and ferrousfumarate (33% iron), which are equivalent to ferrous sulfate.

KollegeApply

573. True about heparin induced thrombocytopenia ?

a) Low molecular weight heparin is better alternative

b) Antibodies are formed against platelets

c) Vitamin K is specific antidote

d) Within 12 hours of starting heparin

Correct Answer - B

Ans. B. Antibodies are formed against platelets

Heparin induced thrombocytopenia (HIT)

- HeParin induced thrombocytopenia is an important adverse effect ofheparin administration, usuallycausedbyunfractionated heparin, but may also be seen with the use of low molecular weight heparin (LMWH).

HIT may be of two types :

1. Type I (Non-immune mediated) :- It is mild and heparin maybe continued.
2. Type 2 (Immune mediated) :- It is due to formation of antibodies against platelets. Paradorical thrombosis can occur.

- Heparin must be discontinued immediately.
- Warfarin and LMW are contraindicated.
- Lepirudin (a direct thrombin inhibitor) is anticoagulant ofchoice.
- Alternatives are danaparoid,hiruitin and Argaboban.

Kollegeapply

574. Mechanism of action of ticagrelor ?

a) Cox inhibition

b) GPIIB/IIIAinhibition

c) Inhibition of thromboxane synthase

d) P_2Y_{12} receptor antagonist

Correct Answer - D

Ans, D. P_2Y_{12} receptor antagonist

Ticlopidine, clopidogrel, Prasugrelàthey block ADP mediated platelet activation by irreversible antagonism of P_2 Y_{12} receptor on ADP.

KollegeApply

575. Mechanism of action of ticgrelor ?

a) Reversible inhibition of ADP action

b) Irreversible inhibition of ADP action

c) Reversible inhibition of **GPIIb/IIIa**

d) Irreversible inhibition of GPIIb/IIIa

Correct Answer - A
Ans. A. Reversible inhibition of ADP action
Cangrelor andticagrelot are reversible antagonist ofADP (P2 Y12), in contrast to ticlopidine, which is irreversible antagonist.

KollegeApply

576. Which of the following is a PAR antagonist ?

a) Prasugrel

b) Ticlopidine

c) Tirofiban

d) Vorapaxar

Correct Answer - D
Ans. D. Vorapaxar
PARs are activated after thrombin-mediated proteolytic cleavage of their N-terminal exodomain.
Platelet activation by thrombin is mediated via two PARs: PAR-I and PAR-4. PAR-I is the major human platelet receptor, exhibiting 10-100 times higher affinity for thrombin when compared with PAR-4.
Two selective PAR-I antagonists are under clinical evaluation: Vorapaxar (SCH530348) and Atopaxar (E5555).

CollegeApply

577. Rebound increase in gastric acid secretion after stopping proton pump inhibitor therapy is due to?

a) Parietal cell hyperplasia

b) Increased histamine release

c) Hypergastrinemia

d) Hypersensitivity of Ach receptors

KollegeApply

Correct Answer - C

Ans. C. Hypergastrinemia

Rebound acid hyper secretion (RAH) results in gastric acid secretion above pretreatment levels after acid suppression.

PPI therapy leads to diminished acid secretion and antral D-cell releases of somatostatin, while increasing G-cell release of circulating gastrin.

The increased gastrin concentration exerts a trophic effect on oxyntic mucosa, causing hyperplasia and increased functional capacity of the enterochromafin - like (ECL) cell and parietal cell.

Increased acid secretion due to sustained hypergastrinemia is not apparent during PPI therapy but appears with drug cessation theoretically, leading to acid- related heartburn, acid regurgitation or dyspepsia,

578. Which of following is a stool softener ?

a) Bran

b) Senna

c) Phenalphthalein

d) Docusates

Correct Answer - D

Ans. D. Docusates

Stool softener (Docusates, liquid paraffin)

- They soften the stools by net water accumulation in the lumen by an action on the intestinal mucosa.
- They emulsify the colonic contents and increase penetration of water into feces.

KollegeApply

579. Drug of choice for drug induced peptic ulcer ?

a) Prostaglandin analogues

b) H_2-receptor antagonists

c) Proton pump inhibitors

d) Antacids

Correct Answer - C
Ans. C,. Proton pump inhibitors
Drug of choice for NSAIDs induced peptic ulcer > PPIs
Most specific drug for NSAIDs induced peptic ulcer > Prostaglandin analogue.

KolleseApply

580. Atropine plus diphenoxylate combination is used for?

a) Glaucoma

b) Iridocyclitis

c) Diarrhea

d) Motion sickness

Correct Answer - C
Ans. C. Diarrhea
Diphenoxylate (2.5 mg) plus atropin (0.025 mg) combination is used as antimotility drug for treatment of diarrhea.

KolleegeApply

581. Latest oral direct thrombin inhibitor is?

a) Ximelagatran

b) Indraparinux

c) Dabigatran

d) Fondaparinux

Correct Answer - C
Ans. is 'c' i.e., Dabigatran
Ximelagatran was the first oral direct thrombin inhibitor approved; however, it was subsequently withdrawn from the market because of reports of liver failure.
Recently a new oral direct inhibitor, dabigatran, was approved for use in Europe for prevention of various thromboembolism in patients who have undergone hip or knee replacement surgery.

KollegeApply

582. Ximelagatran is used as ?

a) Antiplatelet

b) Anticoagulant

c) Fibrinolytic

d) Antifibrinolytic

Correct Answer - B

Ans. B. Anticoagulant

Direct Thrombin Inhibitors:

- This group includes hirudin, lepirudin, bivalirudin, argatroban, dabigatran, melagatran, and ximelagatran.
- Dabigatran and Ximelagatran (a prodrug of melagatran) can be given orally.
- All other drugs are used parenterally.
- These drugs directly inactivate factor IIa (thrombin).
- These are the anticoagulant of choice for heparin-induced thrombocytopenia

CollegeApply

583. Specific feature of simvastatin ?

a) Most potent statin

b) Longest acting statin

c) Lipophilic

d) Not metabolized

Correct Answer - C
Ans. C. Lipophilic
Statins are the most powerful LDL lowering drugs.
Statins are the most effective and best tolerated hypolipidemic drugs.
Simvastatin and lovastatin are lipophilic and hence, their CNS penetration is more than hydrophilic agents like pravastatin and fluvastatin.

KollegeApply

584. Statin having longest half life:
September 2012

a) Rosuvastatin

b) Pravastatin

c) Simvastatin

d) Lovastatin

Correct Answer - A
Ans. A i.e. Rosuvastatin
Rosuvastatin

- It is a competitive inhibitor of the enzyme HMG-CoA reductase, having a mechanism of action similar to that of other statins.
- Its approximate elimination half life is 19 h and its time to peak plasma concentration is reached in 3-5 h following oral administration.

KollegeApply

585. Antitubercular drug which makes the patient non-infective earliest ?

a) INH

b) Rifampin

c) Ethambutol

d) Pyrazinamide

Correct Answer - A

Ans. A. INH

In those with open or infectious pulmonary TB, the great majority of bacilli is freely replicating in the cavity walls and is rapidly killed by INH, thereby speedily rendering the patient non-infections.

KolleeApply

586. Thymidine is responsible for resistance to which antibiotic ?

a) Erythromycin

b) Sulfonamide

c) Tetracycline

d) Nitroforantoin

Correct Answer - B
Ans. B. Sulfonamide
The sulfonamides are antimetabolites that compete with PABA, thereby preventing synthesis of folic acid.
This inhibition blocks the formation of thymidine, some purines, methionine and glycine.
The enterococci are able to use exogenous thymidine and are therefore intrinsically resistant to the sulfonamides.

CollegeApply

587. Which of the following is not excreted in kidney ?

a) Ciprofloxacin

b) Ofloxacin

c) Levofloxacin

d) Moxifloxacin

Correct Answer - D

Ans. D. Moxifloxacin

Fluroquinolone that are primarily excreted by renal mechanisms and for which dose adjustment is needed include:

- Ciprofloxacin
- Gatifloxacin
- Cinafloxacin
- Levofloxacilin
- Lomefloxacilin
- Norfloxacin
- Ofloxacin

KolleegeApply

588. Levamisol is a/an ?

a) Immunomodulator

b) Immunostimulant

c) Antiheliminthic

d) All of the above

Correct Answer - D
Ans. D. All of the above
Levamisol is an anti-helminthic drug with immune-modulatory action. At low doses it has immune-stimulatory action.

KollegeApply

589. Gametocidal antimalarial drug for all species of plasmodium ?

a) Chloroquine

b) Quinine

c) Primaquine

d) Mefloquine

Correct Answer - C
Ans. C. Primaquine
Gametocidal - Acts on gametocytes

- For all species: Primaquine, artimisinins
- For P. vivax: Chloroquine, quinine

KollegeApply

590. Quinine acts on which stage of plasmodium life cycle?

a) Exoerythrocytic

b) Pre-erythrocytic

c) Erythrocytic

d) All of the above

Correct Answer - C
Ans. C. Erythrocytic
Anti-malarial drugs acting on Erythrocyticschizogony.

- Fast acting ===Chloroquine, amadioquine, quininamefloquine, halofantrine, lumefanterine, atovaquone, artimisinin.
- Slow acting === Pyrimethamine, proguanil, sulfonamides,tetracyclines.

KollegeApply

591. Which among the following is present only in iv [intravenous] form -

a) Vancomycin

b) Meropenem

c) Streptomycin

d) All **of** the above

Correct Answer - B
Ans. B. Meropenem
Meropenem is given intravenously.
Vancornycin is used intravenously for all infections, except for pseudomembranous colitis, where it is used by oral route.
Streptomycin is administered by intramuscular route.

KollegeApply

592. Emtricitabine is classified as?

a) Alkylating agent

b) Antimetabolite anticancer

c) NRTI

d) None of the above

Correct Answer - C
Ans. C. NRTI
Emtricitabine is an anti-retroviral drug.
It is a nucleoside-reverse transcriptase inhibitor (NRTI).
It is a synthetic cytidine analogue.
Major side effects are lactic acidosis and liver dysfunction.

KollegeApply

593. Emtricitabine is a/an ?

a) Alkylating agent

b) Antimetabolite

c) Mitotic inhibitor

d) None of the above

Correct Answer - B

Ans. B. Antimetabolite

Emtricitabine is an antimetabolite, but it is not an anticancer drug (it is an anti-retroviral drug).

All NRTIs are antimetabolites:-

- 'Although all NRTIs have same basic mechanism of action, different drugs in the class serve as antimetabolites of different purine and pyrimidine bases of DNA.

KollegeApply

594. Synergistic action is shown by all except ?

a) Penicillin plus sulfonamide

b) Streptomycin plus tetracycline

c) Rifampicin plus dapsone

d) Penicillin plus tetracycline

Correct Answer - D

Ans. D. Penicillin plus tetracycline

Combination of a bactericidal with a bacteriostatic drug may be synergistic or antagonistic depending on the organism.

If the organism is highly sensitive to the cidal drug - response to the combination is equal to the static drug given alone (apparent antagonism), because cidal drugs act primarily on rapidly multiplying bacteria, while the static drug retards multiPlication.

This has been seen with penicillin + tetracydine/chloramphenicol on pneumococci which are highly sensitive to penicillin.

Pneumococcal meningitis treated with penicillin + tetracycline had higher mortality than those treated with penicillin alone.

Penicillin + erythromycin for group A Streptococci and nalidixic acid + nitrofuration for E. coli have also shown antagonism.

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595. Neuropathy with INH therapy is least in patients?

a) Having malnutrition

b) Alcoholics

c) Fast acetylators

d) Vitamin B complex deficiency

Correct Answer - C
Ans. C. Fast acetylators
Peripheral neuropathy is more likely to occur in slowacetylators and patients with predisposing conditions such as malnutrition, alcoholism, diabetes, AIDS, and uremia.

KollegeApply

596. Drugs used for H. Pylori are all except?

a) Bismuth

b) Amoxicillin

c) Domperidone

d) Clarithromycin

Correct Answer - C

Ans. C. Domperidone

Drugs useful for H. Pylori infection

- Amoxicillin
- Tinidazole/metronidazole
- Omeprazole
- Ranitidine
- Tetracycline
- Bismuth
- Clarithromycin.

KollegeApply

597. Duration of erythromycin used in treatment of diphtheria is ?

a) 3 days

b) 7 days

c) 14 days

d) 30 days

Correct Answer - C
Ans. C. 14 days
Drug of choice for diphtheria is erythromycin.
Total course of antibiotics is given for 14 days
Alternative antibiotics are penicillin G, clindamycin and rifampir.

KollegeApply

598. Longest acting carbapenems ?

a) Imipenem

b) Meropenem

c) Doripenem

d) Ertapenem

Correct Answer - D
Ans. D. Ertapenem
Ertapenem is a long-acting carbepenem with a broad spectrum antimicrobial activity similar to older carbapenems, imipenem and meropenem.
However, unlike imipenem, it has Poor activity against pseudomonas.

KollegeApply

599. XDR TB is defined as ?

a) MDR plus resistance to fluoroquinolone

b) MDR plus resistance to fluoroquinolone and streptomycin

c) MDR plus resistance to fluoroquinolone and Amikacin

d) MDR plus resistance to Amikacin

Correct Answer - D
Ans. D. MDR plus resistance to Amikacin
MDR is defined as resistance INH and rifampicin with or without resistance to other drugs. XDR is defined as resistance to INH and rifampicin as well as to all fluoroquinolones and one of njectable drugs (capreomycin, kanamycin, amikacin).

KollegeApply

600. Neuropathy caused by INH increases in all except?

a) Uremia

b) Hyperthyroidism

c) Diabetes mellitus

d) Poor nutrition

Correct Answer - B
Ans. is'b'i.e., Hyperthyroidism
[Ref Katzung 11'h/e p. 1069]
isoniazid induced peripheral neuropathy:

- Peripheral neuropathy is observed in 10 to 20% of patients given doses greater than 5 mg/kg/d, but it is infrequently seen with the standard 300-mg adult dose.
- Peripheral neuropathy is more likely to occur in slow acetylators and patients with predisposing conditions such as malnutrition, alcoholism, iliabetes, AIDS, and uremia.

CollegeApply

601. Idoxuridine is used for treatment of ?

a) Influenza

b) RSV

c) HSV

d) HIV

Correct Answer - C
Ans. C. HSV
Idoxuridine is used only topically forkeratoconjunctivitis by HSV'

KollegeApply

602. Which antibiotic should not be given after drinking milk?

a) Chloramphenical

b) Tetracycline

c) Erythromycin

d) Sulfonamide

Correct Answer - B
Ans. B. Tetracycline

KollegeApply

603. Post-transplantation hypertension can be caused by:I. Rejection. II. Cyclosporine nephrotoxicity.III. Renal transplant artery stenosis (RTAS).IV. Recurrent disease in the allograft.

a) I,II,III,IV are correct

b) I,II,IV are correct.

c) I & III are correct

d) None of the above is correct.

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Correct Answer - A
Both acute and chronic rejection may result in hypertension. The former causes acute fluid retention and plugging of peritubular capillaries with inflammatory cells. This may progress to intimal swelling and medial necrosis and eventuate in ischemia secondary to endothelial proliferation and obliteration of small vessels. Chronic rejection, thought to be related to protracted humoral injury, results in obliteration of capillaries via the development of intimal hyperplasia. Cyclosporine has a vasoconstrictive effect which, through activation of the renin-angiotensin system, may lead to hypertension. RTAS is responsible for hypertension in 4% to 12% of renal allograft recipients. It responds well to percutaneous angioplasty. A careful trial of angiotensin-converting enzyme inhibitors may be diagnostic of RTAS. Recurrent disease such as membranoproliferative glomerulonephritis and focal glomerular sclerosis may result in significant hypertension in renal allograft recipients.

604. Capecitabine belongs to which class of anticancer drug?

a) Antimetabolite

b) Alkylating agent

c) Nitrogen mustards

d) Vinca alkaloids

Correct Answer - C

Ans. C. Nitrogen mustards

Antimetabolites

- Purine antagonists -Mercaptopurine, Thioguanine, Azathioprine, Fludarabine, Cladaribine
- Pyrimidine antagonists - S-Fluorouracil, Cytosine arabinoside (cytarabine), CaPecitabine, Gemcitabine.
- Folate antagonist- Methotrexate, Pemetrexed.

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605. Which of the following drugs is associated with untoward side effect of renal tubular damage-

a) Cisplatin

b) Steptozotocin

c) Methysergide

d) Cyclophosphamide

Correct Answer - A
Ans. is 'a' i.e. Cisplatin
Some nephrotoxic agents which cause tubular necrosis.
o Aminoglycosides o Colistin o Methoxyfluranes o Sulfonamides
o Amphotericin B o Cyclosporine o Polymyxin o Tetracyclines
o Cephaloridine o Intravenous immune globulin o Radioiodinated contrast o Acetaminophenmedium
o Cisplatin

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606. Drug that can cause hypertrophic pyloric stenosis is?

a) Tertacyclin

b) Erythromycin

c) Ampicillin

d) Rifampicin

Correct Answer - B
Ans. is 'b' i.e., Erythromycin
o Maternal and infant use of *erythromycin and other macrolide antibiotics* have been reported as risk factors for *infantile hypertrophic pyloric stenosis (IHPS).*

KolleegeApply

607. Best method for methanol poisoning treatment:
March 2007

a) Ethanol

b) Calcium gluconate

c) Desferroxamine

d) BAL

Correct Answer - A
Ans. A: Ethanol
When metabolized by hepatic alcohol and aldehyde dehydrogenase, methanol forms formaldehyde and formic acid, both of which are toxic.
Formic acid is the primary toxin that accounts for the majority of the anion gap, metabolic acidosis, and ocular toxicity. Formic acid inhibits cytochrome oxidase in the fundus of the eye. Swelling of axons in the optic disc and edema result in visual impairment.
Degradation of formic acid is folate dependent. Thus, if a folate-deficient person ingests ethanol, toxicity may be more severe due to the increased accumulation of formic acid.
Approximately 90-95% of methanol metabolism occurs in the liver, while 5-10% is excreted unchanged through the lungs and kidneys.
Methanol is primarily metabolized by alcohol and aldehyde dehydrogenase.
Formaldehyde has a short half-life, lasting only minutes.
Formic acid is metabolized much more slowly, and it bioaccumulates with significant methanol ingestion. Physical Sign

- Ocular physical findings include sluggishly reactive or fixed and

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dilated pupils.
Retinal edema or hyperemia
Edema of the optic disc may be seen.
Optic atrophy may appear in late stages (permanent blindness).

- CNS signs include lethargy and confusion.
- Respiratory signs include dyspnea (rare cases) or even Kussmaul respiration, despite acidosis.
- Cardiac signs (e.g., hypotension, bradycardia) are late signs associated with a poor prognosis.

Lab studies

- Methanol concentration: This study confirms ingestion and helps guide treatment. Remember that low serum concentration do not rule out significant toxicity; late presenters may have low methanol concentrations but elevated formic acid levels and severe clinical toxicity (e.g., severe metabolic acidosis, blindness, coma).

Treatment

- Supportive measures
- Attempted correction of acidosis using sodium bicarbonate is indicated if pH is less than 7.20. An alkalemic pH makes it more likely that formic acid will exist as its anion (formate), which cannot access the CNS and optic nerve as readily.
- Administer folic acid for several days to potentiate the folate-dependent metabolism of formic acid to carbon dioxide and water.
- Ethanol infusion is recommended: Ethanol is a competitive inhibitor of alcohol dehydrogenase and, thereby, impairs the metabolism of methanol and ethylene glycol. Ethanol has 10-20 times greater affinity for alcohol dehydrogenase than methanol does.
- Plasma formate concentration is of prognostic value

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608. **Lower esophageal sphincter pressure is increased by all of the following substances, EXCEPT:**

a) Gastrin

b) Vasopressin

c) Glucagon

d) Secretin

Correct Answer - D

The lower esophageal sphincter, a physiologic entity but not an anatomic structure, plays an important part in preventing gastroesophageal reflux. Neural, hormonal, myogenic, and mechanical factors influence the tone of the sphincter. Gastrin, vasopressin, glucagon, adrenergic agonists, and cholinergic agents increase the pressure. Secretin has the opposite effect.

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609. Interstitial nephritis is seen with all except

a) Beta lactam inhibitors

b) INH

c) Diuretics

d) Allopurinol

Correct Answer - B

INH *[Ref. Harrison 17th/e p 1806, 1807 & 16th/e p 1702, 1703]*

DRUGS CAUSING INTERSTITIAL NEPHRITIS

Antibiotics	Diuretics	Anticonvulsants	Miscellaneous
. *filactams*[o]	• *Thiazide*[Q]	• *Phenytoin*[u]	. *Captopril0*
. *Sulfonamides*[Q]	• *Furosemide*[Q]	• *Phenobarbitone*[Q]	• *H_2 receptor blockerse*
• *Quinolones*[Q] :	*Triamterene*	• *Carbamazepine*	. *Omeprazole*
. *Vancomycin*	. *NSAIDS°*	• *Valproic acid*	. *Mesalazine*
• *Erythromycin*	. *Indinavir*		
. *Minocycline*	. *Allopurinol*		
. *Rifampicin*			
• *Ethambutol*			
. *Acyclovir*			

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610. Lorcaserin is used as ?

a) Anti-anxiety

b) Anti-smoking

c) Anti-helminthic

d) Anti-obesity

Correct Answer - D
Ans. D. Anti-obesity
Lorcaserine is selective 5-HT2c agonist which decreases appetite in treatment of obesity.

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611. Half life of Nicotine in blood ?

a) 15 minutes

b) 2 hours

c) 5 hours

d) 24 hours

Correct Answer - B
Ans. B. 2 hours
'Nicotine has a half-life of approximately 2 hours (range 1-2 hours).

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612. IC content of Ringer's lactate [mmol/L] ?

a) 130

b) 109

c) 4

d) 50

Correct Answer - C

Ans. C. 4

One liter of Ringer's lactate solution contains :-

1. 130 mEq of sodium ion = 130 mmoVl
2. 109 mEq of chloride ion = 109 mmol/L
3. 28 mEq of lactate = 28 mmol/L
4. 4mEq of potassium ion = 4 mmol/L
5. 3 mEq of calcium ion = 1.5 mmol/L

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613. Flu like syptoms is side effect of which anti TB drug ?

a) NH

b) Rifampicin

c) Pyrzinamide

d) Streptomycin

Correct Answer - B
Ans. is 'b' i.e., Rifampicin

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614. All of the following are known adverse effects of thalidomide, except:

a) Diarrhoea

b) Teratogenicity

c) DVT

d) Neuropathy

Correct Answer - A
Ans is 'a' i.e. Diarrhoea
o Thalidomide causes constipation and not diarrhoea.

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615. Oxidation of drugs is mainly takes place in?

a) Nucleu

b) Smooth ER

c) Rough ER

d) Cytoplasm

Correct Answer - B
Ans. B. Smooth ER
Most of the microsomal drug metabolizing enzymes (Cyt. P450) are located on smooth endoplasmic reticulum.

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616. IPC 304B is related to -

a) Punishment for cruelty by husband or his relatives

b) Dowry death

c) Death caused by negligence

d) Punishment of culpable homicide, not amounting to murder

Correct Answer - B

Ans. is 'b' i.e. Dowry death

- IPC 304 - Punishment of culpable homicide, not amounting to murder
- IPC 304 A - Death caused by negligence
- IPC 304 B - Dowry death : 10 years of imprisonment which can extend to life.
- IPC 498 - Punishment for cruelty by husband or his relatives.

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617. IPC 201 is for -

a) Punishment for embalming before autopsy

b) Perjury

c) Voluntary causing grievous hurt

d) Kidnapping

Correct Answer - A

Ans. is 'a' i.e. Punishment for embalming before autopsy [Ref: Reddy 30th/e p. 11]

- IPC 201 is for punishment for embalming before autopsy (and also for the disappearance of evidence).

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618. Sec 191 IPC is for -

a) Medical negligence

b) Hostile witness

c) Criminal negligence

d) Assault punishment

Correct Answer - B

Ans. is 'b' i.e. Hostile witness [Ref Reddy 30th /e p. 11]

Perjury, Hostile witness and false certificate

191 IPC : (i) Giving false evidence (perjury) under oath and (ii) hostile witness.

192 IPC: Fabricating false evidence (perjury).

193 IPC : Punishment for false evidence (punishment for perjury) : imprisonment upto 7 years + fine.

194 IPC : Giving or fabricating false evidence to procure conviction of capital offence.

195 IPC : Giving or fabricating false evidence to procure conviction of offence punishable with imprisonment for life.

197 IPC : Issuing or signing (attesting) false certificate by a doctor is a criminal offence.

201 IPC : Causing disappearance of evidence.

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619. Dying declaration is a:

MAHE 10

a) Circumstantial evidence

b) Oral evidence

c) Documentary evidence

d) Hearsay evidence

Correct Answer - C
Ans. Documentary evidence

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620. Novus actus interveniens is -

a) Facts speaking for itself

b) Breaking of chain

c) Contributory negligence

d) Therapeutic misadventure

Correct Answer - B

Ans. is 'b' i.e. Breaking of chain

A person is responsible for his actions and their consequences. This principle applies to cases of assault or accidental injuries. However, sometimes such continuity of events is broken by an entirely new and unexpected happening, due to negligence of some other person, i.e. "Novus actus interveniens" (an unrelated action intervening).

- For example, If a person has been assaulted due to which he has sustained a large liver laceration, for which he is operated by a surgeon. If the patient dies intraoperatively or postoperatively due to complications related to surgery or injury, the person who has assaulted the patient will be held responsible.
- But, if the doctor has done some negligent act during surgery, e.g. left the swab or instrument in abdomen during surgery; and patient dies because of that act (sepsis due to swab), then the responsibility may pass from original incident to later negligent act of doctor by principle of `Novus actus intervention' (an unrelated action intervening). Thus the doctor is responsible for negligent acts, i.e. criminal negligence, and the assailant will not be fully responsible for the ultimate harm.

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621. Inquest, not followed in India is -

a) Police inquest

b) Magistrate inquest

c) Coroner's inquest

d) All of the above

Correct Answer - C
Ans. is 'c' i.e.,Coroner's inquest
Coroner's court used to be held in India in Bombay (Mumbai). Now, it is held nowhere in the country. It was abolished even from Mumbai in 1999.

KollegeApply

622. Length of the fetus is 40cms. What would be the age of gestation ?

a) 4 months

b) 6 months

c) 7 months

d) 8 months

Correct Answer - D

Ans. is 'd' i.e.,8 months [Ref Modi 23'^{d}ie p. 1016, 1037; Dutta Obstetrics 6th/e p. 41]

According to Rule of Hasse : Length = 5 x months of pregnancy.

Thus, 40 = 5 x months of pregnancy or months of pregnancy = 8

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623. Extra permanent tooth to erupt is -

a) Upper incisor

b) Canine

c) Molar

d) Lower incisor

Correct Answer - A

Ans. is 'a' i.e., Upper incisor [Ref Textbook of Pediatric Decntistry p. 354]

- Most common supernumerary teeth are permanent, anterior incisor in the maxilla (maxillary incisors), called mesiodens.
- After maxillary incisors, maxillary and mandibular fourth molars called distodens or distomolars

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624. True about finger printing is -

a) Most common type is whorls

b) Most specific method of identification

c) Not present at birth

d) All of the above

Correct Answer - B

Ans. is 'b' i.e. Most specific method of identification [Ref Reddy 30thie p. 76]

- Finger prints are present from birth both on epidermis and dermis, remain constant throughout life and can't be altered without destroying true skin. Fingers prints are due to papillary or epidermal 'ridges' on the tips of fingers and thumb.
- Finger print pattern is absolutely individual i.e. no two hands are entirely alike, not even identical twins. That's why, it is
- best (most sensitive and most specific) and most reliable method of identification (Quetelet's rule of biological variation).
- Loops (67% most common) > Whorls (25%) > archer (7%) > composite (2% least common) are four main types of pattern.
- It is accepted that chances of 2 finger prints matching 16 ridge characteristic are infinitely small (Parikh's). In practice 8-6 points of fine comparision are accepted as proof of identity.

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625. UV rays examination is done for -

a) Faded tattoo

b) Blood satins

c) Hair examination

d) None of the above

Correct Answer - A
Ans. is 'a' i.e. Faded tattoo [Ref Principles of Forensic Medicine and Toxicology by Rajesh Bardale]
Tattoo mark is permanent when dye penetrates the dermis. Ultraviolet lamp makes old tattoos readily visible. A faded tattoo mark becomes visible by use of Infrared photography or rubbing the part and examining with magnifying lens.

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626. Just before the birth which epiphysis appears?

a) Lower end of femur

b) Upper end of humerus

c) Lower end of fibula

d) Upper end of tibia

Correct Answer - A

Ans. is 'a' i.e., Lower end of femur [Ref Reddy 30/e p. 64, 65]

1. At birth center appears upper end of tibia and head of humerus.
2. At 2 months intrauterine life (IUL) → Center appears for mandible, clavicle, ribs, vertebrae, frontal and parietal bones.
3. At 3 months IUL → Center appears for sacrum.
4. At 4 months IUL → Center appears for temporal and occipital bones**.**
5. At 5 months IUL → Center appears for calcaneum.
6. At 6 months IUL → Center appears for sternum.
7. At 7 months IUL → 4 Center appears for talus.
8. At 9 months IUL/birth → Center appears for lower end of femur.
9. At birth → Center appears upper end of tibia and head of humerus.

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627. Base of sphenoid fuses with occipit at the age of -

a) 20 years

b) 30 years

c) 40 years

d) 50 years

Correct Answer - A

Ans. is 'a' i.e., 20 years [Ref Dr. Anil Aggrarwal p.68]

- Spheno-occipit is the earliest to fuse (20 years).
- Saggital suture obliterates at 30-35 years.
- Coronoid (coronal suture) obliterates at 35-40 years.
- Lambdoid suture obliterates at 45-50 years.
- Squamous suture obliterates at 60 years.
- Spheno-parietal suture obliterates at 70 years.

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628. False about declaration of brain stem death in hospital -

a) Presence of neurologist is not required

b) Drug overdose should be ruled out

c) Patient must be in coma

d) All of the above

Correct Answer - A

Ans. is 'a' i.e. Presence of neurologist is not required [Ref Principles of Forensic Medicine & Toxicology By Rajesh Bardale p. 134]

Guidelines for declaration of brain stem death

- Brain death needs to be certified by a board of doctor's consisting of:
- Registered Medical Practioner (RMP) in charge of hospital where brain death has occurred.
- An independent RMP -a specialist.
- A Neurologist / Neurosurgeon nominated by panel.
- RMP treating the patient.
- The patient must be examined by team of doctors at least trice with a reasonable gap of time in between (at least 6 hours).
- None of the doctor's who participate in diagnosis of brain death should have any interest in transplantation or organ removal from cadaver.
- Brain death certificate has to be signed by all the members of board.

Diagnosis of brain stem death depends upon following findings

- The patient must be in deep coma and cause of the coma must be irreversible structural brain stem damage (i.e. prolonged hypoxia, trauma, illness or toxic insult) must be established.
- Exclusion of other causes of coma :

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- Hypothermia,
- Drug overdose eg: CNS depressants (benzodiazepines, barbiturates etc)
- Metabolic or endocrine disturbances
- Intoxication (alcohol)
- Demonstrating of absence of brain stem reflexes (Pupillary reflex, oculovestibular reflex(, corneal reflex, pharyngeal and tracheal reflexes.)
- No spontaneous respiration.

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629. Time interval between somatic and molecular death is -

a) 5-10 min

b) 10-30 min

c) 30 -1hr

d) 1 - 2 hrs

Correct Answer - D

Ans. is 'd' i.e. 1-2 hrs [Ref e-book of Postmortem changes by DR D Rao]

- Death of the tissues and cells individually (molecular death) takes place usually 1-2 hours after stoppage of vital functions (somatic death).
- Molecular death of various organs occur at different intervals after somatic death :

1. Nervous tissue After 5 minutes.
2. Liver - After 15 minutes.
3. Heart - After 45 minutes.
4. Kidney 4 After 1 hours.
5. Muscles After 3 hours

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630. Bishop's tripod of life includes all except -

a) Respiration

b) Circulation

c) Spinal cord reflexes

d) Brain functions

Correct Answer - C

Ans. is 'c' i.e., Spinal cord reflexes

Somatic death

- It is the complete and irreversible stoppage of the circulation, respiration and brain functions (bishop's tripod of life).
- Somatic death is associated with immediate signs of death :?

1. Permanent and complete cessation of function of brain and flat electric EEG with no response to external stimuli; i.e. brain death.
2. Permanent and complete cessation of function of heart and flat ECG.
3. Permanent and complete cessation of function of lungs

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631. For autopsy, stomach is open through -

a) Lesser sac

b) Greater sac

c) Greater curvature

d) Lesser curvature

Correct Answer - C

Ans is 'c' i.e. Greater curvature [Ref Atlas of Adult Autopsy p.66]

- Stomach is opened through greater curvature which allows to see lesser sac.
- Depending on type of case, any of the body cavity can be opened first. Spinal cord is routinely not opened.
- It is convenient to start the examination with the cavity chiefly affected.
- In cases of death due to asphyxia (especially hanging and strangulation), neck should be opened last.
- Spinal cord can be approached either from posterior (most preferred) or anterior approach. High cervical spine injuries are best seen by posterior and thoracic spine by anterior approach.
- Blood for the sample is taken from femoral vein. The jugular or subclavian veins can also be used. 10-20 ml of blood is taken and it is taken before autopsy. 30 ml of blood should be preserved (minimum is 10 ml).

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632. Tache noire de salenortica is a postmortem finding is related to

a) Eye

b) Muscle

c) Hair

d) Semen

Correct Answer - A

- Brownish discolouration of the sclera due to cellular debris and dust- Tache noire

KollegeApply

633. Bacteria most commonly involved in bowel decomposition after death is -

a) Streptococcus pyogenes

b) Clostridium welchii

c) Pseudomonas aeruginosa

d) None

Correct Answer - B

Ans. is 'b' i.e., Clostridium welchii [Ref Reddy 30th/e p. 149-152]

- Bowel decomposition is brought about by aerobic and anaerobic bacteria present in small intestine (e.g. C. welchii, staphylococcus, E.coli etc.) which release enzymes (especially lipase and lecithinase) which act on body to cause breakdown.

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634. Negative autopsy is defined as -

a) No cause of death is found on gross as well as histopathological examination

b) Cause is apparent on gross examination but not on histopathological examination

c) Gross findings are minimal

d) Cause is apparent on gross examination but not found because of constraints on the part of doctor

Correct Answer - A

Ans. is 'a' i.e., No cause of death is found on gross as well as histopathological examination [Ref Dr. Anil Aggrawal p.124]

Types of autopsy

- Normal autopsy - cause is apparent from gross examination
- Defective autopsy - cause was ascertainable, but was not ascertained due to constrains on the part of doctor, hospital, facilities etc
- Obscure autopsy - gross findings are minimal, indecisive or obscure, as in adrenal insufficiency, anesthetic overdose, myxedema, rare plant poisons, thyrotoxicosis etc. subsequent examination like histology, microbiology, toxicology or serology reveal the cause.
- Negative autopsy / inconclusive autopsy - Cause is not clear from gross as well as subsequent examinations.

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635. Last organ to putrefy in females is:
BHU 12

a) Kidney

b) Uterus

c) Brain

d) Spleen

Correct Answer - B
Ans. Uterus

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636. Adipocere formation is seen in:

a) Dead body exposed to air

b) Dead body buried in damp, clay soil

c) Burial in dry hot air

d) All

Correct Answer - B
B i.e. Dead body buried in damp, clay soil
Ideal condition for adipocere formation are *warm (hot) temperature, moisture (humid) & diminution of airQ* e.g. *dead body immersed in water or damp soilQ*

KollegeApply

637. In Adipocere, color change seen is -

a) Grayish white

b) Black

c) Brown

d) Red

Correct Answer - A

Ans. is 'a' i.e. Grayish white [Ref Reddy 30th/e p. 155-156]

- Adipocere is a crumbly, waxy, water-insoluble material consisting mostly of saturated fatty acids. Depending on whether it was formed from white or brown body fat, adipocere is either grayish white or tan in color.

KollegeApply

638. Not a feature of postmortem staining -

a) Occur immediate after death

b) Common in dependent part

c) Disappear with putrefaction

d) Margins are sharp

Correct Answer - A

Ans. is 'a' i.e., Occur immediate after death [Ref Reddy 30th/e p.141,142]

- Postmortem staining is an early sign (not immediate sign) of death.
- It refers to discoloration of skin and internal organs after death due to accumulation of fluid blood in toneless capillaries and small veins of dependent part of the body.
- It does not appear elevated above the surface but has sharply defined (usually horizontal) margins.
- It is an early sign of death. It starts at about 1 hour, becomes a series of mottled patches within 1-3 hours and these pathces increase in size to coalesce in about 3-6 hours. After 6-12 hours, lividity is fully developed and fixed (unchangeable), i.e. primary lividity. It ends when putrification sets in. Fixation of lividity is due to stagnation of blood in distended capillaries and venules (not due to coagulation of blood).

CollegeApply

639. True about cadaveric spasm :

a) Develops immediately after death

b) May develop hours after death

c) Develops only in facial muscles

d) All

Correct Answer - A
A i.e. Develops immediately after death

KollegeApply

640. Best temperature for putrefaction is -

a) 0-10 C

b) 10-45 C

c) 45-100 C

d) 100-150 C

Correct Answer - B

Ans. is 'b' i.e., 10-45 C [Ref Reddy 30th/e p. 149-152]

- Optimum temperature for putrefaction 10°C - 45°C.
- Putrefaction is the last stage in resolution of body from the inorganic to organic state and is certain sign of death.
- Putrefaction rate in air is twice as compared to in water, and eight time as compared to in earth (Casper dictum).
- Putrefaction is delayed in death due to wasting disease anemia, debility, poisoning by carbolic acid, zinc chloride, strychine and chronic heavy metal poisoning.

641. In India exhumation is ordered by ?

a) Magistrate

b) Health Secretory

c) Health Minister

d) Any local MLA

Correct Answer - A

Ans. is 'a' i.e., Magistrate

Exhumation

- Exhumation is lawful digging out of a burried body from the grave for the purpose of identification or determination of cause of death.
- Only a magistrate (executive magistrate) can order for exhumation.
- In india, there is no time limit for exhumation, i.e. can be done at any time after death.
- It is done *under supervision of medical officer and Magistrate* in presence of *a police officer who provides witnesses to identify grave, coffin and dead body,* whenever possible, Magistrate should inform the relatives and allow them not to remain present at the time of enquiry.
- The *whole procedure should be conducted and completed in natural day light.*
- Therefore, it is usually started early in morning.

CollegeApply

642. In a patient of unilateral loss of vision, the patient had injury to opposite eye leading to corneal opacification. The patient was operated by corneal grafting, he could see clearly again with one eye. The injury is said to be

a) Simple

b) Grievous

c) Dangerous

d) Hazardous

KollegeApply

Correct Answer - A

Ans. is 'b' i.e., Grievous

- This patient had permanent vision loss as it was corrected by surgery (corneal transplant).
- Permanent loss of sight of either eye is grievous hurt.

Injuries can be classified as

1. A simple injury is one which is neither extensive nor serious, and which would heal rapidly without leaving any permanent deformity or disfiguration.

2. A grievous injury is one (i) Which is extensive or serious (ii) Which does not heal rapidly, and (iii) Which leaves a permanent deformity or disfiguration. Section 320 IPC defines following injuries as grievous.

1. Emasculation (cutting of the penis, castration; or causing loss of power of erection due to spinal injury).
2. Permanent privation of the sight of either eye.

3. Permanent privation of the hearing of either ear.
4. Privation of any member (part, organ, limb) or joint.
5. Destruction or permanent impairing of powers of any member or joint.
6. Permanent disfiguration of head or face.
7. Fracture or dislocation of a bone or a tooth.
8. Any hurt which endangerous life or which causes the sufferer to be, during the space of twenty days in severe bodily pain, or unable to follow his daily routine. Section 319 IPC defines hurt as bodily pain, disease, or infirmity, caused to any person.

- Grievous hurt is a cognisable offence for which a police officer can arrest a person without a warrant from magistrate.

3. Dangerous injury is a variety of grievous injury. It is an injury whichposes an immediate danger to life and is fatal in absence of surgical aid, e.g. gun shot wounds, compound skull fracture, trauma to large blood vessel or rupture of internal organ like spleen.

KollegeApply

643. Chicken fat appearance is seen in -

a) Antemortem wound

b) Postmortem wound

c) Gunshot injury

d) None

Correct Answer - B

Ans. is 'b' i.e. Postmortem wound [Ref Reddy 29th/e p. 164, 168; Parikh 6th/e p. 4.76]

- Chicken fat clot is seen in postmortem wound.
- Gaping of the wound, presence of vital reaction and increased serotonin are features of antemortem wound.

KolleseApply

644. True about heat hematoma:

PGI 12

a) Inside the brain

b) Between skull and dura mater

c) Between skull and pericranium

d) Between scalp and pericranium

Correct Answer - B
Ans. Between skull and dura mater

KollegeApply

645. Homicidal gunshot wound can be differentiated from suicidal gunshot wound by-

a) Multiple gunshot wounds

b) Presence of gunpowder on hand

c) No sign of struggle

d) None

Correct Answer - A

Ans is'a' i.e. Multiple gunshot wounds

Following are a few ways to Differentiate murder from suicide

1. Where on the body the injury occurred: A shot to the side of the head, in the mouth, or to the front of the chest is usually suicide. Wounds located anywhere else are most likely homicide.
2. Distance of gun from the body: Most suicide shots are at contact or near contact range, causing a burn mark around the wound and leaving gunpowder residue (which can be wiped off). At contact range, and if the gun is fired just above a bone, such as the skull or the sternum, a star-like wound is produced. Anything further away is likely homicide.
3. Angle of the shot: Most suicide shots are angled slightly upward.
4. Number of shots fired: After one shot, even if a suicide victim isn't dead, he would likely be unconscious or physically unable to fire a second time. Multiple shots usually indicate homicide.
5. Presence of gunpowder residue on victims hand: If a man shot himself, there would be powder residue from unburned carbon on the hand that fired the gun.
6. Shots through clothing: A suicide victim will rarely shoot through

clothing. If he shoots himself in the chest, which is unusual, he will open his shirt to expose the skin. Shots through clothing suggest homicide.

7. History, a note, other factors: If the victim left a suicide note, or was known to have personal problems, or if there was evidence of drug use or drinking, suicide is likely.
8. Evidence of a struggle: If there are scratches, cuts, bruises, homicide is likely.

KollegeApply

646. Choking is characteristic of the following weapon:

a) Revolver

b) Pistol

c) Shotgun

d) Rifle

Correct Answer - C
The **choking** lessens the rate of spread of shot after it leaves the muzzle, increases the explosive force and increases the velocity. Shotguns have variable choke adapters.
Different degrees are known as **full-choke, half-choke and quarter-choke or improved cylinder.**
Ref: The Essentials of Forensic Medicine and Toxicology by K S Reddy, 27th edition, Page 184.

KnowledgeApply

647. Beveling of skull is seen in -

a) Broad end of the entry point in bullet injury

b) Narrow end of the entry point in bullet injury

c) Exit point of bullet

d) Depressed fracture of the skull

Correct Answer - C

Ans. is 'c' i.e.,Exit point of bullet [Ref Parikh 6th/e p. 4.43]

- Wound of entrance shows a punched in (clean) hole in the outer table. Cone shaped bone is detached from the inner table forming a crater that is larger than the hole of the outer table and shows beveling (sloping surface).
- Thus, from looking outside, entrance wound is clean cut hole and exit wound is bevelled opening.

KollegeApply

648. Emphysema aquosum is seen in:

a) Wet drowning

b) Dry drowning

c) Immersion syndrome

d) Secondary drowning

Correct Answer - A
A i.e. Wet drowning
- Emphysema aquosum *is seen in wet (typical) drowningQ* where drowning fluid causes alveolar wall disruption & enters tissue & blood vessels. If dead body is thrown into water, due to hydrostatic pressure water passes into lungs known as hydrostatic lung. Oedema aquosum (no columns of froth) is seen in drowning of unconscious.
- ARDS & Fibrosing alveolitis is seen in near drowning or secondary drowning syndrome.
- **Dry Lung** is seen in **dry drowning** in which death occurs due to **laryngeal spasm.**
- If drowning is survived, the event is referred to as near drowning & complications as near (secondary) drowning syndrome..
- In Immersion syndrome death results from *cardiac arrest due to vagal inhibition.Q*

Kollege Apply

649. Best indicator of antemortem drowning is:
Delhi 07; TN 11

a) Froth in nostrils

b) Cutis anserina

c) Washerwoman's hand

d) Water in stomach

Correct Answer - A
Ans. Froth in nostrils

KollegeApply

650. Most specific sign of Antemortem burns is -

a) Soot in respiratory passage

b) Cyanosis of fingernails

c) Pugilistic attitude

d) Heat ruptures

Correct Answer - A

Ans. is 'a' i.e., Soot in respiratory passage [Ref: Parikh 6th le p. 4.152-4.156]

- One of the most important characteristic of antemortem burns is the finding of 'Soot and carbon particles' in larynx, trachea and may be in lungs.

A. Specific signs (which indicate antemortem burning) :

1. Soot and Carbon particles in respiratory passages
2. Increased carboxy hemoglobin (>5%) in blood
3. Signs of vital reaction
4. Signs of inflammation
5. Red line of demarcation
6. True blister (vesicle) containing protein (albumin) and chloride
7. Increased enzyme and sulfhydryl (-SH) group
8. Increased serotorine and histamine
9. Signs of healing and repair.

B. Non-specific signs (may also occur in postmortem burning) :

1. Pugilistic attitude
2. Heat hematoma
3. Heat fracture
4. Heat ruptures.

CollegeApply

651. Sexual gratification of a women is obtained by another woman is called ?

a) Tribadism

b) Bestiality

c) Fellatio

d) Cunnilingus

Correct Answer - A

Ans. is 'a' i.e.,Tribadism ***[Ref Parikh 6th/e p. 5.50, 5.52; Reddy 31"/e p. 401; Rao 2"'lle p. 373-74; Rajes Bardale 1"/e p. 325-26]***

- **Tribadism (Lesbianism or female homosexuality) :**
  Sexual gratification of a women is obtained by another woman by kissing, body contact, manipulation of breast and genitalia.
- Active partner is called **dyke or butch** and the passive agent is called femme. This is not an offence in India.

Rules Apply

652. Sex with cadaver is called -

a) Necrophilia

b) Exhibitionism

c) Voveyrism

d) Undinism

Correct Answer - A

Ans. is 'a' i.e., Necrophilia [Ref Narayan Reddy 30thie p. 394]

- Necrophilia : In this condition, there is a desire for sexual intercourse with dead bodies. It is said to have sadomasochistic foundation and that decomposition, foul smell and coldness act as stimulants.

KollegeApply

653. Sexual gratification by inflicting pain on partner -

a) Sodomy

b) Sadism

c) Necrophilia

d) Bestiality

Correct Answer - B

Ans. is 'b' i.e., Sadism [Ref Reddy 30th/e p. 394]

- Sexual gratification is obtained or increased from acts of physical cruelty or infliction of pain on one's partner.
- It is seen more commonly in men. To obtain sexual gratification, the sadist may bite, beat, whip, produce cuts on the victim, etc

KollegeApply

654. Masochism means:

TN 09

a) Sexual intercourse with dead body

b) Sexual pleasure by contact with articles of opposite sex

c) Sexual pleasure by suffering of pain

d) Sexual pleasure by self-stimulation

Correct Answer - C
Ans. Sexual pleasure by suffering of pain

KollegeApply

655. Irresistible sexual desire in a male is known as:
AIIMS 08

a) Nymphomania

b) Tribadism

c) Satyriasis

d) Sadism

Correct Answer - C

Ans. Satyriasis

- *Satyriasis is excessive sexual desire in male where he enjoys having multiple sexual partners or desires excessive sexual activity.* The female-specific term for the same condition is *Nymphomania.*
- A fetish is an abnormal stimulus or object of sexual desire.
  - Fetishism means the use of such objects of sexual gratification leading to orgasm. For exmaple underclothing, brassiere, petticoat, stocking, shoes, etc.

Frotteurism :

- Sexual satisfaction is obtained by rubbing against persons in crowd.
- If they attempt intercourse, they have a premature ejaculation or they are impotent.

It is an uncommon perversion and rarely occurs alone

KnowledgeApply

656. Sexual gratification obtained by enema is called -

a) Exhibitionism

b) Fetichism

c) Klismaphillia

d) Frotteurism

Correct Answer - C

Ans. is 'c' i.e. Klismaphillia [Ref Internet]

- Klismaphilia (or klysmaphilia), is a paraphilia involving enjoyment of, and sexual arousal from, enemas.

KollegeApply

657. To examine the vaginal cells in of the rape victim test used is -

a) Lugol's iodine test

b) Takayama test

c) Florence test

d) Precipitin test

Correct Answer - A

Ans is 'a' i.e. Lugol's iodine test [Ref G Rao p. 301]

Lugol's iodine test

- It is done on the washing of glans penis (or from a moist blotting paper)of accused, which then exposed to iodine vapors or lugol's iodine solution. Brown color means the test is positive (on 4th day). Brown color is due to glycogen present in vaginal epithelial cells of the victim.

KollegeApply

658. Absorption elution technique is used for -

a) Blood group detection

b) Species detection

c) Seminal stain examination

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Blood group detection [Ref Parikh 6th/e p. 7.15-7.18; SK Singhal 4''1e p. 158-162]

For blood grouping, following tests are used :

1) Immunological (serological) :

1. absorption-elution test,
2. absorption-inhibition test,
3. mixed agglutination test,
4. latex test.

2) Enzymological methods.

3) Latte's crust method.

Kollegeapply

659. Test to know the species from blood stain is -

a) Takayama test

b) Benzidine test

c) Precipitin test

d) Teichmann's test

Correct Answer - C

Ans. is 'c' i.e., Preciptin-test [Ref Parikh 6^{m}/e p. 7.15-7.18; S.K. Singhal 4'/e p. 158-162]

For detection of species, serological (immunological) tests are used. These tests are :

Precipitin test	Haemagglutination inhibition test
Gel diffusion test.	Double diffusion test.
Precipitation electrophoresis.	Latex agglutination test.
Isoenzyme method (enzymological test)	

KollegeApply

660. All of the following are true for ingestion of acid except -

a) They are hygroscopic

b) Coagulate proteins

c) Hemoglobin to hematin

d) Systemic symptoms are severe

Correct Answer - D

Ans. is 'd' i.e. Systemic symptoms are severe

Acids fix, destroy and erode the surface with which they come in contact. They mainly act locally by

1. Hygroscopic extraction of water from tissues
2. Coagulation of proteins
3. Conversion of hemoglobin into hematin.

As a rule there is no remote systemic action with exception to shock.

CollegeApply

661. Max damage is done by which poison -

a) Irritant poison

b) Corrosive poison

c) Alcohol

d) Opioid

Correct Answer - B
Ans. is 'b' i.e., Corrosive poison [Ref Rajesh Bardale p. 437]
Corrosives fix, destroy and erode the surface with which they come in contact. Thus, they cause extensive tissue damage.
Irritants produce less sever damage than corrosives and produce symptoms simulating gastroenteritis.

KollegeApply

662. Least toxic form of lead is -

a) Lead acetate

b) Lead oxide

c) Lead carbonate

d) Lead sulphide

Correct Answer - D

Ans. is 'd' i.e., Lead sulphide [Ref Parikh 6th le p. 9.17-9.20; Reddy 30thle p. 497-498]

No heavy metal is poisonous in native form, except lead. Metallic lead and all its salts are poisonous. The principal salts which produce toxic effects are : (1) Lead acetate (sugar of lead), (2) lead carbonate (safeda or white lead), (3) lead chromate, (4) lead monoxide (lethrage), (5) lead tetraoxide (red lead, vermilion, sindur) and (6) lead sulphide (least toxic).

KnowledgeApply

663. Charas is :

a) Leaves of *Cannabis Indica*

b) Flowers of *Cannabis Indica*

c) Stem of Cannabis Indica

d) Resin exudate of Cannabis Indica

Correct Answer - D
D i.e. Resin exudates of cannabis Indica

KollegeApply

664. Methanol attacks ?

a) Cones

b) Rods

c) Ganglion cells of retina

d) Germinal cell layer

Correct Answer - C
Ans. is 'c' i.e., Ganglion cells of retina
Methyl alcohol is metabolised very slowly and thus stays for a longer period in the body.
It is oxidised into formic acid and formaldehyde in the tissues. These toxic agents cause oedema followed by degeneration of the ganglion cells of the retina, resulting in complete blindness due to optic atrophy.

KollegeApply

665. Arsenic poisoning presents with symptoms mimicking

a) Cholera

b) Dhatura poisoning

c) Barbiturates poisoniong

d) Morphine poisoning

CollegeApply

Correct Answer - A
Ans:A.)Cholera.
ARSENIC
• Copper arsenite - sheele's green
• Copper acetoarsenite - paris green
• Permissible limits of arsenic in ground water - 0.05mg/L
• The gastroenteric type of poisoning resembles cholera
• Greatest quantity is seen in - liver
• Red velvety appearance of mucosa of stomach
• Most affected part of the stomach – pylorus
• Subendocardial petechial hemorrhages of the ventricle is typical of arsenic poisoning (also found in phosphorus, barium, mercury and in cases of heat stroke and acute infectious disease e.g. influenza)
• Rigor mortis lasts longer than usual, Delays putrefaction
Acute poisoning
• Necrosis of intestinal mucosa with hemorrhagic gastroenteritis
• Hypotension, delayed cardiomyopathy
Chronic poisoning
• Aldrich Mee's line on finger nails
• Rain drop pigmentation on skin(measles like rash)
• Chronic consumption of water containing high arsenic concentrations lead to vasospasm and peripheral vascular

insufficiency - black foot disease
• Diabetes, peripheral neuropathy, gangrene
• Cancer of skin, lung, liver (angiosarcoma), bladder, kidney.
• Arsenophagists - some people take arsenic daily as tonic or aphrodisiac and acquire tolerance
• Chelating agent - Dimercaprol

Arsenic poisoning	Cholera
Pain in the throat - before vomiting	After vomiting
Purging - after vomiting	Before vomiting
Dark colored bloody stools initially, later rice water stools	Rice water stools, never blood stained
Tenesmus and anal irritation present	Absent
Vomitus contains mucus, bile and blood	Watery without mucus, bile and blood
Conjunctiva inflamed	Not inflamed

Arsenic was used as murder weapons in royal families, and called as "the poison of kings and king of poisons"

KollegeApply

666. Which of the following is most specific for arsenic poisoning ?

a) Red velvety stomach mucosa

b) Blue lining on gums

c) Tremors

d) Anemia

Correct Answer - A

Ans. is 'a' i.e. Red velvety stomach mucosa [Ref Parikh 6th/e p. 9.9-9.11; Reddy 30" `/e p. 493-494; Essentials of forensic medicine-812]

Red velvety mucosa is a typical postmortem finding in acute arsenic poisoning.

Kollegeapply

667. Black foot disease is caused by

a) Arsenic

b) Cadmium

c) Lead

d) Mercury

Correct Answer - A

Ans. is 'a' i.e., Arsenic

- Chronic arsenic exposure can cause 'black foot disease' a severe form of peripheral vascular disease, causing gangrene of lower limbs.
- Arsenic poisoning may be acute or chronic.

Acute arsenic poisoning

- It can present in any of the two ways :

1. Gastrointestinal type : It is *the common form* and resembles bacterial gastroenteritis (e.g. cholera). There is garlic adour with hemorrhagic gastroenteritis and necrosis of intestinal mucosa. There is tenesmus and anal irritation. Dehydration may cause acute circulatory collapse, with hypotension, oliguria and acute tubular necrosis (ATN).
2. Fulminant narcotic form : Large dose of arsenic is rapidly absorbed without producing GI symptoms. These are giddiness, headache, myalgia, formication, vertigo and death in 2-3 hours.

- Postmortem appearance include :

1. Red velvety mucosa of stomach and submucous petechial haemorrhage.
2. Subendocardial petechial haemorrhage.
3. Fatty degeneration of liver, kidney and heart.

Chronic arsenic poisoning

CollegeApply

- Chronic arsenic poisoning has four stages :

1. First stage (nutritional and gastrointestinal disturbances) : The earliest sign is gradual emaciation. There is loss of appetite, nausea and intermittent vomiting and diarrhea.
2. Second stage (catarrhal changes) : It resembles common cold, i.e. conjunctivitis, running nose and eyes, coughing etc.
3. Third stage (skin rash) : There is classical 'rain drop pigmentation', i.e. patchy brown pigmentation of skin. At initial stages, there is a *vesicular eruption* which may resemble nettle rash. Hyperkeratosis of palms and soles occur. There are white transverse bands crossing the nails, known as Mee's line, and indicate periods of arrested growth due to interference with normal metabolism. There is alopecia and exfoliative dermatitis.
4. Fourth stage (nervous disturbances) : There is sensory and motor (i.e. mixed) polyneuropathy, with painful paresthesia of hands and feet and muscle tenderness.

- There may be evidence of liver (fatty liver) and kidney damage and bone marrow suppression (causing anemia and other cytopenias). Heart may also be involved.
- Chronic arsenic exposure can also cause 'black foot disease' a severe form of peripheral vascular disease, causing gangrene of lower limbs.
- Arsenic is carcinogenic, can cause cancers of skin (squamous cell carcinoma and *basal cell carcinoma),* lung, liver, bladder, kidney, larynx and lymphoid system (leukemia).

KollegeApply

668. Marsch test is done for poisoning with ?

a) Lead

b) Mercury

c) Arsenic

d) Nickel

Correct Answer - C

Ans. is *'c'* i.e. Arsenic *[Ref Parikh 6th/e* p. *9.9-9.11; Reddy 30th/e p. 493-494; Essentials offorensic medicine-812]*

Marsh's test and Reinsh's test were used arsenic poisoning, but are obsolete now.

KollegeApply

669. Papaver semniferum milk exudes from ?

a) Leaf

b) Root

c) Poppy seed

d) Unripe capsule

Correct Answer - D

Ans. is 'd' i.e., Unripe capsule ***[Ref Reddy 30th/e p. 533-534]***

Opioids (opiates) are derived from the poppy plant. Opium is the dried juice obtained by incision of the unripe capsule of the white poppy, papaver somniferum. Natural derivatives of opium are morphine, heroin and codeine.

KollegeApply

670. Arrow poison is ?

a) Opium

b) Curare

c) Cannabis

d) Cyanide

Correct Answer - B

Ans. is 'b' i.e. curare ***[Ref Dr. Anil Aggrawal p. 447]***

Arrow poisons ?

1. Plant based -Abrus precatorius, aconite, calotropis, croton oil, curare, strychnine, stropanthus.
2. Animal based -Batracotoxin (BTX).

KollegeApply

671. Acid used for forging signature is ?

a) Sulphuric acid

b) Nitric acid

c) Carbolic acid

d) Oxalic acid

Correct Answer - D

Ans. is 'd' i.e., Oxalic acid ***[Ref Parikh 6th /e p. 8.32-8.34; Reddy's Essentials of forensic medicine and toxicology 27th/e p. 468-469]***

Oxalic acid is used to erase writing, as a bleaching agent and in calico printing

KollegeApply

672. Smack is -

a) Cocaine

b) Heroine

c) Dhatura

d) Cannabis

Correct Answer - B
Ans is 'b' i.e., Heroin
Heroin (smack or brown sugar) is the most commonly abused opioid and 2" most commonly abused substance, after alcohol.

KollegeApply

673. Mickey Finn is ?

a) Chloroform

b) Methyl alcohol

c) Chloral hydrate

d) Ethylene glycol

Correct Answer - C
Ans. is 'c' i.e., Chloral hydrate *[Ref Reddy 30th/e p. 540]*
Mickey finn is a combination of alcohol and chloral hydrate.

KollegeApply

674. Thorn apple is ?

a) Dhatura

b) Nax vomika

c) Opioid

d) Cannabis

Correct Answer - A

Ans. is 'a' i.e. Dhatura ***[Ref Parikh &hie p. 10.50-10.51; Essentials offorensic medicine-812]***

Dhatura (thorn apple) grows on waste land all over india and is of two types (i) Dhatura alba and (ii) dhatura niger. All parts of plant is poisonous, especially seeds and fruits. Active principles of dhatura are levohyoscyamine, hyoscine (scopolamine) and atropine.

KollegeApply

675. Acid injury can be differentiated from alkali injury by ?

a) Liquefactive necrosis

b) Acid burns are more dangerous

c) Perforation is more common

d) Affects more commonly esophagus

Correct Answer - C
Ans. is 'c' i.e. Perforation is more common

KollegeApply

676. Best method of treatment of Methyl alcohol poisoning is :

a) Calcium gluconate

b) Ethyl alcohol

c) Amphetamines

d) 1 % Ammonia

Correct Answer - B
B i.e. Ethyl alcohol

KollegeApply

677. How many days a person can live without food and water ?

a) 1 to 2 days

b) 2 to 4 days

c) 5 to 7 days

d) 10 to 12 days

Correct Answer - D

Ans. is. d, 10 to 12 days *[Ref Parikh 6th/e p. 3.74; SK Singhal ele p. 146]*

Feeling of intense hunger lasts for→ 30-48 hours

Emaciation & absorption of subcutaneous fat begins to occur→ After 4-5 days

Newborn may survive with out food & water→ For 7-10 days

Adult may survive without food & water → 10-12 days

If food alone is withdrawn death occurs in → 6-8 weeks (50-60 days)

CollegeApply

678. MTP can be done by a single doctor till ?

a) 8 weeks

b) 12 weeks

c) 20 weeks

d) 24 weeks

Correct Answer - B

Ans. is 'b' i.e., 12 weeks *[Ref Dutta 6th/e p. 174; Park 22"/e p. 467]*

The Act provides safeguards to the mother by authorizing only a Registered Medical Practitioner having experience in gynecology and obstetrics to perform abortion where the length of pregnancy does not exceed 12 weeks.

KollegeApply

679. Alcohol is taken with aerated soft drinks because -

a) Absorption is faster

b) Effect is increased

c) To avoid hangover

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Absorption is faster *[Ref Handbook of Alcoholic Beverages]*

The rate of alcohol absorption is dependent on its concentration, being the highest from beverages containing about 20% to 30% alcohol, and on the speed of its consumption.

Alcohol consumed in acrated beveraes is more readily absorbed, as is alcohol taken on an empty stomach.

KollegeApply

680. Blisters are absent in ?

a) Burns

b) Putrefaction

c) Arsenic Poisoning

d) Postmortem caloricity

Correct Answer - D

Ans is 'd' i.e., Postmortem caloricity ***[Ref Reddy03 tive p. 139,140; S.K. Singhal p. 92]***

There is no blistering in postmortem caloricity.

All other conditions are associated with blister formation

KolleegeApply

681. Miner's cramps are also called:

NEET 13

a) Heat collapse

b) Heat cramps

c) Sunstroke

d) Heat exhaustion

Correct Answer - B
Ans. Heat cramps

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682. Ophitoxemia is ?

a) Snake venom poisoning

b) Scorpion bite

c) Spider bite

d) Tick bite

Correct Answer - A
Ans. is 'a' i.e.,Snake venom poisoning *[Ref Ramesh Gupta Zoology book]*
Ophitoxemia is poisoning by snake venom.

KollegeApply

683. After death, blood is taken from ?

a) Femoral vein

b) Antecubital vein

c) Jugular vein

d) Carotid artery

Correct Answer - A
Ans. is 'a' i.e. Femoral vein *[Ref Forensic Neuropathology p.174]*
"Ideally, the blood should be collected from femoral vein distal to clamp or ligature and without milking the calf or thigh" - Forensic Neuropathology p.174
"Femoral vein blood sample is preferred over a heart blood sample" - Water-Related Death Investigation p. 269
Blood for the sample is taken from femoral vein. The jugular or subclavian veins can also be used. 10-20 ml of blood is taken and it is taken before autopsy. 30 ml of blood should be preserved (minimum is 10 ml).

KalpaNapply

684. Corona mortis is ?

a) Is a vascular anastomosis

b) Post mortem heart & coronary arteries examination

c) Another term used for rigor mortis

d) None of the above

Correct Answer - A

Ans. is 'a' i.e. Is a vascular anastomosis *[Ref BRS Gross Anatomy p. 112]*

Corona mortis:

- This is also called as circle of death and refers to vascular ring form by the anastomosis of an aberrant artery with the normal obturator artery arising from a branch of the internal iliac artery. At the time of laparoscopic hernia this vessel is torn both end of vessel can bleed profusely, because both arise from a major artery.
- The surgeon should remember these anatomic landmarks and the point of mesh fixation should be selected superiorly, laterally and medially.

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685. Crystal violet blood agar is used for which bacteria?

a) Corynebacterium diphtheriae

b) Staph aureus

c) β-hemolytic streptococcus

d) Meningococcus

Correct Answer - C
β-hemolytic streptococcus
Crystal violet blood agar is a selective medium for isolation of p-hemolytic group-A streptococcus.
o Crystal violet permits the growth of streptococcus but inhibits growth of other gram positive bacteria (including staphylococcus)

KottegeApply

686. Example of transfer of drug resistance by conjugation -

a) Staphylococci to rifampicin

b) Pneumococcus to penicillin G

c) **M** tuberculosis to antitubercular drugs

d) E coli to streptomycin

Correct Answer - D

Ans. is 'd' i.e., E coli to streptomycin [Ref Basics in laboratory microbiology p. 781]

Drug resistance

It refers to unresponsiveness of a microorganism to an antimicrobial.

Drug resistance may be acquired by :

1. Mutation

- It may be single step (entercocci to streptomycine, staphlococci to rifampicin) or multistep(erythromycin, tetracycline, chloramphenicol, salmonella for ciproflaxacin).
- Mutational drug resistance is also important in tuberculosis.

2. Genetic transfer

Drug resistance from one organism to other may be transferred by :

- Conjugation (most common): It is responsible for multidrug resistance. It is important for resistance of S. typhi against chloramphenicol and E.coli against streptomycin.
- Transduction : Most important for transfer of resistance in staphylococci by (3 – lactamase.
- Transformation (less significant) : Important in pneumococci resistance to penicillin G

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687. Multiple drug resistance is transferred through -

a) Transduction

b) Transformation

c) Conjugation

d) Mutation

Correct Answer - C
Ans. is 'c' i.e., Conjugation
Resistance to multiple drugs is transmitted by R factor (plasmid)
- R factor is transferred from one bacterium to other by conjugation.
- Transduction and mutation usually cause resistance to one drug.
- Transformation is not involved significantly in drug resistance.

KottageApply

688. Medium used for antibiotic sensitivity:

a) CLED agar

b) Hektoen agar

c) Mueller-Hinton agar

d) Salt milk agar

Correct Answer - C

Ans. is. 'c' i. e., Mueller-Hinton agar

Antibiotic sensitivity testing

Antibiotic sensitivity testing is carried out to determine appropriate antibiotic to be used for a particular strain isolated from clinical specimens.

Antibiotic testing can be carried out by two broad methods :

a) Disc diffusion tests

b) Dilution tests

A) Disc diffusion tests

- There are *most commonly used* methods to determine antibiotic susceptibility.
- Discs impregnated with known concentration of antibiotics and are placed on the culture medium that has been inoculated with a culture of bacterium to be tested.
- Antibiotic sensitivity is determined by zone of inhibition of bacterial growth around the disc.

Selection of media

- Medium that supports both test and control strains is selected for carrying out antibiotic susceptibility testing.
- For example:
- *Muller-Hinton agar* is used for gram-negative bacilli and staphylococcus spp.

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- *Blood agar* is used for streptococcus spp and enterococcus spp.
- *Chocolate agar* is used for Haemophilus influenzae
- *Wellcotest medium* uses antibiotics sulfonamide and cotrimoxazole

Mueller -Hinton agar is most commonly used medium for antibiotic sensitivity testing Type of disc diffusion test.

Disc diffusion tests are following types *:?*

i) Kirby-Bauer disc diffusion method - most commonly used.

ii) Stoke disc diffusion method

iii) Primary disc diffusion test

KollegeApply

689. Shadow casting is used in -

a) Light microscopy

b) Electron microscopy

c) Optical microscopy

d) Fluoroscence microspopy

Correct Answer - B

Ans. is 'b' i.e., Electron microscopy [Ref Cell and molecular biology p.726]

Two standard methods of staining in electron microscopy are :

1. Shadow casting
2. Negative staining

KollegeApply

690. Modified Ziehl-neelsen staining is used for:

a) Mycobacterium tuberculosis

b) Mycobacterium bovis

c) Nocardia

d) All of the above

Correct Answer - D
Ans. is. 'd' i. e., All of the above

KollegeApply

691. Viral DNA is integrated into Bacterial DNA in:

a) Transduction

b) Lysogenic conversion

c) Transformation

d) Conjugation

Correct Answer - B
Ans. (b) Lysogenic conversion

KollegeApply

692. Frozen phenomenon is used for -

a) Sterilization of heat sensitive material

b) Killing thermophilic bacteria

c) Preservation of microorganisms

d) Stimulating metabolism of microorganism

Correct Answer - C

Ans. is 'c' i.e., Preservation of microorganisms

[Ref Microbiology Application Based Approach p. 189]

- Some psychrophilic bacteria can grow at 0°C, but subzero temperatures will inhibit the metabolism of microorganism in general.
- Freezing is commonly used to preserve foods, drugs and laboratory specimens because it effectively stops microbial growth.
- However, subzero temperature may not kill microorganism (especially psychrophilic) and may in fact preserve them along with the material being frozen.
- This phenomenon has been used by microbiologists to store and preserve microorganisms.

KollegeApply

693. True about universal precautions are all except -

a) To prevent transmission of blood borne pathogens

b) Includes use of hand washing

c) Consider that all body fluids are contaminated with blood

d) Includes use of gloves and masks

Correct Answer - B

Ans. is 'b' i.e., Includes use of hand washing [Ref **Microbiology for surgical techniques** p. 796]

Hand washing is a part of standard precautions not universal precautions

Universal precautions

- Universal precautions is an approach to infection control to treat all human blood and certain human body fluids as if they were known to be infectious with HIV, HBV and other blood borne pathogens.
- Blood borne pathogen standard requires.
- Employees to observe 'universal precautions'to prevent contact with blood or other potentially infectious material (OPIM)
- Treat all blood and OPIM with proper precautions like use of gloves, masks and gown.

Other potentially infectious material includes :

1. Body fluids: CSF, semen, vaginal secretion, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid contaminated with blood.
2. Any unfixed tissue or organ (other than skin) from human.
3. HIV - containing cells, fluids or cultures.

- Universal precautions have been updated into standard precautions that state all body fluid (except sweat) should be considered

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infectious.

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694. Nucleic acid is not found in -

a) Virus

b) bacteria

c) Fungus

d) Prions

Correct Answer - D

Ans. is 'd' i.e., Prions [Ref Harrison 19' /e p. 451 & **17th/e p.2647]**

- Prions are infectious particle which contains protein **only.**
- They do not have nucleic acid.

KollegeApply

695. Granulomatosis infantiseptica is caused by:

a) Pseudomonas

b) Chlamydia trachomatis

c) Group D streptococci

d) Listeria

Correct Answer - D
Granulomatosis infantiseptica is an intra-uterine infection of the newborn caused by **listeria.**
The predominant feature of this condition is extensive focal necrosis affecting especially the liver and, less often, the lungs.
The mortality rate is very high.
Occasionally meningitis may be associated with it.
The organisms can be isolated from the affected areas in the child and frequently from the genital tract of the mother, who may or may not manifest the disease.

Ref: Harrisons principles of internal medicine, 18th edition, Page: 1196.

CollegeApply

696. Salmonella and shigella can be differentiated from other enterobacteriaceae member by isolation on:

a) MacConkey agar

b) Mannitol salt agar

c) BCYE medium

d) XLD agar

Correct Answer - D
Ans. is. 'd' i. e. XLD agar
XLD (xyloseJysine deoxycholate) agar is a selective differential medium for isolation of Gram-negative enteric pathogens from fecal specimens and other clinical material.
o It is especially suitablefor the isolation of shigella and salmonella specias

CollegeApply

697. True about anthrax toxin are all except:

a) Has three fractions

b) Increase cAMP

c) Coded by plasmid

d) Inhibits protein synthesis

Correct Answer - D
Ans. is. 'd' i. e. Inhibits protein synthesis

KollegeApply

698. Chlamydia pneumoniae causes causes:

a) LGV

b) Atherosclerosis

c) Inclusion conjunctivitis

d) Trachoma

Correct Answer - B
Ans. is. 'b' i. e., Atherosclerosis

KollegeApply

699. Not ture about El Tor biotype of vibrio cholerae?

a) Lower mortality

b) Less SAR

c) Less chances of survival in environment

d) VP (+)

Correct Answer - C
Ans. is 'c' i.e., Less chances of survival in environment

KollegeApply

700. True about vibrio parahemolyticus ?

a) Polar flagella

b) Non halophilic vibrio

c) Non-capsulated

d) Requires NaCI

Correct Answer - D
Ans. is 'd' i.e., Requires NaCI
It is halophilic vibrio.
* Inhabits the coastal sea, where it isfound inftshes arthopods such as shrimps and ctabs and molluscs such as oyster.
* It resembles the cholera vibrio except that:
--> It is capsulated.
--> Shows bipolar staining
* Produces peritrichous flagella when grown on solid mediun (V. cholerae has polar flagella), in liquid medium polar flagella are formed.
* It grows, only in media containing NaCl, optimum conc.is 2-4 %, Its enteropathogenic is closely linked to
its ability to cause hemolysis on Wagatsuma agar t the Kanagawa phenomenon.

KollegeApply

701. Hansen's bacillus is cultured in:

a) L J medium

b) Robertson's cooked meat medium

c) Foot pad of mice

d) Sabraud's agar

Correct Answer - C
Ans. is. 'c' i. e., Foot pad of mice

KollegeApply

702. Tennis racket cells is seen in -

a) Sarcoma botyroides

b) Vaginal adenocarcinoma

c) Leiomyoma uterus

d) Seminoma

Correct Answer - A
Ans. is 'a' i.e., Sarcoma botryoids
o Tumor cells of sarcoma botryoids are small and have oval nuclei, with small protrusions of cytoplasm from one end, so they resemble a tennis racket.

KollegeApply

703. Most common organism involved in nosocomial infection -

a) Staph aureus

b) E. coli

c) Legionella

d) Strep pneumonia

Correct Answer - A
Ans. is 'a' i.e., Staph aureus
. UTI is the most common type of nosocomial infection.
. Most common cause of UTI ---> E coli
. Most common cause of UTI in ICU ----> Candida
. *Overall staph aureus is a leading cause of nosocomial infection.*
. Staph aureus is the most common cause of surgical wound infection -
. Most common cause of primary bacteremia --> Coagulase negative staphylococcus.

KollegeApply

704. Draughtsman colonies are seen with:

a) Anthrax

b) Pnuemococci

c) Pertussis

d) Yersenia

Correct Answer - B
Pnuemococci
Due to alpha hemolysk, colonies of pneumococci rcsemble colonies of Str. virtdans. But on further incubation the colonies ofpneumococci become flat with raised edges and central umbonation, so that concentric rings are seen on the surface when viewed from above - draughtsman or Carrom coin appearance.

KollegeApply

705. All are true about chromobacteritun violaceum except?

a) **Gram negative**

b) **Produces violet-colored pigment**

c) **Normal flora in human**

d) **Causes cellulitis**

Correct Answer - C
Ans. c. Normal flora in human

KollegeApply

706. Oil paint appearance on nutrient agar is seen in -

a) Streptococcus pyogenes

b) Staphylococcus aureus

c) Bordtella pertussis

d) H. influenzae

Correct Answer - B

Ans. is 'b' i.e., Staphylococcus aureus

- Staphylococcus is facultative anaerobe. Optimum pH for growth is 7.4 - 7.6 and optimum temperature is 37°C.
- Staph aureus produces golden yellow pigment, which is maximum at 22°C.
- Most of the staphylococcus species grow in the presence of 10% NaCl

KolleegeApply

707. Streptococcal pneumoniae pneumonia present at -

a) < 5 years

b) 5 - 15 years

c) 20 - 25 years

d) 30 - 40 years

Correct Answer - A

Ans. is 'a' i.e., < 5 years [Ref: Textbook of Microbiology by Parija p.197]

- Streptococcus pneumoniae is the leading cause of pneumonia, both lobar and bronchopneumonia.
- Pneumonia is common at the extereme of ages :
- Children (especially < 5 years of age)
- Elderly (> 60-65 years)
- Serotypes 6, 14, 18, 19 and 23 are responsible for most cases of pneumonia in children, while serotypes 1, 3, 4, 7, 8 and 12 cause pneumonia in adults.

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708. Most common age group affected by streptococcus pyogenes -

a) < 5 years

b) 5 - 15 years

c) 20 - 25 years

d) 30 - 40 years

Correct Answer - B

Ans. is 'b' i.e., 5 - 15 years [Ref Parija p. 191]

- Sore throat (tonsillitis) is the most common manifestation of streptococcal infection and affects 5-15 years age group.

KolleegeApply

709. Naegler's reaction is due to:

a) Coagulase

b) Hyaluronidase

c) Lecithinase

d) None of the above

Correct Answer - C
Ans. is. 'c' i. e. Lecithinase

KollegeApply

710. Oropharyngeal commensal which predisposes to candidiasis -

a) Hemophilus influenzae

b) Streptococcus

c) Staphylococcus

d) Lactobacillus

Correct Answer - B

Ans. is 'b' i.e., Streptococcus [Ref Textbook of polymicrobial disease - Chapter 18]

- An example of the complexity of coaggregation may be the range of intergeneric coaggregations occuring between the oral fungal pathogen candida albicans and other oral species that may play an important role in the colonization of the oral cavity by candida albicans.
- Although streptococcal species, namely, streptococcus gordonii, streptococcus oralis and streptococcus sanguins, exhibit the highest affinities for C albicans, C albicans (as well as Candida dubliniensis) have been shown to coaggregate with Fusobacterium species in suspension.
- Actinomyces has also been shown to coaggreate with candida albicans.

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711. Primary complex of M bovis involves:

a) Tonsil and lung

b) Tonsil and intestine

c) Tonsil and skin

d) Skin and Intestine

Correct Answer - B
Ans. is. 'b' i. e., Tonsil and intestine
Ans. is. 'b' i. e., Tonsil and intestine
Primary complex of M tuberculosis (infection by inhalation)
i) Lung lesion
ii) Enlarged hilar lymph nodes
o Primary complex of M bovis (infection by drinking milk)
i) Tonsil
ii) Cervical nodes or intestine (ileocecal region and mesentric lymph nodes)

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712. Hemophilus parainfluenzae requres -

a) Factor V

b) Factor **X**

c) Factor V & X

d) Factor **VII**

Correct Answer - A

Ans. is 'a' i.e., Factor V [Ref: Ananthanaran 9" /e p. 327 & 8thie p. 330]

- H. influenzae, H. aegyptius, H. haemolyticus → Factor X & V.
- H. Parainfluenzae, H. Parahemolyticus, H. Paraphrophilus → Factor V.
- H. ducreyi, H. aphrophilus → Factor X.

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713. Brill-Zinsser disease is:

a) Recrudescent of R prowazekii infection

b) Recrudescent of R typhi infection

c) Recrudescent of R conorii infection

d) None

Correct Answer - B
Ans. is. 'b' i. e., Recrudescent of R typhi infection

KollegeApply

714. All are true about listeria except:

a) Gram positive

b) PALCAM agar is used for isolation

c) Characteristic tumbling motility at 37°C

d) Umbrella shaped growth

Correct Answer - C

Ans. is. 'c' i. e., Characteristic tumbling motility at 37°C

- *L. monocytogenes* is a gram-positive' coccobacillus'(coccoid rod) with a tendency to occur in chains.
- Peritrichous flagella are produced by the bacillus optimally at 20-30°C but only scantily or not at all at 37°C
- Culture media used for isolation are blood agar, chocolate agar, and PALCAM agar.
- It grows on ordinary media within a temperature *range of 1° to* 45°C.
- *Most cases of human disease are caused by serotypes 1/2a, 1/2b and 4b.*
- The organism can be found as a part of the gastrointestinal flora in healthy individuals.
- Human disease due to L. monocytogenes generally occurs in the setting of *pregnancy or immunosuppression.*

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715. Listeria resists phagocytosis in phagosomes (phagolysosomes) due to:

a) β-hemolysin

b) Caspases

c) Cell membrane adhesion molecules

d) Opacity associated protein (OAP)

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Correct Answer - A
Ans. is. 'a' i. e., β-hemolysin
Most important step in pathogenesis of listeriosis is the survival and multiplication of L monocytogenes in phagocytes (macrophages), host epithelial cells and hepatocytes.
* The most importaflt deterrminant of pathogenesis k listeriolysin O (LLO), A beta- hemolysin . LLO causes lysis of membrane of phagosomes within phagocytes and helps in intracellular survival of L monocytogenes.
* Iron is an important virulence factor. Listeria produce siderophores and are able to obtain iron from transferrin. Immunity to listeria is primary cell mediated. Immunity can be transferred by sensitized lymphocytes but not by antibodies.

716. Most common form of leptospirosis:

a) Weil's disease

b) Icteric form

c) Hepatorenal form

d) Anicteric form

Correct Answer - D
Ans. (d) Anicteric form
It is most common (90%) and mild form. Most commonfindingkfner with conjunctival suftrcion

KollegeApply

717. Bacteria that can grow even in the presence of antiseptic:

a) Staphylococcus

b) Streptococcus

c) E. coli

d) Pseudomonas

Correct Answer - D
Ans. is. 'd' i. e., Pseudomonas

KollegeApply

718. A chronic alcoholic is presenting with clinical features of meningitis. Most likely organism which will grow on CSF culture:

a) Streptococcus pneumoniae

b) N. meningitidis

c) Listeria monocytogenes

d) F. coli

Correct Answer - A
Streptococcus pneumoniae

KollegeApply

719. Vincent's angina is caused by Borrelia vincentii along with:

a) Lactobacillus

b) Lactobacillus

c) Fusobacterium

d) Bacteroides

Correct Answer - C
Ans. (c) Fusobacterium

KollegeApply

720. Bartonella quintana causes:

a) Trench fever

b) Scrub typhus

c) Endemic typhus

d) Epidemic typhus

Correct Answer - A
Ans. is. 'a' i. e., Trench fever

KollegeApply

721. What is trench fever:

a) Q-fever

b) 5-days fever

c) Boutonneuse fever

d) Indian tick typhus

Correct Answer - B
Ans. is. 'b' i. e., 5-days fever

KollegeApply

722. Protein A of staphylococcus binds to

a) IgA

b) IgG

c) IgD

d) IgE

Correct Answer - B
Ans. is. b. IgG

KollegeApply

723. Which streptodornase is most antigenic in human beings:

a) A

b) B

c) C

d) D

Correct Answer - B
Ans. is. b. B

KollegeApply

724. Pneumonic plague is spread by:

a) Bite of infected flae

b) Direct contact with infected tissue

c) Ingestion of contaminated food

d) Droplet infection

Correct Answer - D
Ans. is. 'd' i. e., Droplet infection

KollegeApply

725. Proteus isolated from a patient of UTI will show which boichemical reaction:

a) Phenylpyruvic acid reaction

b) Bile esculin reaction

c) Colchicine sensitivity

d) Bacitracin sensitivity

Correct Answer - A
Ans. is. 'a' i. e., Phenylpyruvic acid reaction
stofthemexceptprovidenciastrains,producepowerfulurease.
--> A characterstic feature ofproteus bacilli is "PPA reaction'
--> It is due to presence of enzyme pheny'alanine deaminasewhich converts phenylalanine to phenyl pymvic acid

KollegeApply

726. Not true about gas gangrene:

a) Most common cause is Cl perfringens

b) Extensive necrosis of muscles

c) Cl perfringens produce heat-labile spores

d) Metronidazole is the drug of choice

Correct Answer - D
Ans. is. 'd' i. e. Metronidazole is the drug of choice

KollegeApply

727. Most sensitive test in syphilis -

a) VDRL

b) TP-PA

c) RPR

d) FTA-ABS

Correct Answer - B

Ans. is 'b' i.e., TP-PA [Ref **Harrison M^{o}le** p. 1137, 1138 e.7 **18th/e** p. 1385, **Ananthanarayan 9th/e** p. 374, 375 & p. 374-78]

- TPPA is the most sensitive serological test overall (considering all stages of syphilis).
- All the serological tests have 100% sensitivity in secondary stage of syphilis

Test	Primary	Secondary	Latent	Tertiary
VDRL / RPR	78 (74-87)	100	95 (88-100)	71 (37-94)
FTA - ABS	84 (70-100)	100	100	96
TP – PA	89	100	100	NA

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728. Most common site for staphylococcus carrier:

a) Skin

b) Nose

c) Oropharynx

d) Perineum

Correct Answer - B
Ans. is. b. Nose

KollegeApply

729. Brazilian purpuric fever is caused by:

a) Bordetella pertussis

b) Haemophilus aegypticus

c) Haemophilus duceryi

d) Haemophilus parinfluenzae

Correct Answer - B
Ans. is. 'b' i. e., Haemophilus aegypticus

KollegeApply

730. Eschar is seen in all the Rickettsial diseases excent:

a) Scrub typhus

b) Rickettsial pox

c) Indian tick typhus

d) Endemic typhus

Correct Answer - D
Ans. is. 'd' i. e., Endemic typhus

KollegeApply

731. Fresh water swimming leads to infection by -

a) Bordetella pertussis

b) Corynebacterium diphtheriae

c) M tuberculosis

d) Pseudomonas

Correct Answer - D

Ans. is `d' i.e., Pseudomonas [Ref Alcamo's fundamentals of microbiology p. 669]

"Extended swimming in fresh water pools can irritate and break down skin in the ear canal allowing bacteria such as pseudomonas, staphylococcus or streptococcus to penetrate and cause otitis externa"

- Pseudomonas is the most common cause of swimmer's ear infection.
- Pseudomonas also causes "hot tub rash" syndrome or hot-tub folliculitis, associated with use of hot tub, less commonly associated with whirlpools or swimming pools.

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732. Commonest cause for puerperal sepsis is :

a) Streptococci

b) Anaerobes

c) Gonococci

d) Staphylococci

Correct Answer - A
Streptococci

KollegeApply

733. Most common complication of diphtheria is -

a) Myocarditis

b) Pneumonia

c) Meningitis

d) Endocarditis

Correct Answer - A
Ans. is 'a' i.e., Myocorditis [Ref With text]
"Myocarditis is the most common complication of diphtheria and the leading cause of death in diphtheric cases, whose incidence is 10-25%"
Essentials in Microbiology "Complications of diphtheria include myocarditis (the most common complication), thrombocytopenia, vocal card paralysis and neuritis" → Clinical microbiology.
"Most common complications of diphtheria are myocarditis and toxic neuritis" → NMS
Two most common complications of diphtheria are :
1. Myocarditis
2. Toxin neuritis → Paralysis of soft palate is the most common manifestation of neuritis.

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734. All are true about anaerobic infection except -

a) Most infections are endogenous

b) Exudates and swabs are best for culture

c) Specimen for UTI is suprapubic aspiration

d) They are found normally on skin and GIT

Correct Answer - B

Ans. is 'b' i.e., Exudates and swabs are best for culture [Ref Essentials of microbiology p.224]

- Most anaerobic bacteria that cause infection are members of our normal indigenous flora and anaerobic infections are usually endogenous, caused by tissue invosion by bacteria normally resisdent or respective body surfaces.
- Anaerobic bacteria are normally present on skin, mouth, nasopharynx, upper respiratory tract, gut and vagina.
- Ideal specimens for anaerobic cultures are samples of needle aspirates and proper tissue specimens. Anaerobic swabs are usually discouraged.

Important specimens are :-

1. Local abscess : Needle aspirates.
2. Pulmonary : Transtracheal aspirates, lung aspirates, pleural fluid, protected bronchial wash.
3. Abdominal : Abdominal abscess aspirate.
4. Urinary tract : Suprapubic bladder aspirate.
5. Genital tract : Culdocentesis specimen, endometrial swabs.
6. CNS : CSF, Aspirate of abscess

735. Most common route of infection in pasteurella cellulitis -

a) Animal bites or scratches

b) Aerosols or dust

c) Contaminated tissue

d) Human to human

Correct Answer - A

Ans. is 'a' i.e., Animal bites or scratches [Ref Ananthanarayan 9th le p. 325; 7h/e p. 326; Harrison 19thle p. 830 & le/e p. 1235]

Transmission to humans may occur by two routes?

1) **Direct inoculation through skin**

- The most common mode of transmission of P.microcida is direct inoculation by a bite or scratch. Most of the infections are caused by cats.
- Infection may also occur via deposition of organism on injured skin or mucosal surfaces during licking.

2) **Through the respiratory tract**

- This is the second most common mode of transmission.
- Infection via the respiratory tract occurs from contact with contaminated dust or infectious droplets (aerosol dust).

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736. True about legionella:

a) Most common mode of transmission is aerosol inhalation

b) There is no man to man transmission

c) Prolonged carrier are common

d) All are true

Correct Answer - B
Ans. is. 'b' i. e., There is no man to man transmission

KollegeApply

737. Hebra nose is caused by:

a) Frisch bacillus

b) Staph aureus

c) Pseudomonas

d) C. diphtheriae

Correct Answer - A
Ans. is. 'a' i. e., Frisch bacillus

KollegeApply

738. Granuloma inguinale is caused by:

a) H. ducreyi

b) Chlamydia trachomatis

c) Treponema pallidum

d) Calymmatobacterium

Correct Answer - D
Ans. is. 'd' i. e., Calymmatobacterium
Granuloma lenerutn (granuloma inguinal) --> Calymmatobacterium

KollegeApply

739. Izumi fever is caused by:

a) Pseudomonas aeruginosa

b) Burkholderia mallei

c) Yersinia pseudotuberculosis

d) Pasteurella multocida

Correct Answer - C
Ans. is. 'c' i. e., Yersinia pseudotuberculosis

KollegeApply

740. True about widal test:

a) Anti-0 antibody persists longer

b) 0 antigen of S. paratyphi is used

c) H-antigen is most immunogenic

d) Felix tube is used for 'H' agglutination lnar

Correct Answer - C
Ans. is. 'c' i. e., H-antigen is most immunogenic

KollegeApply

741. Absence of Vi-antibody in a typhoid patient has:

a) Good prognosis

b) Bad prognosis

c) No relation with prognosis

d) Indicates widal negative

Correct Answer - B
Ans. is. 'b' i. e., Bad prognosis

KollegeApply

742. Clinical significance of Vi antigen of S. typhi is:

a) Helps in diagnosis

b) Highly immunogenic

c) Most important antigen for widal test

d) Antibody against Vi-antigen is used for diagnosis of carrier

Correct Answer - D
Ans. is. 'd' i. e., Antibody against Vi-antigen is used for diagnosis of carrier

KollegeApply

743. Non-motile bacterium is -

a) Vibrio

b) Clostridium septicum

c) Clostridium perfringens

d) Legionella

Correct Answer - C

Ans. is 'c' i.e., Clostridium perfringens [Ref Ananthanarayan 9th/e p.262, 263, 252-257]

All clostridia are motile by peritrichous flagella except C/ tetani VI and Cl perfringens which are non-motile.

KollegeApply

744. Which of the following is non-motile:

a) Pseudomonas aeruginosa

b) Burkholderia mallei

c) Burkholderia pseudomallei

d) None of the above

Correct Answer - B
Ans. is. 'b' i. e., Burkholderia mallei

KollegeApply

745. Phagocytosis of mycobacterium tuberculosis by macrophages is mainly mediated by:

a) IL 6

b) IL 3

c) IL 12

d) IFN Gamma

Correct Answer - D
Ans. is. 'd' i. e., IFN Gamma

KollegeApply

746. Not true about Vi polysaccharide vaccine of typhoid:

a) Single dose is given

b) Revaccination at 3 years

c) Given at birth

d) Given subcutaneously

Correct Answer - C
Ans. is. 'c' i. e., Given at birth

KollegeApply

747. Ehrlichia phagocytophila mainly affects -

a) RBC

b) Platelets

c) Neutrophils

d) Macrophages

Correct Answer - C

Ans. is 'c' i.e., Neutrophils [Ref Essentials of clinical microbiology p. 712]

- Anaplasma phagocytophilum (formerly known as Ehrlichia phagocytophila) is a causative agent of tick-borne fever in sheep and pasture fever in cattle.
- It is an obligate intracellular bacterium whose main target is neutrophils but it can also infect monocytes.

KollegeApply

748. Test to differentiate staphylococci from micrococci:

a) Catalase test

b) Coagulase test

c) Novobiosin sensitivity

d) Oxidation fermentation

Correct Answer - D
Oxidation fermentation

KollegeApply

749. Not true about corynebacterium hormannii

a) A diphtheroid

b) Non-pathogenic saprophyte

c) Toxigenic

d) Also known as C pseudodiphthericum

Correct Answer - C
Ans. is. 'c' i. e. Toxigenic

KollegeApply

750. True about corynebacterium diphtheriae:

a) All types produce toxin

b) Toxin production is dependent upon critical concentration of iron

c) Heat stable toxin

d) Inhibit cAMP

Correct Answer - B
Ans. is. 'b' i. e. Toxin production is dependent upon critical concentration of iron

KollegeApply

751. Bile esculin agar is used for ?

a) Group A streptococcus

b) Group B streptococcus

c) Group C streptococcus

d) Enterococcus

Correct Answer - D
Ans. is 'd' i.e., Enterococcus
Enterococcus

- Majority of the infections are caused by *E. faecalis and E. faecium.* Less frequently isolated species are E. gallinarum, E. durans, E. hirae and E. avium.
- Enterococci are *normal inhabitants of the large bowel of human adults,* although they usually make up < 1% of the culturable intestinal microflora.
- They are catalase negative (as all streptococci).

Their characteristic feature is that they can grow in presence of *:?*

1. *40% bile*
2. *6·5% Sodium chloride*
3. *At pH 9.6*
4. *At 45°C (relative heat resistant surving 60°C for 30 minutes)*
5. *In 0-1% methylene blue milk*

- They hydrolyze esculin. They grow in presence of 40% bile and hydrolyze esculin → Bile esculin positive.
- They are PYR (Pyrrolidonyl Arylamidase) positive.
- They are usually *non-hemolytic (gamma-hemolytic),* but some-times *may show alpha or beta hemolysis.*

KollegeApply

752. Heating at 60°C for 30 minute would isolate:

a) Staphylococci

b) Enterococci

c) Micrococci

d) Streptococci

Correct Answer - B
Enterococci

KollegeApply

753. Which of the following belongs to Herpesviridae:

a) Variola

b) Adenovirus

c) HPV

d) RK virus

Correct Answer - D
Ans. d. RK virus

KollegeApply

754. HIV envelop is formed by:

a) Host cell

b) Virus

c) Both

d) None

Correct Answer - C
Ans. c. Both

KollegeApply

755. Which HIV-virus is more dangerous:

a) HIV-1

b) HIV-2

c) Both are same

d) **It depends on host factors**

Correct Answer - A
Ans. a. HIV-1

KollegeApply

756. Most common mode of transmission of HIV sexual transmission:

a) Blood & blood products

b) Occupational

c) Perinatal

d) Breast feeding

Correct Answer - A
Ans. a. Blood & blood products

KollegeApply

757. Which viral gene acts as carcinogen in causing carcinoma cervix -

a) P 24 - gene

b) E - gene

c) L - gene

d) H - gene

Correct Answer - B

Ans. is 'b' i.e., E-gene [Ref Harrison 15^{0}/e p. 1199-1200]

- HPV is the most important cause of cervical cancer.
- Products of E-genes (E6, E7) are related to immortalization or malignant transformation of keratinocytes by interfering with p53 and Rb genes, respectively

KollegeApply

758. Which influenzae strain, not of human origin and can cause pandemic:

a) H_i N_i

b) H_2 **N2**

c) H_5 N_i

d) H_9 Ni

Correct Answer - C
Ans. c. H5 N1

KollegeApply

759. True about influenza vaccine:

a) Live vaccine is used most commonly

b) Live vaccine is given by nasal drops

c) Killed vaccine is given intramuscular in deltoid

d) All are correct

Correct Answer - B
Ans-B
Live attenuated vaccines--> These are used as nasal drops
Killed vaccine --> It is used mosf commonly. It is given subcutaneously in 2 doses, 3-4 weeks apart. Protective efficacy is 70-90% and duration of protection is 3-6 months.

KollegeApply

760. Which of the following can infect ovary -

a) Mumps virus

b) EBV

c) CMV

d) Measles virus

Correct Answer - A

Ans. is 'a' i.e., Mumps virus [Ref Clinical microbiology p. 273]

- Mumps begins as a primary infection in the respiratory tract and spreads by viremia to glandular tissues including the salivary glands, pancreas, testes and ovaries.

KollegeApply

761. Which is not a poxvirus:

a) Vaccinia virus

b) Molluscum contagiosum

c) Tanapox virus

d) Coxsackie virus

Correct Answer - D
Ans. d. Coxsackie virus

KollegeApply

762. Integration of viral genome into host cell chromosome can leads to -

a) Malignancy

b) Latency

c) Altered growth

d) All of the above

Correct Answer - D

Ans. is 'd' i.e., All of the above [Ref Clinical microbiology p. 312]

- Integration of viral genomes into host cell chromosome can cause alteration in :

1. Host cell surface
2. Metabolic function
3. Cell growth and replication pattern
4. Malignant transformation
5. Latent infection

KollegeApply

763. Not true about paramyxoviruses -

a) Belong to family myxovirus

b) Are DNA viruses

c) Have linear nucleic acid

d) Antigenically stable

Correct Answer - B

Ans. is 'b' i.e., Are DNA viruses [Ref Ananthanarayan 9`h/e p. 497-498]

- Myxoviruses are enveloped RNA viruses.
- They are characterized by ability to adsorb on to mucoprotein (affinity for mucin) on erythrocytes causing agglutination of erythocytes.
- Major route of infection of all these virus is respiratory route by droplet infection.
- Myxovirus are divided into two important families ?

1. Orthomyxovirus → Influenza
2. Paramyxovirus → Mumps, measles, RSV, Parainfluenza virus

CollegeApply

764. HTLV-1 can be transmitted by -

a) Blood transfusion

b) Droplet inhalation

c) Contaminated water

d) Animal bite

Correct Answer - A

Ans. is 'a' i.e., Blood transfusion [Ref Manual of clinical microbiology Vol.1 p.1131]

HTLV-1 and HTLV-2 infections are transmitted by?

1. Sexually (mainly by males to female)
2. Vertically (from mother to child by prolonged breast feeding)
3. Parenterally (through drug use and blood transfusion)

KollegeApply

765. True about rotavirus vaccine:

a) Killed vaccine

b) Given subcutaneous

c) Pentavalent vaccine

d) Should be given before 5 years

Correct Answer - C
Ans. c. Pentavalent vaccine

KollegeApply

766. Von Magnus phenomenon -

a) Is a normal replicative cycle

b) Virus yield has low hemagglutination

c) Virus has high infectivity

d) Virus yields has high hemagglutination titre but low infectivity

Correct Answer - D
Ans. is 'd' i.e. virus yields has high hemagglutination titre but low infectivity
Abnormal replicative cycles of viruses
. *Von magnus phenomenon* when cells are infected with a high dose of influenza virus, there is defective assembly during replication and the
produced virus has *high hemagglutinin titre but low infectivity.*
. *Abortive infection* Due to defective maturation or assembly, either no release of virons occur or the progeny of virus is noninfectious.
. *Defective viruses* Some viruses are genetically defective and require help of simultaneously infected helper virus for replication. eg.
HDV, Rous sarcoma virus.

KollegeApply

767. Trypanosoma cruzi is transmitted by:

a) Tse tse fly

b) Reduviid bug

c) Culex mosquito

d) Sand fly

Correct Answer - A
Ans. a. Tse tse fly

KollegeApply

768. Duodenal aspirate is used in diagnosis of:

a) E histolytica

b) Giardia lamblia

c) Taenia solium

d) Leishmania

Correct Answer - B
Ans. b. Giardia lamblia
Duodenal aspirate is used for G lambia, o sinesis, F heptica, and S stercoralis.

KollegeApply

769. Amoebiasis is not transmitted by:

a) Feco-oral route

b) Sexual transmission

c) Blood and blood products

d) Vector transmission

Correct Answer - D
Ans. d. Vector transmission

KollegeApply

770. Recrudescences are commonly seen in which malaria:

a) P vivax

b) P ovale

c) P malariae

d) P falciparum

Correct Answer - D
Ans. d. P falciparum

KollegeApply

771. River blindness is caused by -

a) Onchocerca

b) Loa loa

c) Ascaris

d) B. malayi

Correct Answer - A
Ans. is 'a' i.e., Onchocerca

- Onchocerciasis is also known as River blindness and Robles disease.

KollegeApply

772. Which of the following cell types are the most potent activator of T-cell ?

a) Bell

b) Follicular Dendritic Cells

c) Mature dendritic cells

d) Macrophages

Correct Answer - C

Ans. (c) Mature Dendritic cells *Ref. Robins 8/e, p 192, Harrison 18/e, p 2657*

"Mature dendritic cells are the most potent activator of naive T-cell"

Dendritic Cells:

- Bone marrow derived cells
- There are two types of cells with dendritic morphology:
  - Interdigitating dendritic cells
  - Follicular dendritic cells

Interdigitating dendritic cells or just dendritic cells are the most important antigen presenting cells for initiating primary immune response against protein antigens. This is due to following reasons:

- These cells are located at the right place to capture antigens , i.e. under epithelia, in the interstitial of all tissue.
- They express variety of receptors (including TLR, mannose) for capturing microbes.
- In response to microbes dendritic cells express the same chemokine receptors as to naive T-cells.
- They express high levels of MHC class II molecules as well as co-stimulatory molecules B.7-1 and B.7-2. Or in other words they possess all the machinery needed for presenting antigens to and activating CD4 + T cells.

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On the other hand *follicular dendritic cells (does not arise from bone marrow)* are present in the germinal centres of lymphoid follicles where they trap antigens bound to antibodies or complement. Follicular dendritic cells plays a role in ongoing immune response by presenting antigens to B-cells and selecting the B-cells that have the highest affinity for the antigen.

KollegeApply

773. Thymus dependent area in spleen -

a) Mantel layer

b) Perifollicular region

c) Malphigian corpuscle

d) All of the above

Correct Answer - C

Ans. is 'c' i.e., Malphigian corpuscle

Thymus dependent (T-cells collect)	**Thymus independent (B-cells collection)**
1. Spleen	**1. Spleen**
• Periarterial lymphoid collect	• Perifollicular region
• Malphigian corpuscle in white pulp	• Mantel layer
2. Lymph node	**2. Lymph node**
• Paracortical area	• Cortical follicles
	• Germinal centres
	• Medullary cords

KollegeApply

774. Precipitation in comparison to agglutination requires -

a) Less pH

b) High temperature

c) Specific enzyme

d) Soluble antigen

Correct Answer - D

Ans. is 'd' i.e.,Soluble antigen [Ref Ananthanarayan 9^{t}Ve p. 105]merav

KollegeApply

775. True about VDRL test -

a) Non - specific

b) Slide flocculation test

c) Best followed for drug therapy

d) All

Correct Answer - D
Ans is 'd' i.e., All

KollegeApply

776. Rose waaler test is -

a) Complement fixation test

b) Pricipitation in gel

c) Ring precipitation

d) Passive hemagglutination test

Correct Answer - D
Ans. is 'd' i.e., Passive hemogglutination test [Ref Ananthanarayan ^{8th} /e p. 107, 108, Harrison 18th/e p. 1469, 1470]

KollegeApply

777. Weil felix reaction in scrub typhus is/are positive for:

a) OX -19

b) OX-2

c) Both OX -19 & OX-2

d) OX -K

e) OX -19, OX-2 & OX -K

KollegeApply

Correct Answer - D

Ans: d. OX -K ***[Ref Ananthanarayan 9th/410; Medical Microbiology by Greenwood 16th/373]***

- This reaction is an agglutination test in which sera are tested for agglutinins to the 0 antigens of certain non-motile Proteus strains OX-19, OX-2 & OX-X
- The basis of test is the sharing of an alkali-stable carbohydrate antigen by some rickettsiae & by certain strains of proteus, P. vulgaris OX 19 & OX 2 & P.mirabilis OX K.

disease	OX-19	OX-2	OX-K
Epidemic typhus	+++	+	–
Brill-Zinsser disease	Usually(–ve)or weakly (+ve)		-
Endemic typhus	+++	+/-	-
Tickborne spotted	++	++	-

fever			
Scrub typhus	-	-	+++

KollegeApply

778. Complement Fixation test is:
September 2005

a) VIDAL

b) Coombs test

c) Wassermann reaction

d) VDRL

Correct Answer - C
Ans. C: Wassermann reaction
The complement fixation test (CFT) was extensively used in syphilis serology after being introduced by Wasserman in 1906. However, there is now a trend to replace the CFT with the simple flocculation tests.
Although CFT is considered to be a relatively simple test, it is a very exacting procedure because 5 variables are involved. In essence the test consists of two antigen-antibody reactions, one of which is the indicator system.
The first reaction, between a known virus antigen and a specific antibody takes place in the presence of a predetermined amount of complement. The complement is removed or "fixed" by the antigen-antibody complex.
The second antigen-antibody reaction consists of reacting sheep RBC with haemolysin. When this indicator system is added to the reactants, the sensitized RBCs will only lyse in the presence of free complement. The antigens used for CFT tend to be group antigens rather than type-specific antigens. In order for the CFT to be set up correctly, the optimal concentration of haemolytic serum, complement, and antigen should be determined by titration.
The Wassermann test is no longer in use.

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779. Example of precipitation test is

a) Rose waaler test

b) Widal test

c) Latex agglutination

d) Kahn test

Correct Answer - D
Ans. is 'd' i.e., Kahn test

- It is a Heterophile tube agglutination test, used to diagnose Rickettsiae.

KollegeApply

780. Which of the following complement factors is a marker of humoral rejection?

a) C3d

b) C3b

c) C4d

d) C5a

Correct Answer - C

Ans: C. C4d

(Ref: Robbins 9/e p234)

- C4d factor is a marker for humoral rejection.
- Acute antibody-mediated rejection is manifested mainly by damage to glomeruli and small blood vessels.
- Typically, the lesions consist of inflammation of glomeruli and peritubular capillaries, associated with deposition of the complement breakdown product C4d, which is produced during activation of the complement system by the antibody- dependent classical pathway.
- Small vessels may also show focal thrombosis.

CollegeApply

781. Primory T-cell deficiency is -

a) Ecto- 5' nucleotidase deficiency

b) Common variable immunodeficiency

c) DiGeorge syndrome

d) Wiskott-Aldrich syndrome

Correct Answer - C

Ans. is 'c' i.e.,Di George syndrome [Ref: Atlas of immunology p. 537]

I. Cellular immunodeficiencies (T cell defects)

1. Thymic hypoplasia (DiGeorge syndrome)
2. Chronic mucocutaneous candidiasis
3. Purine nucleoside phosphorylase (PNP) deficiency

II. Combined immunodeficiencies (B and T cell defects)

1. Cellular immunodeficiency with abnormal immunoglobulin synthesis (Nezelof syndrome)
2. Ataxia telangiectasia
3. Wiskott-Aldrich syndrome
4. Immunodeficiency with thymoma
5. Immunodeficiency with short-limbed dwarfism

KolegeApply

782. Oakley - fulthorpe procedure is -

a) Agglutination test

b) Precipitation test

c) Single diffusion in one dimension

d) Double diffusion in one dimension

Correct Answer - B:D

Ans. is 'd > b' i.e., Double diffusion in one dimension > Precipitation test [Ref: Ananthanarayan 9th/e p. 105]

Immunodiffusion tests are precipitation reaction in gels.

Important examples of immunodiffusion test are :-

1. Oudin procedure -› single diffusion in one dimension.
2. Oakley fulthorpe procedure -, Double diffusion in one dimension
3. Mancini method or radial immunodiffusion -› Single diffusion in two dimensions.
4. Ochterlony procedure -› Double diffusion in two dimension**s**

KollegeApply

783. Molecular mass of IgG [in K Da]

a) 150

b) 400

c) 1000

d) 1500

Correct Answer - A

Ans. is 'a' i.e.,150

Antibody	Molecular mass (KDa)
IgG	150
IgA	160,400
IgM	950,1150
IgD	175
IgE	190

KollegeApply

784. Haptens are immunogenic when they covalently bind to -

a) Lipid carrier

b) Polysaccharide carrier

c) Protein carrier

d) Any of the above carrier

Correct Answer - C

Ans. is 'c' i.e.,Protein carrier [Ref Essentials of microbiology p. 91]

Hapten

- Hapten is a substance, which itself is unable to induce antibody synthesis, i.e non-immunogenic but may be able to react specifically with antibody. Thus, hapten can function as antigen but not as immunogen.
- Haptens are incomplete antigens , which become complete antigens when they covalently combine with carrier molecule or schleper. After combination with carrier molecule, it becomes complete antigen and can induce an immune response.

KollegeApply

785. IgM appears in fetus at what gestational age -

a) 10 weeks

b) 20 weeks

c) 30 weeks

d) at birth

Correct Answer - B

Ans. is 'b' i.e., 20 weeks

- IgM is the earliest immunoglobulin class to be synthesized by the fetus, beginning at 20 weeks of age.

KollegeApply

786. The serum concentration of which of the following human IgG subclass is maximum ?

a) IgG 1

b) IgG 2

c) IgG 3

d) IgG 4

Correct Answer - A

Ans. is 'a' i.e., Ig G_1 [Ref Ananthanarayan 9th/ep. $_{97}$ & 8`"/e p. 98; Harrison 19^{m}/e p. 372 & 18^{t}Ve p. 2674]

KollegeApply

787. Example of neutrilization reaction -

a) VDRL

b) Widal test

c) Kahn test

d) Nagler reaction

Correct Answer - D
Ans. is 'd' i.e., Nagler reaction [Ref Ananthanarayan 9th/e p.112]
Important neutralization tests are Nagler reaction, dick test and schick test.

KollegeApply

788. Which does not stimulate active immunity -

a) Subclinical infection

b) Clinical infection

c) Vaccination

d) Transplacental antibody in newborn

Correct Answer - D

Ans. is 'd' i.e., Transplacental antibody in newborn [Ref Ananthanarayan 9th/e p. 81-83]

Adaptive (acquired) immunity is of following types :?

1) Active immunity

- It is so called because host's immune system actively produce immunity.
- Antigenic stimulus induces the immune system to produce antibodies or cellular immune response.

Active immunity may be :-

1. Natural : Due to infection (either clinical or subclinical /inapparent)
2. Artificial : Vaccination (immunization)

2) Passive immunity

- It is so called because antibodies are produced in another organism and then received passively by the host.

Passive immunity may be :-

1. Natural : Transport of antibodies across the placenta from mother to fetus.
2. Acquired : Administration of immunoglobulin/Antibody.

CollegeApply

789. Which is specific for acquired immunity ?

a) Immunological memory

b) Affected by genetic makeup

c) No antigen exposure

d) All of the above

Correct Answer - A

Ans. is 'a' i.e., Immunological memory *[Ref Harrison 19th/e p. 372]*

Acquired (adaptive) immunity is found only in vertebrates

It is based on the generation of antigen receptors on T and B lymphocytes by germ line gene rearrangements.

It is specific.

It is developed as a result of an antigenic stimulus (Immunological priming)or by passive transfer of antibodies.

It provides immunological memory; subsequent antigen exposure leads to more rapid and vigorous immune responses.

The adaptive immune system consist of dual limbs of cellular and humoral immunity.

CollegeApply

790. Lattice phenomenon is seen in -

a) Neutrilization reaction

b) Complement fixation test

c) Precipitation test

d) All of the above

Correct Answer - C

Ans. is 'c' i.e., Precipitation test *[Ref Textbook of clinical microbiology p.785]*

The lattice hypothesis was proposed by marrack (1934) to explain the mechanism of precipitation.

According to this concept, multivalent antigens combine with bivalent antibodies in varying proportion depending on the antigen-antibody ratio in the reacting mixture.

Precipitation results when large lattice is formed consisting of alternating antigen and antibody molecules. This is possible only in the zone of equivalence.

In the zone of antigen or antibody excess, the lattice does not enlarge, as the valencies of the antibody and the antigen, repectively are fully satisfied. In either cases extensive lattice cannot be formed and precipition is inhibited.

The lattice hypothesis holds good for agglutination also.

CollegeApply

791. Complement deficiency has not been implicated in causing ?

a) SLE

b) PNH

c) Hereditary angiodema

d) Membranous nephritis

Correct Answer - D

Ans. is 'd' i.e., Membranous nephritis ***[Ref Pariza 3'/e p. 121]***

<u>Complement deficiency and disease</u>

- Deficiency of early components (C1, C2, C4) causes immune - complex diseases (e.g. SLE), and pyogenic infections.
- Deficiency of C3 and C3b causes recurrent pyogenic infections.
- Terminal complement component (C_5 through C_o) deficiencies and deficiencies of the alternative pathway (Properdin, C3, Factor D) have a strong effect on susceptibility to, as well as severity of, neisserial infections.
- Inherited deficiency of C, esterase inhibitor cases Hereditary angioneurotic edema.
- Acquired deficiency of Decay accelarating factor (DAF) causes Paroxysmal nocturnal hemoglobinuria (PNH). DAF is a regulator in complement system which increases dissolution of C_3 convertase (C4b2a)

Kollege Apply

792. Which is not true about macrophages:

a) Activation by IFN-y

b) Major cells in chronic inflammation

c) M_2 type involved in inflammation

d) Phagocytic cells

Correct Answer - C
Ans. c. M_2 type involved in inflammation

KollegeApply

793. Prozone phenomenon is due to

a) Antigen excess

b) Antibody excess

c) **False +ve** reaction

d) False -ve reaction

Correct Answer - B:D

Ans. (b) and (d) Antibody excess and False-negative *Ref. Ananthanarayan 8/e, p 104, 9/ 105*

Zone phenomenon (seen in agglutination and precipitation) consists of 3 parts:

1. Prozone = Ab excess = weak or absent precipitation reaction = False -ve
2. Zone of equivalence = peak amount of precipitation.
3. Post zone = Ag excess = weak or absent precipitation reaction.

KollegeApply

794. Monoclonal antibody binds to ?

a) Epitope

b) Paratope

c) Both epitope and paratope

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Epitope ***[Ref : Ananthanarayan 9th/e p. 88 & 71* p. 81; Harrison 18thie p. 2673 & 17th/e p. 2036]***

Epitope

- Also known as "antigenic determinant".
- It is antibody binding site of antigen.

KollegeApply

795. When transfer factor is given as treatment results in -

a) Natural active immunity

b) Artificial active immunity

c) Artificial passive immunity

d) Adoptive immunity

Correct Answer - D
Ans. is 'd' i.e., Adoptive immunity

KollegeApply

796. Indirect Coomb's test detects:

a) Antibodies attached to RBC Surface

b) Antibodies in the serum

c) Antigens attached to RBC Surface

d) Antigens in the serum

Correct Answer - B
Answer is B (Antibodies in the serum)
Indirect Coomb's test detects IgG antibodies in the serum (e.g. Anti-D Antibodies). Direct Coomb's test detects IgG Antibodies (or complements) attached to the surface of RBCs.
Direct Antihuman Globulin Test *Detects RBCs sensitized with IgG or Complements(C3B or C3d)*
(DAT; Coomb's; Direct Coomb's) Detects IgG Antibodies (or complements) attached to the surface of RBCs.
Indirect Antihuman Globulin Test
Direct Coomb's Test
In the Direct Coomb's test, red blood cells (RBCs) sensitized with IgG antibodies (or C3b, C3d) are agglutinated when Coomb's reagent (Rabbit Anti-IgG antibody) is added to the test tube
Detects Antibodies in the Serum
Indirect Coomb's Test In the Indirect Coomb's test IgG antibodies (e.g. Anti-D) in the serum must first bind to blood group Type 0 Test RBCs added to the test tube. Addition of Coombs Reagent, then causes the sensitized Type 0 Test RBCs to agglutinate, indicating that IgG antibodies are present in the serum.

KollegeApply

797. Which of the following is not an in vivo test ?

a) Elek's gel precipitation test

b) Schick test

c) Lepromin test

d) Tuberculin test

Correct Answer - A
Ans. is 'a' i.e., Elek's gel precipitation test *[Ref Read below]*
Elek's gel precipitation is an in vitro test for toxigenicity of C diphtheriae.
Other three options are skin tests (i.e. in vivo tests).

KollegeApply

798. Which of the following can be used for obtaining specimen for isolation of microorganism in laboratory diagnosis:

a) Meningococcal rash

b) Blood in staphylococcal food poisoning

c) Throat swab in Rheumatic fever

d) Blood in post-streptococcal GN

Correct Answer - A
Ans. is. a' i.e. Meningococcal rash

KollegeApply

799. Morula form is seen in which infection ?

a) Chlamydiae

b) Bartonella quintana

c) Mycoplasma hominis

d) Ehrlichia

Correct Answer - D

Ans. is 'd' i.e.,Ehrlichia ***[Ref Ananthanarayan h le p. 409; Vasanthakumari p.310]***

Ehrlichiae graw within phagosomes of phagocytes as mulberry-like clusters called morula.

KollegeApply

800. A child is presenting with vomiting and abdominal pain after 5 hours of eating some food. The most likely causative orgonism:

a) Bacillus cereus

b) Cl. perfringens

c) Cl. botalinum

d) V. cholerae

Correct Answer - A
Ans. is. 'a' i. e. Bacillus cereus

KollegeApply

801. Prevention of catheter induced urinary tract infection is by ?

a) Prophylactic antibiotics

b) Use of face mask

c) Closed drainage technique

d) All of the above

Correct Answer - C

Ans. is 'c' i.e., Closed drainage technique *[Ref Microbiology in clinical practice p.450]*

Prevention of catheter-associated infection depends on:

1. Aseptic catheter techniques.
2. Antiseptic lubricant containing chlorhexidine and local instillation of 1% chlorhexidine into the bladder.
3. Closed drainage cathater technique.
4. Excellent hand washing techniques, using chlorhexidine detergent and good drying of hands.
5. Use of gloves and isolation of patients with infections due to multiple antibiotic-resistant strains.

CollegeApply

802. Bubus form is which stage of LGV:

a) Prmary

b) Secondary

c) Tertiary

d) Latent

Correct Answer - B
Ans. is. 'b' i. e., Secondary

KollegeApply

803. Nosocomial infection is most commonly caused by:
March 2004

a) Gram negative bacilli

b) Gram positive bacilli

c) Gram negative cocci

d) Mycoplasma

Correct Answer - A
Ans. A i.e. Gram negative bacilli

KollegeApply

804. ABO non- secretors are more prone to ?

a) Infection

b) Autoimmunity

c) Heart disease

d) Carcinoma

Correct Answer - A:B:C

Ans. is 'a' i.e., Infection, 'b' i.e., Autoimmunity & 'c' i.e.,Heart disease ***[Ref www.dadamo.com]***

There are two types of people (independent of blood group)

- Secretor: These persons secrete their blood group antigen into other body fluids like saliva etc.
- Nonseretor: They do not secrete their blood group antigen into body fluids.
- Non-secretors appear to have an increase in prevalence of a variety of autoimmune disease like ankylosing spondylitis, reactive arthritis, Graves disease and Sjogren's syndrome.
- Non - secretors are at a greater risk of developing diabetes, MI and heart disease.
- Non-secretors are at a greater risk for recurrent urinary tract infections and candida infection.
- Non-secretors have more oral diseases and more digestive problems.

CollegeApply

805. In Rideal walker method, plates are incubated for ?

a) < 2 days

b) 2-3 days

c) 6-8 days

d) > 10 days

Correct Answer - B
Ans. is 'b' i.e., 2-3 days *[Ref Textbook of sterilization e.7 disinfection p.233]*
In Rideal walker method, for checking efficiency of disinfectant, bactericidal activity is determined against salmonella typhi suspension.
Subcultures are performed from both the test and phenol at intervals of 2.5, 5, 7.5 and 10 minutes.
The plates are incubated for 48-72 hours at 37°C.

CollegeApply

806. CD3 is a marker for?

a) B - cells

b) T - cells

c) NK - cells

d) Monocytes

Correct Answer - B

Ans. is 'b' i.e., T - cells *[Ref : Robbin's 9th/e p. 590 & 8`5/e p. 600 table (13.5)]*

CD-3 is known as Pan T-cell marker.

KollegeApply

807. Common variable deficiency is due to -

a) Absent B cells

b) Reduced number of B cells

c) Defective B cell differentiation

d) All of the above

Correct Answer - C

Ans. is 'c' i.e., Defective B cell differentiation *[Ref: Robbin's 9^{m}/e* p. *241 & 8th/e p. 233]*

Most patients with common variable immunodeficiency have normal or near-normal numbers of B cells in the blood and lymphoid tissues. These B cells, however, are not able to differentiate into plasma cells.

The clinical manifestations are caused by antibody deficiency.

The feature common to all patients is hypogammaglobulinemia, generally affecting all the antibody classes but sometimes only IgG.

CollegeApply

808. Performance of components of PQLI is counted between

a) -1 to +1

b) 0 to 1

c) 0 to 100

d) None

Correct Answer - C
Ans. is 'c' i.e., 0 to 100
The subjective component of well being-4 Quality of life

- While "level of living" is an objective component, "quality of life" comprises the individual's own subjective evaluation.
- The index for quality of life is *"Physical quality of life index (PQLI)".*
- The PQLI is an attempt to measure the quality of life or well-being of a country.
- Physical quality of life index consolidates three indicators*:?*

1. Literacy rate
2. Infant mortality rate
3. Life expectancy at age 1 year (LE)

- PQLI ranges from 0 to 100.
- For each component, the performance of individual countries is placed on a scale of 0 to 100, where 0 represents an absolutely defined worst performance and 100 represents an absolutely defined best performance.
- The composite index is calculated by averaging the three indicators, giving equal weight to each of them.
- The resulting PQLI thus also is scaled 0 to 100.

KopyKatApply

809. Human development index includes all except ?

a) Longevity

b) Knowledge

c) Income

d) Literacy rate

Correct Answer - D

Ans. is 'd' i.e., Literacy rate

<u>Human development index</u>

- HDI is a composite index combining indicators representing three dimensions.

i. *Longevity : Life expectancy at birth.*

i. *Knowledge : Mean years of schooling (gross enrolment ratio) and expected year of schooling.* (In older editions of Park, i.e., 21st/e and older than that, it was *adult literacy rate* instead of expected year schooling).

i. *Income : GNI Per Capita* (In older editions of Park, it was *GDP per capita* instead of GNI per capita).

CollegeApply

810. Human, animal, fomite or objects from which infective organism enters the host is called ?

a) Source

b) Reservoir

c) Carrier

d) None

Correct Answer - A

Ans. is 'a' i.e., Source *[Ref: Park 23rdle p.92-97]*

Source is 'the person, animal, object or substance from which infectious agent passes to host', i.e. man acquires infection from source.

Reservoir is 'any person, animal, insect, plant, soil or substance in which an infectious agent lives and multiplies'. Infectious agent is dependent on reservoir for survival. From reservoir it can be transmitted to susceptible host. Thus a reservoir may act as a source of infection when a person acquires infection directly from a reservoir.

KollegeApply

811. Reservoir is defined as ?

a) Person, animal or object from which infectious agent is transmitted to host

b) Person, animal or substance in which infectious agent lives and multiplies

c) Person or animal in which infectious agent causes a disease

d) None of the above

Correct Answer - B

Ans. is 'b' i.e., Person, animal or substance in which infectious agent lives and multiplies.

KollegeApply

812. Measles is infective for:
March 2009

a) One day before and 4 days after rash

b) Four days before and five days after rash

c) Entire incubation period

d) Only during scabs falling

Correct Answer - B
Ans. B: Four days before and five days after rash
Measles/English Measles is spread through respiration (contact with fluids from an infected person's nose and mouth, either directly or through aerosol transmission), and is highly contagious — 90% of people without immunity sharing a house with an infected person will catch it.
The infection has an average incubation period of 14 days (range 6-19 days) and Period of communicability in measles is approximately 4 days before and 5 days after the appearance of the rash.
Measles is an infection of the respiratory system caused by a virus, specifically a paramyxovirus of the genus Morbillivirus.
Morbilliviruses, like other paramyxoviruses, are enveloped, single-stranded, negative-sense RNA viruses. Symptoms include fever, cough, runny nose, red eyes and a generalized, maculopapular, erythematous rash.

CollegeApply

813. Not included in Bradford Hill's criteria ?

a) Strength of association

b) Consistency of association

c) Specificity of association

d) Lack of temporal association

Correct Answer - D

Ans. is 'd' i.e., Lack of temporal association *[Ref Park 23"/e p. 88-89]*

It is the presence of temporal association (not lack or absence) that forms a criteria for causal relationship.

Criteria that suggest causal relationship (Bradford Hill's criteria)

Likehood of a causal relationship is increased by the presence of the following criteria :?

1. Temporal association
2. Strength of association
3. Specificity of association
4. Consistency of association
5. Biological plausibility
6. Coherence of association

Hill's criteria (sometimes also known as 'Surgeon general's Criteria' of causal association): in epidemiology are Analogous to Koch's Postulates (of causal association between a microbe and disease) in microbiology.

KollegeApply

814. Most important criterian in causal relationship hypothesis ?

a) Temporal association

b) Coherence of association

c) Specificity of association

d) Strength of association

Correct Answer - A

Ans. is 'a' i.e., Temporal association *[Ref Park 23rd/e p.89]*

Most important criteria → temporal association

Weakest and most difficult criteria to establish → specificity of association

KollegeApply

815. The weakest criterian in causal relatianship hypothesis?

a) Temporal association

b) Coherence of association

c) Specificity of association

d) Strength of association

Correct Answer - C
Ans. is 'c' i.e., Specificity of association

KollegeApply

816. Benefit of screening is ?

a) Prevention of disease/cancer

b) Early treatment of disease

c) Provide rehabilitation

d) Diagnosing all the missing cases

Correct Answer - B

Ans. is 'b' i.e., Early treatment of disease

Screening is the active search for the disease among apparently healthy people.

Screening intends to identify healthy person those likely to have a disease or at increased risk of a disease

understudy, thus enabling earlier intervention and management in the hope to reduce mortality and suffering from a disease.

Screening is a type of secondary prevention → Early diagnosis, treatment

CollegeApply

817. Multiphasic screening means-

a) Application of the two or more screening tests in combination at one time

b) Application of two or more screening tests in combination at different time

c) Application of two or more screening tests in combination at different geographical areas

d) Application of separate screening tests for different diseases

Correct Answer - A
Ans. is 'A' i.e., Application of the two or more screening tests in combination at one time
Multiphasic screening
It has defined the application of two or more screening tests in combination with a large number of people at one time than to carry out separate screening tests for a single disease.
It increases the cost of health services without any observable benefit.Example-Annual Health Checkups
High-risk or selective screening is done on high-risk groups example- MRI screening of breast done annually in 25-year old women with BRCA 1, BRCA 2 mutations in first-degree relative

KollegeApply

818. Randomization is done to reduce ?

a) Recall bias

b) Selection bias

c) Berksonian bias

d) Reporting bias

Correct Answer - B
Ans. is 'b' i.e., Selection bias

KollegeApply

819. Benefit of RCT ?

a) Faster study

b) Cheaper study

c) No selection bias

d) Suitable for rare disease

Correct Answer - C

Ans. is 'c' i.e., No selection bias *[Ref Park 23rd le p.81-83]*

Randomization is the heart of RCT. Randomization is a statistical procedure by which the participants are allocated into study group (in which intervention is given) and control group/reference group (in which intervention is not given).

It is worth noting that randomisation is done while dividing the participants into study group and control (reference) group, and not while selecting subjects for study, i.e. randomization is done after the sample of subjects has already been selected. Therefor, each participant has 'equal and known chance' of falling into either study group or control group.

Randomization is an attempt to eliminate bias and allow comparability. It will give the greatest confidence that the groups are comparable so that "like" can be compared with "like". It ensures that the investigator has no control over allocation of participants to either study or control group, thus eliminating what is known as selection bias.

NEET PG Apply

820. Most commonly used blinding technique in epidemiological studies ?

a) Single blinding

b) Double blinding

c) Triple blinding

d) None of the above

Correct Answer - B:C

Ans. is 'b > c' i.e., Double blinding > Triple blinding *[Ref Statistics and epidemiology 3'/e p.46]*

Most commonly used blinding is double blinding, i.e. most of the epidemiological studies are started as double blinded. But more aften than not it becomes triple blinded as more than two people in the study are blinded → for example the statician (analyzer) performing the analysis is often blinded in addition to doctor (investigator) and patient (study subject).

CoolDocApply

821. Most effective blinding technique ?

a) Single blinding

b) Double blinding

c) Triple blinding

d) Any of the above

Correct Answer - C
Ans. is 'c' i.e., Triple blinding *[Ref Read below]*
Most commonly use blinding → Double blinding
Best blinding technique to eliminate bias → Triple blinding

Kollege Apply

822. Which of one of the following is NOT a utilization rate?

a) Population bed ratio

b) Bed occupancy rate

c) Bed turnover ratio

d) Average length of stay

Correct Answer - A

Ans. is 'a' i.e., Population bed ratio *[Ref Park 23rd/e p. 26 & 22nd/e p. 25]*

1. Proportion of infants who are "fully immunized" against the 6 EPI diseases.
2. Proportion of pregnant women who receive antenatal care, or have their deliveries supervised by a trained birth attendant.
3. Percentage of population using various methods of family planning.
4. Bed - occupancy rate
5. Average length of stay
6. Bed turn-over ratio (i.e. discharges / average

CollegeApply

823. Calculate IMR if in a population of 100000 there are 3000 live births in a year and 150 infant deaths in the same year -

a) 75

b) 18

c) 5

d) 50

Correct Answer - D
Ans. is `d' i.e., 50

KollegeApply

824. True about combined prospective-retrospective study true is ?

a) Exposure (+) nt, disease (+) nt

b) Exposure (+) nt, disease (-) nt

c) Exposure (-) nt, disease (+) nt

d) Exposure (-) nt, disease (-) nt

Correct Answer - A

Ans. is 'a' i.e., Exposure (+) nt, disease (+) nt ***[Ref Park 23"'/e p. 79-85]***

There are following types of cohort study:**?**

A) Prospective cohort study

- Outcome has not yet occurred when the study has begun: Only exposure has occurred; we look for development of same disease in both exposed and non-exposed groups

B) Retrospective cohort study

- Both exposure as well as outcome have occurred when the study has begun: First we go back in time and take only exposure into consideration (cohorts identified from past hospital/ college records), then look for development of same disease in both exposed and non-exposed groups

C) Combined prospective-retrospective cohort study

- Both exposure as well as outcome have occurred when the study has begun: First we go back in time and take only exposure into consideration (cohorts identified from past hospital/ college records), then look for development of same disease in both exposed and non-exposed groups; later cohort is followed prospectively into future for outcome.

CollegeApply

825. Proportional mortality rate is ?

a) Number of death due to a particular cause

b) Number of death during that year

c) Number of death in one month

d) None

Correct Answer - A

Ans. is 'a' i.e., Number of death due to a particular cause

<u>Proportional mortality rate (ratio)</u>

- Proportional mortality rate measures the proportion of total death due to specific cause or proportion of deaths in a particular age group.
- It is defined as *"number of deaths due to a particular cause (or in specific age group) per 100 total deaths".*
- It is the *'simplest measure of estimating the burden of disears'* in the community.
- It is a useful *'health Status indicator';* indicates magnitude of preventable mortality.
- It is used when population data is not available.
- It does not indicate the risk of members of population contracting or dying from the disease.

KollegeApply

826. Population attributable risk is defined as the difference between:

a) Incidence in exposed and incidence in non-exposed compared with incidence in non-exposed

b) Incidence in population and incidence in exposed compared with incidence in population

c) Incidence in population and incidence in non-exposed compared with incidence in population

d) Incidence in population and incidence in exposed compared with incidence in non-exposed

Correct Answer - C
Ans. c. Incidence in population and incidence in non-exposed compared with incidence in population
population attributable risk is defined as the difference between incidence in population and incidence in non-exposed compared with incidence in population.

CollegeApply

827. Slection bias occurs during ?

a) Recruitment

b) Treatment

c) Analysis

d) Observation

Correct Answer - A
Ans. is 'a' i.e., Recruitment *[Ref: Essentials of epidemiology in Public Health p.270]*
Selection biases are distortion that result from procedure used to select subjects and from factors that influence study participation.
Groups to be compared are differentially susceptible to the outcome even before the experimental maneuver is performed.
Selection bias usually occurs at the Stage of recruitment of participants.
Selection biases is less likely to occur in a cohort study compared to case-control or cross-sectional study because study participant are selected before the outcome occurs.
Randomized control trials do not have selection bias as randomization eliminates selection (investigator) bias.

Kollegeapply

828. Selection bias occurs mainly in

a) Cohort study

b) Case-control study

c) RCT

d) All have equal chances

Correct Answer - B
Ans. is 'b' i.e., Case-control study
Case-control study > cross-sectional study > Retrospective cohort study > Prospective cohort study > RCT
Selection bias: Cases and controls may not be representative of the population or there may be systematic differences between both.

KollegeApply

829. Best study technique to study the occurence of rare adverse effects of drug ?

a) Case-control study

b) Cohort study

c) Clinical trial/experimental study

d) Cross-sectional study

Correct Answer - C

Ans. is 'c' i.e., Clinical trial/experimental study *[Ref Clinical Research for medicine 2009/e p.62]*

Experimental epidemiology is also called trial. Broadly speaking, a trial refers to putting something to a test. This allows the term to be used in reference to a test of a treatment for the sick or a test of a preventive measure intended to avert illness, injury or disease. Therefore, the defining feature of an experimental study is its ability to allocate or assign interventions or treatment to experiment unit. In simple words, the study of a treatment (Drugs, surgical intervention) or preventive measure (e.g. vaccination) on living subjects is known as experimental study or trial.

KnowledgeApply

830. Bladder cancer can occur in those who are working in chimney for 25 years. Which is the best study for this relationship ?

a) Meta-analysis

b) Cross-sectional study

c) Randomized control trial with double blinding

d) Cohort study

CollegeApply

Correct Answer - A

Ans. is 'a' i.e., Meta-analysis

As a single study unit, double blind RCT is the best:

- "The efficacy of new interventions are most readily accepted if the results are from randomized controled trial"
- Peer Review & Biomedical publication
- However, overall meta-analysis is a better study since it combines the data from multiple RCT and also from other types of study.
- "Randomized controlled trials (RCT) provide the stongest, most relevant evidence to inform practice. Some evidence hierarchies place systematic review and meta-analysis above RCTs since these often combine data from multiple RCTs, and possibly from other study type as well" – Epidemiology at a glance
- So, systematic review and meta-analysis of RCTs are the best epidemiological studies.

831. Which is an example of case control study ?

a) Thalidomide and teratogenicity

b) Framingham heart study

c) PVC and angiosarcoma of liver

d) Doll & Hill Study

Correct Answer - A
Ans. is 'a' i.e., Thalidomide and teratogenicity *[Ref: Park 23rd /e* p. *74, 75]*

KollegeApply

832. Advantage of case-control over a cohort study *?*

a) Attributable risk can be calculated

b) Odd's ratio can be calculated

c) For rare disease

d) b and c

Correct Answer - D
Ans. is 'b' i.e., Odd's ratio can be calculated & c i.e., For rare disease
o A cohort study is more reliable than a case-control study for an association between a suspected risk factor and subsequent disease because relative risk can be estimated by cohort study, while case-control study measures only an estimate of relative risk (odds ratio).
Why the Case-Control Study is suitable for a rare disease but not Cohort Study?
o In the cohort study, we proceed from effect to cause and if the study is for the rare disease we may get very few cases or no case at the end of the study. For example, if a rare disease has an incidence rate. 01 per 1000 (1 per 100000) population and we take a sample of 100 people to expose the risk factor, there will be very few cases at the end of the study as the disease is very rare and has a low incidence of 1 per 100000 population. (you can expect, How low will be the incidence in a sample of 100 people).
o On the other hand, in the case-control study, we can choose controls for the few available cases and the history of possible/suspected exposure *(s)* can be explored.

KottageApply

833. Immunity starts after how many days of yellow fever vaccination ?

a) 7-10 days

b) 2-3 weeks

c) 4-5 weeks

d) 2-3 months

Correct Answer - A

Ans. is 'a' i.e., 7-10 days *[Ref Park 23rd /e p. 283]*

Yellow fever vaccine

- It is a live attenuated freez dried (lyophilized) vaccine, prepared from 17 D strain.
- It is given by subcutaneous route at insertion of deltoid.
- Immunity lasts from 7 days of vaccination till 35 years. The validity of the vaccination certificate begins 10 days after the date of vaccination and extends upto 10 years.
- Diluent used for reconstitution is cold physiological saline and reconstituted vaccine should be used within 30 minutes. Cold chain temperature for storage is -30° to +5°C.
- Yellow fever vaccine is the only live vaccine that can be given in pregnancy, if required. Yellow fever and cholera vaccine cannot be given together, a minimum gap of 3 weeks is required between the two.

CollegeApply

834. Which Dipheria vaccine is recommended in a 14 years old girl ?

a) DPT

b) DT

c) Tdap

d) None

Correct Answer - C

Ans. is 'c' i.e., Tdap *[Ref: www.tapcoi.com]*

- According to IAP (Indian Academy of Paediatricians) Tdap is recommended for adolescents (10-18 years). (Note Tdap contains a lower concentration of diphtheria and pertusis toxoids than DtaP)

Note:

- DPT → Diphtheria, Cellular pertussis, Tetanu, used before 7 years
- DtaP → Diphtheria, Tetanus, acellular pertussis
- Tdap → Tetanus, diphtheria (low dose), acellular pertussis (low dose) -> used in adolescents.

KollegeApply

835. Droplet nuclei is a type of ?

a) Vertical transmission

b) Direct transmission

c) Indirect transmission

d) Biological transmission

Correct Answer - B

Ans. is 'b' i.e., Direct transmission *[Ref Park 23"1/e p.97-100, 768]*

Communicable disease may be transmitted from the reservoir or source of infection to a susceptible host in many different ways.

Modes of transmission may be :?

1. Direct transmission : Direct contact, droplet infection, contact with soil, inoculation into skin or mucosa, vertical transmission (through placenta).
2. Indirect transmission : Vehicle-borne, vector-borne, air-borne, fomite-borne, by uncleaned hand & fingers.

KollegeApply

836. Which is not a direct transmission ?

a) Droplet infection

b) Vertical transmission

c) Transmission by mosquito

d) Soil contact

Correct Answer - C
Ans. is 'c' i.e., Transmission by mosquito

KollegeApply

837. After taking MMR live vaccine, conception should not occur within ?

a) 2 weeks

b) 4 weeks

c) 8 weeks

d) 10 weeks

Correct Answer - B

Ans. is 'b' i.e., 4 weeks *[Ref* CDC *guidlines of vaccination in pregnancy]*

Measles-mumps-rubella (MMR) vaccine and its component vaccines should not be administered to women known to be pregnant. Because a risk to be fetus from administration of these live virus vaccines cannot be excluded for theoretical reasons, *women should be counseled to avoid becoming pregnant for 28 days after vaccination* with MMR vaccine or its component vaccines or varicella vaccine.

CollegeApply

838. Disinfection of urine is which type of disinfection ?

a) Precurrent

b) Concurrent

c) Preconcurrent

d) Terminal

Correct Answer - B

Ans. is 'b' i.e., Concurrent *[Ref Park 23"[1]/e p.127]*

Types of disinfection

There are following types of disinfection :?

1) Precurrent (prophylactic) disinfection

- It is done as a preventive method before illness, i.e. person is not ill, for example chlorination of water, pasteurization of milk, and handwashing.

2) Concurrent disinfection

- It is done when person is ill. It is the application of disinfective measures as soon as possible after the discharge of infectious material from the body of patient or after the soiling of articles with such material, i.e., the disease agent is destroyed as soon as it is released from the body, and in this way further spread of the agent is stopped. e.g., disinfection of urine, faeces, vomit, contaminated linen, clothes, hands, dressing, aprons, gloves etc.

3) Terminal disinfection

- It is the application of disinfective measures after the patient has taken discharge from hospital or he/she has died. e.g., disinfection of hospital rooms & floor, burning or burial of soiled material.

CollegeApply

839. Not a freeze dried vaccine ?

a) OPV

b) Measles

c) DPT

d) Rubella

Correct Answer - C

Ans. is 'c' i.e., DPT ***[Ref: Park 23"/e*** **p.** ***109 & 22"d/e p. 104]***

Vaccine which must be stored in the cold part but never allowed to freez.

Typhoid DPT TT
DT BCG Diluents Hepatitis B

KollegeApply

840. Most widely used vaccine, beside OPV ?

a) BCG

b) TT

c) Influenza

d) Pneumococcal

Correct Answer - A
Ans. is 'a' i.e., BCG *[Ref www.ncbi.nlm.mih.]*
"Making wider use of the world's most widely used vaccine : Bacille calmette-Guerine revaccination reconsidered"
"The bacille calmette-Guerin (BCG) vaccine has existed for 80 years and is one of the most widely used of all current vaccines, reading > 80% of neonates and infants in counteries where it is part of the national childhood immunization programme

KalpaGo Apply

841. True about chicken pox ?

a) Caused by Herpes simplex type-7

b) SAR is 90%

c) Infectious perios is 7 days prior to 7 days after onset of rash

d) Affects commonly 10-15 years old

Correct Answer - B

Ans. is 'b' i.e., SAR is 90% ***[Ref Park 23"/e p.144]***

The causative agent of chicken pox is **Varicella - Zoster** virus (Herpes simplex type III).

It is an acute respiratory infection with incubation period 10-21 days.

Infection is acquired through respiratory tract via air droplets or rarely from conjunctiva.

Infectious period (communicable period) for chicken pox is 2 days prior to 5 days after onset of rash, with a very high secondary attack rate of 90%.

Chicken-pox usually affects children of age group 5-9 years.

CollegeApply

842. Chickenpox rash does not involve ?

a) Trunk

b) Axilla

c) Palms & soles

d) Back

Correct Answer - C
Ans. is 'c' i.e., Palms & soles *[Ref Park 23'/e p.144]*
Rash of chicken pox : Superficial, unilocular, centripetal, pleomorphic, symmetrical, affects flexor surfaces and axilla, spares palms and sales, has inflammation around, rapid evolution and dew-drop on rose petal appearnace.

KollegeApply

843. 95% carrier and 5% cases are seen in ?

a) Measles

b) Diphtheria

c) Rabies

d) Hepatitis B

Correct Answer - B

Ans. is 'b' i.e., Diphtheria ***[Ref: Park 23rd/e p.160]***

Diphtheria is caused by **Corynebacterium diphtheriae,** a gram-positive bacterium.

Source of infection is either case or carrier, with carriers being the most common sources of infection, their ratio is estimated to be **95** carriers for 5 clinical cases. **Nasal carriers are more dangerous than throat carriers. Inmunuzation does not prevent carrier state.**

KollegeApply

844. Following is Hib conjugate vaccine ?

a) Capsular polysaccharide

b) Cell wall polysaccheride

c) Capsular polysaccheride with carrier

d) PRP with carrier

Correct Answer - C:D

Ans. is 'd > c' i.e., PRP with carrier > Capsular polysaccheride with carrier *[Ref Pariza 4th/e p.3401*

Conjugated Hib vaccine include PRP (polyribosyl ribitol **phasphate)** covalently linked to carrier protein. **PRP** is **the Capsular polysaccaride** of H influenzae type B (Hib).

Currently three types of Hib (H influenzae type B) vaccines are available. These vary in ?

1. Protein carrier used
2. The molecular size of saccharide
3. Mehtod of conjugation of protein to saccharide

These vaccines are -

1. HbOC (mutant diphtheria toxin as the carrier protein)
2. PRP-T (Tetanus toxoid as the carrier protein)
3. PRP-OMP (major OMP of N meningitidis serogroup B as carrier)

KotaboApply

845. True about Pertussis is ?

a) Most of the infections are subclinical

b) Most infective stage is Paroxysmal stage

c) Drug of choice is Erythromycin

d) Cerebellar ataxia may be a complication

Correct Answer - C

Ans. is 'c' i.e., Drug of choice is Erythromycin ***[Ref Park 23'/e p.161]***

Pertussis (Whooping cough)

- Pertussis, also called '100 day cough', is caused by Bordetella pertussis (only 5% cases are caused by B. parapertussis).
- Source of infection is a case of pertussis. **There is no subclinical case or chronic carrier state.**
- Period **of infectivity (communicability)** extends from a week after exposuse to about 3 weeks after the onset of paroxysmal stage. **Catarrhal stage is most infective. Secondary attack rate is high, i.e. 90%.**
- For diagnosis, gold standard is isolation of organism in culture from nasopharyngeal secretion.
- **Erythromycin is the drug of choice for treatment of cases as well as for contacts. Isolation period** is 4 weeks or until paroxysms cease.

846. True about influenza infectivity ?

a) Communicable period is 5 days before to 5 days after the onset of symptoms

b) Source of infection is clinical case

c) There are no subclinical cases

d) All are correct

Correct Answer - B

Ans. is 'b' i.e., Source of infection is clinical case ***[Ref Park 23rdie p.154]***

Influenza

- Influenza virus a **RNA virus,** belongs to **orthomyxovirus.**
- Source of infection of influenza is a clinical case or subclinical case.
- Major reservoir of influenza virus exists in animal and birds.
- Incubation period is 18-72 hours. Most of the infections are subclinical. Clinical cases present with cough, fever, myalgia and headache.
- Complications include pneumonia, encephalitis, Reye's syndrome (with type-B virus); GB syndrome and gastric flu/GIT symptoms (with type-B virus).
- Period of Communicability is 1-2 days before to 1-2 days after onset of symptoms.

KollegeApply

847. What is common in H5N1 and H7N7 strains of influenza ?

a) Frequent endemic infection in man

b) Have same frequency of antigenic variation

c) Strains of avian influenza

d) All are correct

Correct Answer - C

Ans. is 'c' i.e., Strains of avian influenza [Ref *Essentials of microbiology p.701; Harrison 18th/e p.1494; Park 23rd/e p.153]*

Avian influenza (Bird flu)

- It is caused mostly by **H_5** N, strain of influenza - A. It was detected in Hongkong in 1997 during a pandemic in poultry. It is a pandemic with high mortality rate (60%).
- Other types of influenza viruses which have been observed to cause avian influenza are **H_7 N_7 and** H_9 N_2 of influenza - A.
- Recently an outbreak of avian influenza was caused by 11_2 INT, in China, in 2013.
- Drug of choice for avian influenza is oseltamivir.

Kollegeapply

848. Not used for treatment and/or prophylaxis of seasonal influenza -

a) Amantidine

b) Rimantidine

c) Oseltamivir

d) Acyclovir

Correct Answer - D
Ans. is 'd' i.e., Acyclovir
Two classes of antiviral drugs are available for the treatment and prevention of influenza.
1. Neuraminidase inhibitors : Zanamivir, Oseltamivir, peramivir
2. Adamantanes : Amantidine, rimantidine

KollegeApply

849. Capsular polysaccharide derived vaccine is available for all meningocci except ?

a) Group A

b) Group B

c) Group C

d) Group Y

Correct Answer - B

Ans. is 'b' i.e., Group B *[Ref Park 23rdie p. 166]*

Meningococcal vaccine is prepared from Capsular polysaccharide. Vaccines are availabe for group A, C, Y and W-135. Bivalent (A, C), trivalent (A, C, W135) and tetravalent (A, C, Y, W135) vaccines are available.

Meningoccal group B vaccine was not available for last two decades. Recently, group B vaccine has also been developed in many countries (UK, Ireland) and is a part of routine immunization schedule.

Now, you must be thinking that why the answer of this question is group B meningococci. This is because meningococcal vaccine is not prepared from capsular polysaccharide.

CollegeApply

850. Vaccine derived polio virus outbreaks are due to ?

a) Type-2 virus

b) Type-3 virus

c) Type-1 virus

d) All of the above

Correct Answer - A
Ans. is 'a' i.e., Type-2 virus
"The main cause of vaccine derived poliovirus (VDPV) out breaks is currently type-2 component of OPV" ...Park 23rd/e
"Currently, the type-2 component contained in trivalent OPV accounts for more than 90% of all CVDPV cases" .

KotteeApply

851. False regarding polio vaccination ?

a) Both killed and live vaccines are available

b) First OPV is given at 4 weeks

c) OPV induces both humoral and intestinal immunity

d) IPV is given intramuscularly

Correct Answer - B

Ans. is 'b' i.e., First OPV is given at 4 weeks *[Ref Park 23rd/e p.206-210]*

First OPV (zero dose) is given at birth.

There are two polio vaccines : killed (IPV) and live attenuated (OPV)

OPV induces both humoral and intestinal immunity, whereas IPV induces only humoral immunity.

IPV is given intramuscularly (preferrable) or subcutaneously.

KalpaApply

852. Reservoir of infection in enteric fever ?

a) Birds

b) Cow

c) Cattle

d) Man

Correct Answer - D

Ans. is 'd' i.e., Man *[Ref Park 23rd le p.235]*

Typhoid fever is the result of systemic infection mainly by S.typhi found only in man. The term enteric fever include both typhoid fever (caused by S. typhi) and paratyphoid fever (caused by S. Paratyphi & 'C').

Reservoir - Man is the only reservoir. Carriers are more important than cases.

Source of infection

Primary Feces, Urine

Secondary - Water, food, fingers, flies.

KollegeApply

853. Rideal-walker coefficient for disinfectant used for cholera stool should be ?

a) 2

b) 4

c) 7

d) 10

Correct Answer - D
Ans. is 'd' i.e., 10 *[Ref Park 23'1/4 p. 129-30 & 22"/e p. 120]*
For cholera **stool :** *?*

- "The most effective disinfectant for general use is a coal-tar disinfectant with a Rideal-Walker (RW) coefficient of 10 or more such as cresol". - Park 250

KollegeApply

854. Women traveling from Bihar to Delhi is suspecting to have Kala-azar. Suitable investigation is ?

a) P24 antigen

b) Rk-39 test

c) Combo RDT

d) HRP-2 antigen

Correct Answer - B

Ans. is 'b' i.e., rk-39 test *[Ref Park 23rd le p.305, 306; Essentials of microbiology p.785]*

Laboratory diagnosis of Kala-azar

- The demonstration of parasite LD bodies in the aspirates of the spleen, liver, bone marrow or lymph node is only way to confirm visceral leishmaniasis.
- Hematological findings : T ESR, anaemia, reversed albumin-globulin ratio & leucopenia.
- Aldehyde test of Napier is a simple test widely used in India for the diagnosis of Kala-azar.
- Serological test : Direct agglutination test, rk 39 dipstick test, ELISA & Indirect fluorescent antibody test.
- Leishmanin test : This test is based on skin reaction.

CollegeApply

855. Most common route of nosocomial infection [Hospital-acquired infection] ?

a) Droplet transmission

b) Direct contact

c) Indirect contact

d) Vehicle transmission

Correct Answer - B
Ans. is `B' i.e., Direct contact *[Ref Textbook of Environmental microbiology p.819]*
There are following types of modes of transmission of hospital-acquired infections.
Contact transmission
It is the most common and most preventable means of transmission.
It is divided into two types -
Direct contact : It involves contact of body surface to body surface with a physical transfer of microorganisms. Hand contact is most common mode of transmission.
Indirect co*ntact :* It involves body surface contact with a contaminated intermediate object.

CollegeApply

856. Behavioral surveillance survey is done in ?

a) Malaria

b) Filaria

c) AIDS

d) TB

Correct Answer - C

Ans. is 'c' i.e.,AIDS ***[Ref www.cdc.gov/hiv]***

Behavioral surveillance survey is done in persons who are at high risk for **HIV infection.**

Surveillance is conducted in rotating, annual cycles in three different populations at increased risk for HIV :?

1. Gay, bisexual and other men who have sex with men (MSM cycle).
2. Persons who inject drugs (IDU cycle).
3. Heterosexuals at increased risk for HIV infection (HET cycle).

Collegeapply

857. Drug of choice for Mass therapy under filaria control Programme ?

a) Albendazole

b) Ivermectin

c) DEC

d) Mebendazole

Correct Answer - C
Ans. is 'c' i.e.,DEC *[Ref nvbdcp.gov.in]*
Every person above 2 years of age living in the endemic area (except for pregnent women & seriously ill person) should be given Diethylcarbamazine citrate (DEC) tablets.
0-2 years N.1.
t.,2-5 years 1 tablet of 100 mg
6-14 years 2 tablets of 100 mg
15 years 3 tablets of 100 mg

CollegeApply

858. Which of the following larvicide is used under urban Malaria Scheme ?

a) Malathion

b) Parathion

c) DDT

d) Abate

Correct Answer - D
Ans. is 'd' i.e., Abate ***[Ref nvbdcp.gov.in]***
Following chemical larvicides are used in the Urban Malaria Scheme Programme
1. Temephos (Abate)
2. Bti (WP ey, 12AS) Bacillus thuringiensis israelensis.

KollegeApply

859. Regular insectisidal spray is done when API is ?

a) > 1

b) > 2

c) < **1**

d) < 2

Correct Answer - B

Ans. is 'b' i.e., > 2 ***[Ref: Park 20 Ie p.384]***

Area with API <2→ focal spaying

Area with API >2 → regular spray

Areas having Annual Parasite Index (API) > 2

- Regular 2 rounds of insecticidal spray with DDT/Malathion/Synthetic Pyrethroids at the dose of 1, 2, 0·5 mg/sq meter respectively.
- Entomological assessment for vector behavior and development of insecticidal resistance
- Active and passive surveillance is carried outon regular basis every fortnight.
- Presumptive Treatment to all fever cases and radical treatment to all slide positive cases is given

KnowledgeApply

860. Main function of sodium citrate in ORS ?

a) To increase absorption of glucose by cotransport

b) To correct electrolyte imbalance

c) To correct Acidosis

d) To correct dehydration

Correct Answer - C

Ans. is 'c' i.e., To correct Acidosis

- The main function of sodium citrate is to correct acidosis ?
- "The citrate in ORS is needed for the treatment of acidosis, which frequently occurs with dehydration" "Efficacy of sodium citrate equals to sodium bicarbonate for correction of acidosis in diarrhea"

Kollege Apply

861. For post exposure prophylaxis for HIV the regimen is ?

a) Zidovodin + lamivudin for 4 weeks

b) Lamivudin + ritonavir for 4 weeks

c) Zidovudin + lamivudin + Indinavir for 4 weeks

d) Single dose zidovudin + lamivudin + Indinavir

CollegeApply

Correct Answer - C

Ans. is 'c' i.e., Zidovudin + lamivudin + Indinavir for 4 weeks

<u>Postexposure prophylaxis</u>

- Anti-retroviral drug for post-exposure prophylaxis should be initiated as soon as possible after the exposure within the first few hours and no later than 72 hours.
- Usually combination of two nucleoside reverse transcriptase inhibitors (zidovudin and lamivudin) plus a protease inhibitor (ritonavir or indinavir) is given for 4 weeks.
- To prevent mother to child transmission, the preferred regimen is single dose of nevirapine to mother at onset of labour and to child within 72 hours of birth. Zidovudine is also used, but requires multiple dosage. Caesarean section reduces the risk of transmission by 50%.

862. True about post-exposure prophylaxis in HIV ?

a) Should be given in 5 days of exposure

b) Single dose nevirapine prevents mother to child transmission

c) Given for 2 weeks

d) Standard protocol is to use Any Two NRTIs with no other drugs

Correct Answer - B
Ans. is 'b' i.e., Single dose nevirapine prevents mother to child transmission *[Ref Has been explained]*

KollegeApply

863. Incubation period of plasmodium vivax is-

a) 5-7 days

b) 7-10 days

c) 10-14 days

d) 15-30 days

Correct Answer - C
Ans. is 'c' i.e., 10-14 days

KollegeApply

864. Drug of choice for plasmodium vivax is:
September 2006

a) Mefloquine

b) Chloroquine

c) Artesunate

d) Quinine

Correct Answer - B
Ans. B: Chloroquine
Chloroquine remains the treatment of choice for clinical cure and suppressive prophylaxis of all types of malaria, except that caused by resistant P.falciparum.
In short time visitors to chloroquine-sensitive endemic areas, suppressive dose should be started 1 week before and continued for 4 weeks after returning.

KollegeApply

865. Maximum relative risk attributed by obesity to which condition ?

a) Hypertension

b) CHD

c) DM

d) Cancer

Correct Answer - C
Ans. is 'c' i.e., DM [Ref Obesity clinical management p.712]
"Recently, a meta-analysis of 89 studies examining the relative risk of obesity-related co-morbidities showed that the strongest association was with type 2 diabetes mellitus"
"Proportion of type II diabetes that is attributable to obesity was approximately 61% whereas the proportion of CHD that wast attributable to obesity was approximately 17%"

KnowledgeApply

866. Rule of Halves is related to ?

a) Obesity

b) Burns

c) Blindness

d) Hypertension

Correct Answer - D

Ans. is 'd' i.e.,Hypertension [Ref Park 23'/e p.376]

- Rule of Halves: Hypertension is an 'Iceberg disease'. Only about half of hypertensive subjects in general population of most of the developed countries are aware of condition, only half of those aware of the problem were being treated and only half of those treated were considered adequately treated.

KollegeApply

867. Total communication means ?

a) Use of all methods of communication for advertisment

b) Use of all methods of communication for school teaching

c) Use of all methods of communication for community participation

d) Using every communication option to teach deaf child

Correct Answer - D

Ans. is 'd' i.e., Using every communication option to teach deaf child [Ref Development - behavioral pediatrics p.392]

Total communication is philosophy of educating children with hearing loss (deaf children) that incorporates all means of communication, i.e. formal signs, natural gestures, fingerspelling, body language, listening, lipreading and speech.

KollegeApply

868. Newborn care corner is present in ?

a) NICU

b) OPD

c) Labour room

d) Wards side room

Correct Answer - C

Ans. is 'c' i.e., Labour room [Ref dghs.gov.bd]

Newborn care corner is a space within the delivery room where immediate care is provided to all newborns

Health facility	All newborns at birth	Sick newborns
MCH level I: PHC, Subcentre	Newborn care corner (NBCC) in labour room	Prompt referral
MCH level 11: CHC, First referral unit (FRU)	NBCC in labour room and operation theatre	Newborn stabilization unit (NBSU)
MCH level District hospital	NBCC in labour room and operation theatre	Special newborn care unit (SNCU)

Kalpedia

869. Smoking is preventive for ?

a) Lung cancer

b) Chronic bronchitis

c) Ulcerative colitis

d) CHD

Correct Answer - C

Ans. is 'c' i.e.,Ulcerative colitis

Smoking has been shown to have some protective effect in -

1. Ulcerative colitis
2. Parkinson's disease
3. Endometrial cancer and uterine fibroid
4. Pre-eclampsia
5. Thyroid cancer
6. Skin cancer (melanoma)
7. Psychiatric symptoms
8. Aphthous stomatitis

KollegeApply

870. According female sterlization 2014 guidelines, eligibility criteria for female sterilization are all except?

a) Age between 22-49 years

b) Should have at least 1 child

c) Unmarried woman

d) Partner is not sterilized

Correct Answer - C

Ans. is 'c' i.e.,Unmarried woman [Ref www.tvhealth.org]

Following are the eligibility criteria for female sterilization (2014) ?

1. Clients should be ever-married.
2. Female clients should be above the age of 22 years and below the age of 49 years.
3. The couple should have at least one child, whose age is above one year, unless the sterilization is medically indicated.
4. Clients or their spouses/partners must not have undergone sterilization in the past (not applicable in cases of failure of previous sterilization).
5. Clients must be in a sound state of mind, so as to understand the full implications of sterilization.
6. Mentally ill clients must be certified by a psychiatrist and a statement should be given by the legal guardian/spouse regarding the soundness of the client's state of mind.
7. A relevant medical history, physical examination and laboratory investigations need to be completed to ascertain eligibility for surgery.

KolleseApply

871. Which state has lowest IMR ?

a) Uttar Pradesh

b) Kerala

c) Maharashtra

d) Tamil Nadu

Correct Answer - B

Ans. is 'b' i.e., Kerala [Ref Park 23rd/e p.563-561

Kerala has lowest -

1. Infant mortality rate
2. Neonatal mortality rate
3. Post neonatal mortality rate
4. Child mortality rate

KollegeApply

872. Gross reproduction rate is ?

a) Number of girls born to a mother in her reproductive age

b) Number of boys born to a mother in **her** reproductive age

c) Number of total children born to a mother in her reproductive age

d) Number of lives births per 1000 women

Correct Answer - A

Ans. is 'a' i.e., Number of girls born to a mother in her reproductive age [Ref Park 23'/e p.489]

Gross reproduction rate

- Average number of girls that would be born to a married woman if she experiences the current fertility pattern throughout her reproductive span (15-44 or 49 year) assuming no mortality.
- GRR in India is 1.1 (1.2 in rural areas and 0.8 in urban areas).

KollegeApply

873. In a town there are 2500 live birth within six month. During same period 5 women died due to peripartum infection, 5 died due to electrocution, 2 died due to obstructed labor and 3 died due to PPH. What is the MMR ?

a) 4 per 1000 live birth

b) 6 per 1000 live birth

c) 40 per 1000 live birth

d) 60 per 1000 live birth

Correct Answer - A

Ans. is 'a' i.e., 4 per 1000 live birth [Ref Park 23rd/e p.559]

In this question, pregnancy related deaths are 10 (infection, obstructed labor and PPH). Electrocution is not a pregnancy/ labor related death so excluded from numerator..

CollegeApply

874. Vital statistics in a population are ?

a) Sex ratio

b) Age composition

c) Birth rate

d) Dependency ratio

Correct Answer - C
Ans. is 'c' i.e., Birth rate
Vital statistics are statistics concerning the important events in humon life, such **as** birth, death, marriages and migration. These are -

- Birth rates
- Death rates
- Infant mortality rate
- Fertility rate
- Mortalility rates (perinatal mortality rate, MMR, CMR etc)

KollegeApply

875. What is exponential growth ?

a) Rapid growth in population that leads to disbalance in birth and deaths

b) Slow growth rate

c) Growth limited by limiting factors

d) None

Correct Answer - A

Ans. is 'a' i.e., Rapid growth in population that leads to dysbalance in birth and deaths [Ref O.P. Ghai 7Ve p. 93]

Exponentional Vs logistic population growth

- The population growth of a species is regulated by limiting factors (resources) that exist within the species environment.
- Population growth maintains equilibrium in all species under normal conditions bacause of these limiting factors.
- A populations overall growth rate is affected by the **birth rate** and **death rate.**
- The rate of increase within a populations is represented by the birth rate minus death rate.
- When the growth rate in a population is represented by the birth rate minus the death rate, the population remains at a constant level.

KollegeApply

876. Sample registration system is done once in *?*

a) 6 months

b) 1 year

c) 2 years

d) 5 years

Correct Answer - A
Ans. is 'a' i.e., 6 Months

KollegeApply

877. In a community of 1000000 population 105 children were born in a year out of which 5 was still births, and 4 died within 6 months after birth. The IMR is ?

a) 40

b) 90

c) 120

d) 150

Correct Answer - A

Ans. is 'a' i.e., 40 [Ref: Read below]

In the given question out of 105 deliveries, 5 were still births -3 Thus, live births are 100.

Infant deaths are 4.

$$\text{IMR} = \frac{\text{No. of death of less than 1 year age}}{\text{No of live birth}} \times 1000$$

$$\text{IMR} = \frac{4}{100} \times 1000 = 40 \text{ per } 1000 \text{ live births}$$

VoltageApply

878. Maternal mortality rate is defined as ?

a) Maternal death per 1000 total births

b) Maternal death per 1000 live births

c) Maternal death per 1000 women

d) Maternal death per 1000 women of reproductive age

Correct Answer - D

Ans. is 'd' i.e., Maternal death per 1000 women of reproductive age [Ref Park 23rd /e p.558-559]

Maternal mortality rate=Total no. of female death due to complication of pregnancy childbirth or within 42 days of delivery **/ Total no. of women of reproductive age x1000**

KollegeApply

879. NPU for egg is ?

a) 70

b) 80

c) 85

d) 100

Correct Answer - D
Ans. is 'd' i.e., 100
The net protein utilization, or NPU, is the ratio of amino acid mass converted to proteins to the mass of amino acids supplied.

NPU for egg: 100	Wheat: 51	Fish: 77
NPU for meat: 80	Pulses: 45-50	Rice: 65
NPU for milk: 81	Soyabean: 55	

KollegeApply

880. Skeletal fluorosis occurs with fluoride level in water?

a) < 1.5 mg/L

b) 1.5-3 mg/L

c) 3-6 mg/L

d) > 10 mg/L

Correct Answer - C
Ans. is 'C' i.e., 3-6 mg/L
Dental fluorosis → > 1.5 mg/L (PPM)
Skeletal fluorosis → 3-6 mg/L (PPM)
Crippling fluorosis → > 10 mg/L (PPM)

KolleegeApply

881. Mid-day meal provides ?

a) 1/2 of energy

b) 1/3 of protein

c) 30 gm pulse/day

d) All are correct

Correct Answer - C

Ans. is 'c' i.e., 30 gm pulse/day [Ref Park 23"Ve p.662]

Mid-day Meal Programme

It is also known as 'School Lunch Programme'. It was launched in 1961 under Ministry of Education. The features of programme are :

1. Meal should be a supplement and not a substitue to home diet.
2. The meal should supply at least 1/3 of total energy requirement and Y2 of total protein requirement.

A model-menu of mid-day school meal is as follows :-

A mid-day school meal

Foodstuffs	g/day/child
Cereals and millets	75
Pulses	30
Oils and fats	8
Leafy vegetables	30
Non-leafy vegetables	30

CollegeApply

882. Maximum protein is found in ?

a) Egg

b) Soyabean

c) Rice

d) Wheat

Correct Answer - B
Ans. is 'b' i.e., Soyabean

KollegeApply

883. Tablet for supplementation of iron and folic acid for adult contains ?

a) 20 mg iron, 5001,tg folic aci

b) 40 mg iron, 250 folic acid

c) 100 mg iron, 500 lig folic acid

d) 100 mg iron, 100 hg folic acid

Correct Answer - C
Ans. is 'c' i.e., 100 mg iron, 500 jig folic acid

KollegeApply

884. Limiting amino acid in cereals ?

a) Methionine

b) Tryptophan

c) Lysine

d) Cysteine

Correct Answer - C

Ans. is 'c' i.e., Lysine

Food	**Deficiency**
Cereals	Lysine & threonine
Wheat	Lysine & threonine
Maize	Tryptophan & lysine
Pulses	Methionine & cysteine
Soybean	Methionine

KollegeApply

885. Vanaspati Ghee is fortified with ?

a) Iodine

b) Vitamin A

c) Iron

d) Calcium

Correct Answer - B

Ans. is 'b' i.e., Vitamin A

Examples of food fortification : -

1. Iodisation of Salt
2. Addition of vitamin A and D in vanaspati (2500 IU vitamin A and 175 IU vitamin D per 100 gm).
3. Fluoridation of water.
4. Calcium added to fruit juices.
5. Folic acid added to flour.

KollegeApply

886. Village Health and Nutrition Day (VHND) is observed ?

a) Every week

b) Every month

c) Every 6 month

d) Every year

Correct Answer - B

Ans. is 'B' i.e., Every month

- **The Village-Health and Nutrition day (VHND)** is to be organized once **every month** on a fixed day (such as the second Saturday).
- The day can be decided by the VHWSC (village health and water sanitation committee) in each village at anyone of the Anganwadi centers (AWCs) in that village, preferably, all the AWCs should be covered by rotation.
- On that day, Anganwadi worker and other VHWSC members will mobilize villagers to assemble in AWC.

KollegeApply

887. Phrynoderma is due to ...deficiency-

a) Vitamin D

b) Niacin

c) Vitamin A

d) Essential fatty acid

Correct Answer - D
Ans. is 'd' i.e., Essential fatty acid
In vitamin 'A' deficiency there is toad like skin also known as phrynoderma.
o But this is due to associated deficiency of essential fatty acids.

KollegeApply

888. Protein quality assessment is best done by *?*

a) NPU

b) Biological value

c) Digestibillity coefficient

d) Amino acid score

Correct Answer - A
Ans. is 'a' i.e., NPU
o Net protein utilization is considered to be most practile because it is the product of biological value and digestibility coefficient divided by 100.

KolleegeApply

889. Nutrient which is lost maximum in polished rice?

a) Proteins

b) Thiamine

c) Ascorbic acid

d) Calcitriol

Correct Answer - B
Ans. is 'b' i.e., Thiamine
Effect of milling on rice
The milling process deprives the rice grain of its valuable nutritive elements

KollegeApply

890. Glycemic index is defined as:

a) Glucose control in last 3 months

b) Measure of the change in the blood glucose following ingestion of proteins

c) Measure of the change in the blood glucose following ingestion of carbohydrate

d) Measure of the change in the blood glucose following ingestion of fats.

Correct Answer - C
The Glycemic index (GI) of a carbohydrate containing food is a measure of the change in the blood glucose following its ingestion

KollegeApply

891. **Low glycemic index is classified as value less than:**

a) 25

b) 45

c) 55

d) 65

Correct Answer - C

Concept of glycemic index has utility in management of diabetes and obesity.

Classification	GI range	Example
Low GI	55 or less	Most fruits and vegetables except potatoes and water melon, pasta beans, lentils
Medium GI	56-69	Sucrose, brown rice, basmati rice
High GI	70 or more	Corn flakes, white bread, candy bar

Ref: Park 22nd edition, page 568

KollegeApply

892. Caloric requirement in an adult male for heavy work?

a) 1800 k cal/d

b) 2300 k cal/d

c) 3000 k cal/d

d) 3500 k cal/d

Correct Answer - D

Ans. is `d' i.e., 3500 k cal/d [Ref Park 23rd le p.634]

Indian Reference Indian Reference

Energy requirements	**Man**	**Woman**
Light work	2320 kcal/day	1900 kcal/day
Moderate work	2730 kcal/day	2230 kcal/day
Heavy work	3490 kcal/day	2850 kcal/day

CollegeApply

893. Differences between human milk and cow milk are all of the following except: *September 2005*

a) Cow milk has comparatively more fat

b) Cow milk has comparatively more protein

c) Cow milk has comparatively more calcium

d) Cow milk is iron deficient

Correct Answer - D

Ans. D: Cow milk is iron deficient

Cow milk has comparatively more energy, fat, protein, minerals, iron and calcium Human milk has comparatively more of lactose and vitamin C but is deficient of iron.

KollegeApply

894. **Skin fold thickness is measured in all of the following places, EXCEPT:**

a) Mid triceps

b) Biceps

c) Supra pubic

d) Supra iliac

Correct Answer - C

Harpenden callipers are used to measure skin fold thickness.

Skin fold thickness is measured in mid triceps, biceps, supra iliac and sub scapular areas.

The sum of these measurements should be less than 40 mm in boys and 50 mm in girls.

Ref: Park 21st edition, page 369.

KollegeApply

895. Which is true of pathogenic mosquitoes ?

a) Anopheles has spotted abdomen

b) Mansoni lays eggs singly

c) Culex cause yellow fever

d) Aedes has stripped yellow scales

Correct Answer - D

Ans. is 'd' i.e., Aedes has stripped yellow scales [Ref Park 23rdie p. 769 & 22nd/e p. 714]

- Aedes mosquitoes are easily distinguished by white stripes on a black body. Because of the striped or banded Character of their legs they are sometimes referred to as tiger mosquito.
- Anopheles has spotted wings (not spotted abdomen).
- Mansoni lays eggs in clusters.
- Yellow fever is caused by aedes mosquito (not culex).

CollegeApply

896. Which is not an aryl organophosphate ?

a) Malathion

b) Parathion

c) Chlorthion

d) Diazinon

Correct Answer - A

Ans. is 'a' i.e., Malathion

Organophosphates

Aryl	Alkyl
Diazinon	Malathion
Parathion	Sulfotepp
Chlorpyrifos	Demeton
Chlorthion	Triclorfon
Paraoxon	HETP
	TEPP

KollegeApply

897. True about culex larvae ?

a) Rest parallel to surface water

b) Long Palmate hair

c) Siphon tube present

d) All are true

Correct Answer - C

Ans. is 'c' i.e., Siphon tube present [Ref Park 23'/e p. 769 & 22"^{d}/e p. 714]

KollegeApply

898. Horrock's apparatus is used to measure ?

a) Wind velocity

b) Humidity

c) Chlorine demand

d) Cooling power

Correct Answer - C
Ans. is 'c' i.e., Chlorine demand
-Chlorine demand for water can be estimated by Horrock's apparatus.
-Chlorine demand of water is the amount of chlorine that is needed to destroy bacteria and to oxidize all the organic matter and ammoniacal substances present in water.
-It is the difference between the amount of chlorine added to the water, and the amount of residual chlorine remaining at the end of a specific period of contact (usually 1 hr), at a given temperature and pH of the water

CollegeApply

899. Indicator used in Horroch's apparatus ?

a) Bleaching powder

b) Soda-lime

c) Potassium permagnate

d) Starch iodine

Correct Answer - D

Ans. is 'd' i.e., Starch iodine [Ref Park 23'/e p. 717]

- In Horrock's apparatus, 6 cups are filled with water and indicator (starch iodine) is added in increasing quantity in each cup (1 unit in lst, 2 units in 2nd, 3 units in third and so on).
- The first cup which shows the blue color is multiplied by 2, for example if 2nd cup shows blue colour than 4 grams (2 x 2) of bleaching powder will required to disinfect 455 litre of water.

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900. In water testing from a well [containing 75000 litres of water] by Horrock's apparatus, there is blue colour from 4th cup onwards. What is the amount of bleaching powder required to disinfect the water ?

a) 1000 gm

b) 1300 gm

c) 1600 gm

d) 2000 gm

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Correct Answer - B

Ans. is 'b' i.e.,1300 gm

- In Horrock's apparatus, 6 cups are filled with water and indicator (starch iodine) is added in increasing quantity in each cup (1 unit in 1st, 2 units in 2nd, 3 units in third and so on).
- The first cup which shows the blue color is multiplied by 2, for example, if the 2nd cup shows a blue colour than 4 grams (2 x 2) of bleaching powder will be required to disinfect 455 litre of water.
- Bleaching powder required=8*75000/455=1318

901. Daylight factor in the kitchen should be ?

a) 5%

b) 8%

c) 10%

d) 15%

Correct Answer - C
Ans. is 'c' i.e.,10% [Ref Park 22"d /e p. 687, 688]
Minimum recommended day light factor :
Living room → 8%
Kitchens → 10%

KollegeApply

902. Anemometer measures ?

a) Humidity

b) Air velocity

c) Room temperature

d) Radiant temperature

Correct Answer - B

Ans. is 'b' i.e., Air velocity [Ref Park 23'/e p. 749 & 22"^{d}/e p. 695]

KollegeApply

903. SI unit of luminal intesity is -

a) Candela

b) Lumen

c) Lux

d) Coulomb

Correct Answer - A

Ans. is 'a' i.e., Candela [Ref BASAK p.4]

- Candela is the SI base unit of luminous intensity, i.e. luminous power per unit solid angle emitted by a point light source in a particular direction.
- SI unit of luminous intensity -÷ Candela
- SI unit of luminous flux -± Lumen
- SI unit of illuminance -÷ Lux

Kollegeapply

904. Waste Sharps should be disposed in ?

a) Black bag

b) Yellow bag

c) Blue bag

d) None of these

Correct Answer - C
Ans. is 'c' i.e.,Blue bag [Ref Park 23'/e p. 793-794]

KollegeApply

905. Which category waste is disposed in red bags ?

a) Category 1

b) Category 2

c) Category 3

d) Category 10

Correct Answer - C

Ans. is 'c' i.e.,Category 3 [Ref Park 23'/e p.793, 794]

KollegeApply

906. All are incinerated except ?

a) Human anatomical waste

b) Animal waste

c) Infected solid waste

d) Broken thermometers

Correct Answer - D

Ans. is 'd' i.e.,Broken thermometers [Ref: Park 23"^{1}/e p. 791 & 22"/e p. 738]

"Waste types not to be incinerated are: (a) pressurized gas container; (b) large amount of reactive chemical wastes; (c) silver salts and photographic or radiographic wastes; (d) Halogenated plastics such as PVC; (e) waste with high mercury or cadmium content, such as broken thermometers, used batteries, and lead-lined wooden panels; and (J) sealed ampules or ampules containing heavy metals"

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907. Incineration is used for which category of waste ?

a) Category 1

b) Category 7

c) Category 4

d) Category 10

Correct Answer - A

Ans. is 'a' i.e., Category 1 [Ref Park 23`ale p.793-794]

- Incineration is done for category 1,2,3 & 6

KolleegeApply

908. Micropolysopora faeni causes ?

a) Baggasosis

b) Farmer's lung

c) Suberosis

d) Sequousis

Correct Answer - B

Ans. is 'B' i.e., Farmer's lung

Micropolyspora faeni in Hay or grain dust causes farmer's lung.

Anthracosis	
• Silicosis	Coal dust
• Siderosis	Silica
• Byssinosis	Iron
• Farmer's lung	Cotton dust (textile industry)
• Sequousis	Hay or grain dust (micropolyspora faeni)
• Suberosis	Moldy red wood saw dust
Detergent worker's lung	Moldy cork dust Enzyme additives
• Baggassosis	Sugarcane dust (thermoactinomyces sacchari)

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909. In disaster management all are true except

a) Mitigation before a disaster strikes

b) Response in pre-disaster phase

c) Yellow colour is for medium priority

d) Gastroenteritis is commonest infection after disaster

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Correct Answer - B

Ans. is 'B' i.e., Response in pre-disaster phase

<u>Disaster management</u>

Disaster Impact

Most injuries are sustained during the impact, and thus the greatest need for emergency care occurs in the first few hours. The management can be divided into:-

- Search, rescue and first aid: Most immediate help comes from uninjured survivors.
- Field care: As many injured patients come simultaneously, emergency services should be proper in terms of priority and numbers of facilities.
- Triage: Triage consists of classifying the injured based on the severity of injuries and the likelihood of their survival with prompt medical intervention. The most common triage classification system used internationally is four colour code system:?

1.	**Red -**	**High priority treatment or transfer**
2.	**Yellow -**	**Medium priority**
3.	**Green**	**Ambulatory patients**

4.	**Black -**	**Dead or moribund patients**

- Tagging: All patients should be identified with tags.
- Identification of the dead: Proper respect to dead is of great importance

KollegeApply

910. In disaster management following are practiced except

a) Triage

b) Rehabilitation

c) Mass vaccination

d) Disaster response

Correct Answer - C

Ans. is 'c' i.e., Mass vaccination

Disaster Management includes three aspects:

1. Disaster impact and response:

Search, rescue, and first-aid

- **Field care**
- **Triage**
- **Tagging**
- **Identification of the dead**

2. Rehabilitation or recovery:

- **Water supply**
- **Basic sanitation and personal hygiene**
- **Food safety**
- **Vector control**

3. Mitigation: Measures designed either to prevent hazards from causing disaster or to reduce the effects of the disaster. This also includes preparedness for any impending disasters or in disaster-prone areas.

KollegeApply

911. True about Anganwadi worker is all except ?

a) Mostly female

b) Training for 4 months

c) Under ICDS scheme

d) Covers a population of 2000

Correct Answer - D

Ans. is 'D' i.e., Covers a population of 2000

- Anganwadi center is mainly managed by Anganwadi worker.
- Mostly Anganwadi worker is a female worker.
- She is a health worker chosen from the community and given 4 months training in health, nutrition and childcare.
- one AWC is for 400-800 population

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912. As per ICDS scheme, there should be one Anganwadi centre for a population of ?

a) 1000-1500

b) 2000-25000

c) 400-800

d) 100-200

Correct Answer - C

Ans. is 'c' i.e.,400-800

The recommendations of Anganwadi center are :?

1. Rural/urban projects -› One anganwadi centere per 400-800 population, and one mini-anganwadi center per 150-400 population.
2. Tribal/Hilly/Other difficult areas One anganwadi centre per 300-800 population, and one mini-anganwadi centre per 150-300 population.

KollegeApply

913. All are true for ASHA worker EXCEPT:
March 2013

a) Informs about birth and deaths in her village to PHC

b) Education atleast till 4th class or higher

c) Local resident

d) Works per 1000 people of an area

Correct Answer - B

Ans. B i.e. Education atleast till 4th class or higher

ASHA/Accredited Social Health Activists (ASHAs)

- ASHAs must primarily be female residents of the village that they have been selected to serve, who are likely to remain in that village for the foreseeable future.
- Married, widowed or divorced women are preferred over women who have yet to marry since Indian cultural norms dictate that upon marriage a woman leaves her village and migrates to that of her husband.
- ASHAs must have class eight education or higher, preferably be between the ages of 25 and 45, and are selected by and accountable to the gram panchayat (local government).

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914. True about ASHA are all except

a) One per 1000 rural population

b) Mobiliser of antenatal care

c) Female voluntary worker

d) Skilled birth attendant

Correct Answer - D
skilled birth attendant */Ref: Park 20/e, p 380-381 (19k, p 365)1*
Ref. littp://molifw.nic.in/NRHM/stakeholders.htm
ASHA is the central component of the National Rural Health Mission (NRHM)
National Rural Health Mission (NRHM) was launched to address the health needs of rural population, especially the vulnerable sections of society
One of the key components of the National Rural Health Mission is to provide every village in the country with a trained female community health activist — `ASHA' or *Accredited Social Health Activist.* Selected from the villa itself and accountable to it, the ASHA will he trained to work as an interface between the community and the *public e health system.*
Following are the key components of ASHA:

- ASHA must primarily be a woman *resident of the village* — married/ widowed/ divorced, preferably in the age group *of 25 to 45 years.*
- She should be a literate woman with formal education up to class eight. This may be relaxed only if no suitable person with this qualification is available.
- ASHA will be the first port of call for any *health related demands* of deprived sections of the population, especially women and children, who find it difficult to access health services

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- ASHA will be a health activist in the community who will *create awareness on health* and its social determinantsand mobilize the community towards local health planning and inc[a]reased utilization and accountability of the existing health services. She would be a *promoter of good health practices.*
- She will counsel women on birth preparedness, importance of safe delivery, breastfeeding and complementary feeding, *immunization, contraception* and prevention of common ¡nfections including Reproductive Tract Infection/Sexually Transmitted Infection (RT1s/STIs) and care of the young child

  The gynaecomastia causing drugs can he categorized into :
- The first type are drugs *that act exactly like estrogens,* such as *diethylstilbestrol, birth control pills, digitalis,* and *estrogen containing cosmetics.*
- The second type is drugs that *enhance endogenous estrogen formation* such as *gonadotropins* and *clomiphene.*
- The third type is drugs that inhibit *testosterone synthesis and action such* as *spironolactone, ketoconazole, metronidazole* and *cimetidine.*
- The final type is drugs that act by *unknown mechanisms* such as *isoniazid,* methyldopa, captopril, tricyclic antidepressants, diazepam and heroin.

  Also know,
- Testosterone also causes Gynaecomastia

KollegeApply

915. All of the following are duties of an ASHA worker except:

a) Primary screening for prevalence of non-communicable diseases

b) Administering zero dose of DPT and OPV

c) Assessing the success of national programs under ANM

d) All

Correct Answer - B

Ans: C. Administering zero dose of DPT and OPV

Ref: Park 24Ie p936, 23Ie p449, 22Ie p414; Ministry of Health anti Family Welfare (MoHFW). (2005b). Reading Material for ASHA. Government of India)

- ASHA does'nt receive financial remuneration for administering zero dose of DPT and OPV is not the function of ASHA.

ASHA Payments under Janani Suraksha Yojana (JSY): On 45th Day:

- 6 visits in institutional deliveries (Day 3, 7, 14, 21, 28,
- 7 visits in home deliveries (Day 1, 3, 7, 14, 21, 28, 42).
- Birth weight record
- Immunized with BCG, first dose of OPV & DPT
- Birth registration
- Mother & child are safe

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916. ASHA gets remuneration on all except ?

a) Institutional delivery

b) Zero dose of OPV and BCG

c) Recording birth weight

d) Birth registration

Correct Answer - B
Ans. is 'b' i.e., Zero dose of OPV and BCG

KollegeApply

917. **Swajaldhara programme is associated with:**

a) Provision of safe drinking water

b) Provision of food supplements for destitute women

c) Provision of relief for victim of sexual abuse

d) Provision of health care for sick tribals

Correct Answer - A

Swajaldhara is a community lead participatory programme, which aims at provision of safe drinking water in rural areas with the full ownership of the community.

Swajaldhara has 2 components:

Swajaldhara I – for a Grama Panjayath or a group of Panjayath
Swajaldhara II – for a district as such

Ref: Park, Edition 21, Page - 419

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918. Group of 4-8 experts talking in front of a large group of audience is known as:

September 2011

a) Symposium

b) Workshop

c) Seminar

d) Panel discussion

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Correct Answer - D

Ans. D: Panel Discussion

In a panel discussion, 4-8 persons who are qualified to talk about the topic sit and discuss a given problem, or the topic, in front of a large group of audience

Panel Discussion

- A panel consists of a small group of four or eight persons, who carry on a guided and informal discussion before an audience as if the panel were meeting alone.

The proceedings of the panel should be the same as those described for informal discussion: volunteering of facts, asking questions, stating opinions-all expressed with geniality, with respect for the contributions of other members, without speech making, and without making invidious personal references.

This primary function should occupy approximately two-thirds of the allotted time-say forty minutes of an hour's meeting.

The secondary function of the panel is to answer questions from the audience.

This discussion method is suitable for use when a relatively large

audience is anticipated.

- The disadvantage of the method is that it confines most of the discussion to the panel itself.
- The audience listens and is given a chance to ask questions, but for the most part is passive and receptive.
- Panel discussions, if well conducted, are usually more interesting to the audience than is the single-speaker forum.
- They provide sufficiently varied clash of opinion and presentation of facts to give even the quiet members of the audience a feeling of vicarious participation.
- Quality and tasks of leadership in panel discussion are similar to those described for informal discussion.
- The leader must in addition take special care to select panel members who can think and speak effectively.
- He must also be sure that they prepare themselves to discuss the subject.
- During the discussion by the panel the leader has substantially the same duties as in informal discussion except that he should keep himself more in the background as chairman of the panel.
- He can do so because each member of the panel is in reality an assistant to the leader and is responsible for specific contributions to the proceedings.
- When the subject is thrown open to the house, it is the leader's job to recognize appropriate questions and to reject those not bearing on the subject or involving personalities.
- Some questions he may answer himself, but usually he should repeat the question and call upon one of the panel to answer it.
- By preliminary announcement the leader may also tell the audience that they may direct questions at particular members of the panel if they choose.

  In any case, during the question period the leader needs to maintain strict control.On many occasions this may be the toughest part of his assignment to carry off efficiently and with good humor.
- While it is customary to confine audience questions to a specific period, some leaders permit questions from the floor at any time.
- Unless very carefully limited by the leader, this practice may interfere with effective discussion by the panel.

  Arranging the panel properly will lend effectiveness to this form of

discussion.The members should face the audience.It is important that each panel member adjust his chair so that he can see every other member without effort the chairman will also find that the best places for his readiest speakers are at the extreme ends of the table.He should keep the more reticent members close to, him so that he can readily draw them out with direct questions.
If the quieter ones sit on the fringes of the panel, the more voluble members are quite likely to monopolize the discussion.

KollegeApply

919. All are principles of primary health care except?

a) Intersectoral coordination

b) Community participation

c) Appropriate technology

d) Decentralised approach

Correct Answer - D
Ans. is 'd' i.e., Decentralised approach
o There are 4 main principles of primary health care :
1) Equitable distribution
2)Community participation
3)Intersectorial coordination
4) A ppro priate technology

KollegeApply

920. Screening under RNTCP emphasizes on:

a) Sputum microscopy

b) Chest X-ray

c) PCR

d) Sputum culture

Correct Answer - A
Ans. a. Sputum microscopy
Over-reliance on chesl X-ray was a draw back of National Tuberculosis Programme (NTP) which was over come by Revised National Tuberculosis Control Programme(RNTCP) which started diagnosing patient by sputum microscopy
'A nation-wide network of RNTCP qaality assured designated sputum smear microscopy laboratories has been set
up, providing appropriate, available, affordable and accessible diagnostic services for TB suspects and cases.

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921. **Which of the following screening methods is used under RNTCP?**

a) Active

b) Passive

c) Mass

d) All of the above

Correct Answer - B

Under RNTCP, active case finding is not pursued. *Case finding is passive*. Patients presenting themselves with symptoms suggesting tuberculosis are screened with two sputum smear examinations.

Ref: Park 21st edition, page 381.

KollegeApply

922. Drug NOT used in pulmonary hypertension -

a) Calcium channel blocker

b) Endothelin receptor antagonist

c) Alpha blocker

d) Prostacyclin

Correct Answer - C

alpha blockers *[Ref- Harrison 17th/e p 1577, 1578]* Pulmonary hypertension

General management

- Diuretic therapy may be useful as it relieves pulmonary edema.
- Anticoagulant therapy is advocated for all patients.

Specific management

Calcium channel blockers

- *Patients who have substantial reductions in pulmonary arterial pressure in response to short acting vasodilators at the time of cardiac catheterization should he initially treated with calcium channel blockers.*

Endothelin receptor antagonist

- *Bostenan is a non-selective endothelium receptor antagonist, is an approved t/t ¸for patients who are NYHA .functional classes III and IV.*

Phosphodiesterase-5 inhibitors

- Slidenafil is used for patients who are NYHA functional classes II and

Prostacyclins

- Iloprost is a prostacyclin analogue used in PAH patients who are

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NYHA functional classes III and IV.

- *Pulmonary circulation is unique in that it accommodates a blood flow that is almost equal to that of all the other organs of body but still maintains low pressure.*
- *The factors responsible for low pressure in pulmonary circulation (even with large volume of blood) are:- - Larger diameter of pulmonary vessels due to thin wall of pulmonary artery and arterioles.*

  - Greater compliance (distensibility) of pulmonary vessels.

  numoral factors responsible for maintaining pulmonary circulation:? Normally
- *NO causes vosodilation and proliferation of smooth muscles by r in the conc. of cGMP —) this increases the diameter of pulmonary vessels.*
- *causes vosodilation and decreased proliferation of smooth muscles by increasing the conc. of cAMPincrease in the diameter of pulmonary vessels. Prostaglandin also decreases coagulation. Endothelin causes vasoconstriction and increase smooth muscle proliferation si lumen of pulmonary vessels. - Normally the vasodilators and antiprolifeave effects of NO and PGI_7 dominate*

  In Pulmonary hypertension

- *There is l production of NO (and cGMP) and PGI_2 (and cAMP), t vasoconstriction and proliferation of smooth*

  muscles, st lumen of pulmonary vessel. Decreased production of PGI_2 also causes increased coagulation.

- There is *T production* of endothelin, /vasoconstriction and smooth muscle proliferation, .1 lumen.
- *Drug therapy in puhnonan hypertension is targetted at these growth factor pathways which are involved in the pathogenesis of pulmonary hypertension:*

  Endothelium receptor antagonist
- *Bostenan is an endothelin receptor antagonist. It prevents endothelin mediated contraction of vessels. Phosphodiesterase-5*

Kollegeapply

inhibitors

- *Nitric oxide mediates its action through increasing cGMP concentration. Increased cGMP relaxes the vessels. cGMP is degraded by an enzyme phosphodiesterase-5 (PDE-5).*
  - Slidenafanil is a phosphodiesterase 5 inhibitor. It reduces the degradation of cGMP, thus causing vascular relaxation and reducing pulmonary hypertension.
  Prostacyclins
- *In pulmonary hypertension, the level of prostacycline is reduced.*
- *This causes pulmonary constriction as prostacyclin causes dilatation of pulmonary vessels.*

KollegeApply

923. Regarding PPV vaccine following is true ?

a) Given at birth

b) Obtained from cell wall polysaccharide

c) Indicated in sickle cell disease

d) Commonly used

Correct Answer - C

Ans. is 'c' i.e., Indicated in sickle cell disease [Ref Essentials of microbiology ydie p. 391]

- Pneumococcal polysaccharide vaccine (PPV or PPSV) is prepared from capsular (not cell wall) polysaccharide. It is not given before 2 years of age
- It is not for general use, but given in conditions which predispose to pneumococcal infection, like sickle cell anemia.

KollegeApply

924. All are included in sleep hygiene except ?

a) Healthy diet

b) Sleeping on time

c) Sleeping in dark room

d) Exercise before sleep

Correct Answer - D

Ans. is 'd' i.e.,Exercise before sleep [Ref Comprehensive Guide for sleep p.173]

- Sleep hygiene can be considered the cornerstone of environmental modification and consists of developing good sleep habits and an environment that is conducive to sleep.
- Sleep hygiene includes the physical sleep setting, sleep schedule and sleep practices (e.g. pre-bedtime routine), all of which influence effective sleep.

The principles of sleep hygiene include ?

1. Eating a healthy diet
2. Limiting amount of caffeine intake
3. Going to bed and getting out of bed at consistent time
4. Sleeping in dark, quiete and temperature controlled rook on a comfortable mattress and pillow.

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925. A problem village is defined as if water source is ?

a) > 0.5 km

b) > 1 km

c) > 1.6 km

d) None of the above

Correct Answer - C

Ans. is 'c' i.e., > 1.6 km [Ref Park 22"`l le p. 428 & 21"/e p. 418]

- A problem village has been defined as one
- Where no source of safe water is available within a distance of 1.6 km, or
- Where water is available at a depth of more than 15 meters, or
- Where water source has excess salinity, iron, fluorides and other toxic elements, or
- Where water is exposed to the risk of cholera.

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926. Not true about strategic plan for malaria control 20122017 ?

a) Objective is API < 1 per 10,000

b) 50% reduction in mortality by 2017

c) Annual incidence < 10 per 1000 by 2017

d) Complete treatment to at least 80% of patients

Correct Answer - C

Ans. is 'c' i.e., Annual incidence < 10 per 1000 by 2017

Strategic action plan for malaria control in India : 2012-2017

Objective of plan is to achieve API < 1 per 10,000 population by the end of 2017.

Goals of strategic plan are :

1. Screnning all fever cases suspected for malaria (60% through quality microscopy and 40% by rapid diagnostic test).
2. Treating all P. falciparum cases with full course of effective ACT and primaquine, and all P. vivax cases with 3 days chloroquine and 14 days primaquine.
3. Equipping all health institutions (PHC level and above), especiality in high-risk areas, with microscopy facility and RDT for emergency use and injectable artemisinin derivatives.

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927. Observation under nursing care for 24 hours in an hospital is defined as ?

a) Inpatient

b) Outpatient

c) Observation status patient

d) Urgent care patient

Correct Answer - C

Ans. is 'c' i.e., Observation status patient

- Observation status patients : These are neither inpatients nor outpatients. These patients are placed in a hospital bed (often in an inpatient unit) after displaying signs/symptoms that require additional work-up. Observational stay is usually limited to 24 hours then the physician must determine whether patient's condition warrants inpatient addmission or discharge. If the patient is discharged it is called observation status pedient, however if the patient is admitted to the hospital then status is changed to inpatient.
- Inpatient : A patient is admitted in hospital room for an overnight or more than that.
- Outpatient : A patient receives a diagnosis and/or treatment but does not stay overnight.

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928. Under RNTCP, DOTS provider gets how much honorarium after completion of treatment ?

a) 150 Rs

b) 250 Rs

c) 500 Rs

d) 1000 Rs

Correct Answer - B
Ans. is 'b i.e., 250 Rs [Ref www.pbnrhm.org]
Honorarium to DOT provider for cure or completed TB patient treatment is 250 Rs per care.

KollegeApply

929.

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All of the following are are a part of medial wall of the middle ear except?

a) Promontory

b) Fenestra vestibule

c) Pyramid

d) Subiculum

Correct Answer - C

Ans. is 'c' i.e.,Pyramid [Ref Dhingra S^ave **p. 6]**

Medial or inner or labyrinthic wall (paries labyrinthica) of middle ear

- It is formed by labyrinth and separates the middle ear cavity from internal ear. It has following features :- **A bulge called as promontory formed by basal turn of cochlea.**
- **Fenestra vestibuli (oval window)** lies posterosuperior (behind and above) to the promontory and opens into scala vestibuli.
- **It is occupied by foot plate of stapes** fixed by annular ligament. Its, **size on average is 3.25 mm long & 1.75 mm wide.**
- **Fenestra cochleae (round window)** lies posteroinferior to the promontory and opens into scala tympani of cochlea. **It is closed by secondary tympanic membrane.** The round window is closest to ampulla of posterior semicircular canal. Round window is a triangular opening. **Its diameter is between 1.8 to 2.3 mm.**

KollegeApply

930. True statement about malignant otitis externa is:

a) Not painful

b) Common in diabetics and old age

c) Caused by streptococcus

d) All of the above

Correct Answer - B
Ans. is. B. Common in diabetics and old age

KollegeApply

931. What is the intensity in decibel of normal conversation in humans?

a) 30dB

b) 60dB

c) 90dB

d) 150dB

Correct Answer - B

Ans. is 'b' i.e., 60dB [Ref Dhingra 5th le p. 23]

- Intensity is the strength of sound which determines its loudness. It is usually measured in decibels (dB).
- Following are intensities when a person is at a distance of one meter from sound source.

Whisper	30 dB
Normal conversation	60 dB
Shout	90 dB
Discomfort of ear	120 dB
Pain in ear	130 dB

KollegeApply

932. Ceruminous glands present in the ear are:

a) Modified eccrine glands

b) Modified apocrine glands

c) Mucous gland

d) Modified holocrine glands

Correct Answer - B
Ans. is. B. Modified apocrine glands

KollegeApply

933. **A patient with ear complaints showed positive Hennebert sign. Which of the following condition shows positive Hennebert sign?**

a) Meniere's disease

b) Acoustic neuroma

c) Neuronitis

d) Glossopharyngeal neuralgia

Correct Answer - A

The presence of a fistula is suspected if nystagmus occurs or if the patient perceives movement of a visual target that is fixed after applying positive pressure to the outer ear canal.

A positive test result (ie, **Hennebert sign**) suggests either a **perilymph fistula** or **Meniere's disease.**

KollegeApply

934. Light house sign in seen in ASOM in which stage?

a) Stage of suppuration

b) Stage of hyperaemia

c) Stage of resolution

d) Stage of pre-suppuration

Correct Answer - A

In the stage of supperation of ASOM, pus formation occurs, hence in this stage pulsatile otorrhea or light house sign in seen.

KolleegeApply

935. What is the role of Sodium Fluoride in otosclerosis?

a) It restores the electrolyte equilibrium

b) It hastens recovery of the Overstimulated Cochlea

c) It quickens the maturity of the active focus and reduces osteoclastic resorption

d) It repolarizes the cochlear cells

Correct Answer - C

Ans. is 'c' i.e., It quickens the maturity of the active focus and reduces osteoclastic resorption

[Ref Current Diagnosis and treatment in Otolaryngology 2nd/e p. 678; Otosclerosis and Stapedectomy: Diagnosis, Management, and Complication by Glasscock (7hieme) 1st (2004) p. 61, 62]

Mechanism of action of Sodium fluoride in otosclerosis

1. Reduces osteoclastic bone resorption and increases osteoblastic bone formation : These actions reduce bone remodelling in actively expanding osteolytic lesions and promote recalcification.
2. Inhibits proteolytic enzymes that are cytotoxic to the cochlea : Inhibition of proteolyic enzymes that are cytotoxic to the cochlea is believed to prevent sensorineural deafness.

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936. Chemical labyrinthectomy by transtympanic route is done in Meniere's disease using which drug?

a) Amikacin

b) Gentamicin

c) Amoxycillin

d) Cyclosporine

Correct Answer - B
Ans. is 'b' i.e., Gentamicin [Ref Levine SC, Haberkamp TJ. Labyrinthectomy to correct vertigo
Operative techniques in otolaryngology - Head & neck surgery. 2001. 12:141-143.]
Chemical labyrinthectomy in meneires disease is done using Gentamicin loca**lly.**

KollegeApply

937. Which of the following tests is not used to differentiate between cochlear and retrocochlear hearing loss?

a) SISI TEST

b) Evoked response audiometry

c) Threshold tone decay test

d) Recruitment

Correct Answer - C

Ans. is 'c' i.e., Threshold tone decay test [Ref Dhingra 5th/e p. 31; Zr/e p. 28]

KollegeApply

938. When does the rudimentary cochlea develop in the fetus?

a) First week

b) 4^{th} to 8^{th} week

c) 8^{th} to 12^{th} week

d) 16 to 20^{th} week

Correct Answer - B

Ans. is 'b' i.e., 4^{th} to 8^{th} week [Ref Chap 172-Teview of medical embryology-Ben Pasky]

Development of Inner ear

- After implantation, around the second to third week the developing embryo consists of three layers: endoderm, mesoderm andectoderm.
- The first part of the ear to develop is the inner ear,which begins to form from the ectoderm around the 22nd day of the embryo's development. Specifically, the inner ear derives from two thickenings called otic placodes on either side of the head. Each otic placode recedes below the ectoderm, forms an otic pit and then an otic vesicle. This entire mass will eventually become surrounded by mesenchyme to form the bony labyrinth.
- Around the 33^{rd} day of development, the vesicles begin to differentiate. Closer to the back of the embryo, they form what will become the utricle and semicircular canals. Closer to the front of the embryo, the vesicles differentiate into a rudimentary saccule, which will eventually become the saccule and cochlea.
- Part of the saccule will eventually give rise and connect to the cochlear duct. This duct appears approximately during the sixth

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week and connects to the saccule through the ductus reuniens.

KollegeApply

939. Otosclerosis affects which bone?

a) Stapes

b) Incus

c) Malleus

d) None

Correct Answer - A
Ans. is 'a' i.e., Stapes
Types of otosclerosis

- Following types of otosclerosis have been described :-
1. Fenesteral or stapedial otosclerosis
- It is the most common type (80-90%) The lesion starts just in front of the oval window in an area called fissula ante fenestram" and causes stapes footplate fixation and conductive hearing loss. Hearing loss is purely mechanical.
2. Cochlear otosclerosis (Retrofenestral otosclerosis)
- When present, it is almost always associated with stapedial (fenestral) otosclerosis. It involves region of round window or other areas in the otic capsule. It causes mixed or sensorineural hearing loss which is believed to be toxic due to diffusion of cytotoxic enzymes into the fluid of the membranous labyrinth (In contrast to stapedial otosclerosis, where the deafness is purely mechanical and is conductive). Tinnitus is more common in cochlear otosclerosis.
3. Histologic otosclerosis
- This type of otosclerosis remains asymptomatic and causes neither conductive nor sensorineural hearing loss.

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940. External auditory canal is formed by:

a) 1St branchial groove

b) 1st visceral pouch

c) 2nd branchial groove

d) 2nd visceral pouch

Correct Answer - A

Ans. is. A. 1st branchial groove

KollegeApply

941. Which perforation of the tympanic membrane is most commonly seen with tubotympanic CSOM?

a) Central

b) Anterosuperior

c) Posterosuperior

d) Posteroinferior

Correct Answer - A

Ans. is 'a' i.e., Central [Ref Dhingra 5th le p. 77; Pediatric otolaryngology 2"/e p. 478] Tubotympanic CSOM

- It is also known as safe ear as it does not cause any serious complications
- Infection is is limited to antero-inferior part of middle ear cleft (eustachain tube & mesotympanum) and is associated with central perforation in pars tensa of tympanic membrane.

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942. Most common cause of otitis externa is?

a) Fungal infection

b) Bacterial infection

c) Seborrheic disease

d) Herpes Zoster

Correct Answer - B

Ans. is 'b' i.e., Bacterial infection [Ref Clinical ENT 5th/e p. 223]

- Most common cause of otitis externa is bacterial infection.
- Two most common causative bacteria are staphylococcus aureus and pseudomonas

KollegeApply

943. Which of the following is a cause of objective tinnitus?

a) Impacted Wax

b) Carotid artery aneurysm

c) Meniere's disease

d) Ototoxic drugs

Correct Answer - B

Ans. is 'b' i.e., Carotid artery aneurysm [Refi Dhingra Sth/e p. 145; Scott Brown's 7th/e Vol-3 p. 4029-4030;Tuli p. 125-126]

Kollegeapply

944. Pulsatile tinnitus is a feature of ?

a) Glomus tumour

b) acoustic neuroma

c) malignant otits externa

d) meneire's disease

Correct Answer - A

Ans. is 'a' i.e., Glomus tumour [Ref Logan Turner 10th/e p. 214]

- The earliest symptoms of glomus tumour is pulsatile tinnitus (earliest) and hearing loss. Hearing loss is conductive and slowly progressive. These are followed by blood stained otorrhoea and earache.

Kollegeapply

945. Histelberger's sign is seen in?

a) Acoustic neurom

b) Glomus Tumour

c) Nasal angiofibroma

d) Acute suppurative otitis media

Correct Answer - A

Ans. is 'a' i.e., Acoustic neurom [Ref Acta Otorhinolaryngol Belg. 1987;41(1):40-8.The Hitselberger sign as a perception phenomenon. Benz B, Baumgarten D.]

Hitselberger's sign

- In Acoustic neuroma - loss of sensation in the postero-superior part of external auditory meatus supplied by Arnold's nerve (branch of Vagus nerve to ear).

Kollegeapply

946. Ethmoidal infundibulum lies between ?

a) Bulla ethmoidalis and uncinate process of ethmoid

b) Middle and inferior turbinate

c) Hiatus semilunaris and Inferior meatus

d) Wing of sphenoid and maxillary antrum

Correct Answer - A

Ans. is 'a' i.e., Bulla ethmoidalis and uncinate process of ethmoid

- The hiatus semilunaris is bounded inferiorly by the sharp concave margin of the uncinate process of the ethmoid bone, and leads into a curved channel, the infundibulum, bounded above by the bulla ethmoidalis and below by the lateral surface of the uncinate process of the ethmoid.

KollegeApply

947. What lies between the middle and inferior turbinate?

a) Middle meatus

b) Superior meatus

c) Hiatus semmilunaris

d) Inferior meatus

Correct Answer - A

Ans. is 'a' i.e., Middle meatus [Ref Scott Brown 7'Ve vol 2 p. 1329]

- Superior meatus → * Below superior turbinate (between superior and middle turbinates)
- Middle meatus → Below middle turbinate (between middle and inferior turbinates)
- Inferior meatus → Below inferior turbinate.

KollegeApply

948.

KollegeApply

The narrowest part of the nasal cavity is ?

a) Internal nasal valve

b) Antrochoanal region

c) 1st nasal turbinate

d) Region of inferior concha

Correct Answer - A

Ans. is 'a' i.e., Internal nasal valve [Ref Jafek BW. Anatomy and physiology of the nose. Jafek BW, Stark AK, eds. ENT Secrets. Philadelphia, Pa: Hanley & Belfus; 1996. 77-83.]

- The internal nasal valve involves the area bounded by upper lateral cartilage, septum, nasal floor, and anterior head of the inferior turbinate. This makes up the narrowest portion of the nasal airway

Kollegeapply

949.

KollegeApply

Narrowest part of the nasal cavity is ?

a) Vestibule

b) Choanae

c) Inferior turbinate

d) Middle turbinate

Correct Answer - C

Ans. is 'c' i.e., Inferior turbinate [Ref Heidari Z, Mahmoudzadeh-Sagheb H, Khammar T, Khammar M (May 2009). "Anthropometric measurements of the external nose in 18-25-year-old Sistani and Baluch aborigine women in the southeast of Iran". Folia Morphol. (Warsz) 68 (2): 88-92]

- The internal nasal valve comprises the area bounded by the upper lateral-cartilage, the septum, the nasal floor, and the anterior head of the inferior turbinate. In the narrow (leptorrhine) nose, this is the narrowest portion of the nasal airway.

KolegeApply

950. Saddle nose deformity is seen in?

a) Primary Syphilis

b) Secondary syphilis

c) Tertiary syphilis

d) Lupus Vulgaris

Correct Answer - C

Ans. is 'c' i.e., Tertiary syphilis [Ref Dhingra 5th/e p. 184]

Syphilis of nose occurs as :-

1. Primary :- Rare and manifests as primary chancre of the vestibule.
2. Secondary :- Rarely recognized and manifests as simple rhinitis, crusting and fissuring.
3. Tertiary :- This is the stage in which nose is involved most commonly. There is formation of gumma followed by bony perforation of nasal septum. Bridge of the nose collapses causing a saddle deformity. Atrophic rhinitis may occur as a complication.

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951. All of the following are true about vasomotor rhinitis except ?

a) It is allergic

b) It is due to parasympathetic overactivity

c) Resistant cases may need cryotherapy

d) It may lead to hypertrophic rhinitis

Correct Answer - A

Ans. is 'a' It is allergic [Ref Scott's Brown 7th ie p. 2122]

Vasomotor rhinitis

- Vasomotor rhinitis is a nonallergic condition that involves a constant runny nose, sneezing and nasal congestion, i.e., the nose is stuffy or runny for reasons other than allergies and infections. The exact etiology is unknown, but triggers include emotions, odors, poor air quality, spicy foods, and medication side effects.

KalingaApply

952. All of the following are true about vasomotor rhinitis except?

a) It is a nonallergic condition

b) it is due to parasympathetic overactivity

c) It may cause paroxysmal episodes of sneezing

d) It is an infective condition

Correct Answer - D

Ans. is 'd' i.e., It is an infective condition [Ref Dhingra 5th/e p. 170]

KollegeApply

953. In evaluation of a case of immotile nasal cilia, which of the following investigations should prove useful?

a) Rhinogram

b) Xray nasal and paranasal sinuses

c) Sweat sodium levels

d) Nitric oxide test

Correct Answer - D

Ans. is 'd' i.e., Nitric oxide test [Ref Leigh MW, Pittman JE, Carson JL, Ferkol TW, Dell SD, Davis SD. Clinical and genetic aspects of primary ciliary dyskinesia/Kartagener syndrome. Genet Med. 2009 Jul. 11(7):473-87]

Screening tests for immotile cilia syndrome

- Nitric oxide : Measuring exhaled nasal nitric oxide, which is mostly reduced in primary ciliary dyskinesia, is a good screening test for immotile-cilia syndrome with a good negative predictive value. Studies have demonstrated a relationship between nasal nitric oxide levels, nasal oxide synthase mRNA expression, and ciliary beat frequency. There is also a significant inverse correlation between the degree of aplasia and/or hypoplasia of the paranasal sinus and nasal nitric oxide values in primary ciliary dyskinesia patients.

YouBeAble

954. All of the following are features of ethmoidal polyp except ?

a) Common in adults

b) Commonly Singular

c) Commonly bilateral

d) Is usually allergic

Correct Answer - B

Ans. is `b' i.e., Commonly Singular [Ref Dhingra 5thle p. 187; Tuli 1"/e p. 173]

- Antrochoanal polyp grows backward (posteriorly), therefore, it may not be visible on anterior rhinoscopy, while posterior rhinoscopy shows smooth, greyish white, spherical mass in choana.
- On the other hand, ethmoidal polyps grow anteriorly. Therefore, they are best seen on anterior rhinoscopy and may not be seen on posterior rhinoscopy.

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955. All of the following are treatments of multiple bilateral ethmoidal polyps except?

a) Functional endoscopic sinus surgery

b) Intranasal ethmoidectomy

c) Extranasal ethmoidectomy

d) Caldwll Luc Surgery

Correct Answer - D

Ans. is 'd' i.e., Caldwil Luc Surgery [Ref Scott Brown, Vol-IL p.1701; Dhingra 5`"/e p. 188, 430]

Surgical treatment of ethmoidal polyps :

1. Functional endoscopic sinus surgery (FESS) : Surgery of choice when available.
2. Polypectomy : When there are one or two pedunculated polyps.
3. Intranasal ethmoidectomy : Indicated when polyps are multiple and sessile.
4. Extranasal ethmoidectomy : This is indicated when polyps recur after intranasal procedures.
5. Transantral ethmoidectomy : Indicated when infection and polypoidal changes are also seen in the maxillary antrum. In this case antrum is opened by caldwell-Luc approach and the ethmoidal air cells approached through the medial wall of the antrum.

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956. What is the treatment of choice for ethmoidal polyps?

a) Functional Endoscopic sinus surgery with polypectomy

b) Intranasal ethmoidectomy

c) Extranasl ethmoidectomy

d) Transantral ethmoidectomy

Correct Answer - A

Ans. is 'a' i.e.,Functional Endoscopic sinus surgery with polypectomy [Ref See above explanation]

Kollegeapply

957. The artery which leads to bleeding in Woodruff's area is?

a) Anterior ethmoidal artery

b) Sphenopalatine artery

c) Greater palatine artery

d) Superior labial artery

Correct Answer - B

Ans. is 'b' i.e., Sphenopalatine artery [Ref Scott Brown 7^{h}/e Vol-2p. 1597; Dhingra 5th/e p. 190]

Woodruff's area : ?

- It is situated under the posterior end of inferior turbinate. Sphenopalatine artery anastomoses with posterior pharyngeal artery here. Posterior epistaxis occurs in this area.

KollegeApply

958. Intrathecal fluorescein with endoscopic visualization is useful in diagnosis of?

a) Deviated nasal septum

b) Multiple ethmoidal polyps

c) Rhinitis Medicamentosa

d) CSF Rhinorrhoea

Correct Answer - D

Ans. is 'd' i.e., CSF Rhinorrhoea [Ref: Logan Turner 10(h/e p. 28, Dhingra 5th/e p. 179]

Detection of site of CSF leak in CSF Rhinorrhoea

1. HRCT : - HRCT with or without godolinium is the most helpful study for identifying the site of leak, i.e., investigation of choice.
2. MRI : - MRI with heavy T2 weighted image may highlight CSF sufficiently to show the leak.
3. CT cisternography : - CT scan after injection of contrast dye is effective in patients with an active leak.
4. Radioisotope cisternography : - Radioisotope injected intrathecally and measured.
5. Fluorescin dye : - Intrathecal fluorescin with endoscopic visualization.

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959. All of the following are features of a nasal foreign body except?

a) Foul smelling discharge

b) Epistaxis

c) Nasal obstruction

d) Septal perforation

Correct Answer - D

Ans. is 'd' i.e., Septal perforation [Ref Dhingra S^{a}Ve p. 176; Logan Turner 10$^{'h}$/e p. 63]

Foreign body in nose

- A nasal foreign body is anything that gets stuck inside the nose. Inanimate foreign body (object) is more common than animate foreign body. Common objects found in noses include food material (peas, beans, nuts), tissue paper, beads, toys and rocks. Animate foreign bodies are worms, larvae or maggots. Most cases of foreign bodies in the nose and nasal cavity are not serious and occur in toddlers and children from 1-8 years. Because children develop the ability to pick up objects at about the age of 9 months, this problem is much less common before 9 months of age.

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960. All of the following are features of a nasal foreign body except?

a) Vestibulitis

b) Epistaxis

c) Nasal obstruction

d) Deviated septum

Correct Answer - D

Ans. is 'd' i.e., Deviated septum [Ref Dhingra 5thie p. 176; Logan Turner 10`"/e p. 63]

KolleegeApply

961.

KollegeApply

All of the following are causes of perforation of cartilaginous part of nasal septum except?

a) Tuberculosis

b) Leprosy

c) Lupus

d) Syphilis

Correct Answer - D

Ans. is 'd' i.e., Syphilis [Ref Dhingra 5th/e p. 166; Scott-Brown's Otolaryngology 7th/e Vol-2 chapter-124 p. 1583]

- A nasal septal perforation is a through-and-through defect in any portion of the cartilaginous or bony septum with no overlying mucoperichondrium or mucoperiosteum on either side.
- Perforation of bony part :- Syphilis
- Perforation of cartilaginous part :- TB, leprosy, lupus.

Rules Apply

962. All of the following are true about nasal myiasis except?

a) Common in vasomotor rhinitis

b) Intense nasal irritation present

c) Meningitis may occur in severe disease

d) Chloroform water is one of the modes of treatment

Correct Answer - A

Ans. is 'a' i.e., Common in vasomotor rhinitis ***[Ref Dhingra 5th/e p. 178]***

KollegeApply

963. ETHMOIDAL BULLAE are seen in?

a) Posterior ethmoidal air cells

b) Middle ethmoid air cells

c) Superior ethmoidal air cells

d) Inferior ethmoidal air cells

Correct Answer - B

Ans. is 'b' i.e., Middle ethmoid air cells ***[Ref: Logan Turner 10th le p.* 379; *Dhingra 5th/e p. 153, 154]***

KollegeApply

964. What is the type of epithelium of the adenoid?

a) Pseudostratified ciliated columnar epithelium

b) Non keratinized squamous epithelium

c) Cuboidal epithelium

d) Columnar epithelium with goblet cells

Correct Answer - A

Ans. is 'a' i.e., Pseudostratified ciliated columnar epithelium

[Ref Wiatrak BJ, Woolley AL. Pharyngitis and adenotonsillar disease. Cummings CW, Fredrickson JM , Harker LA, Crause CJ, Schuller DE, Richardson MA. Otolaryngology Head and Neck Surgery. ..V/e. London: Mosby; 1998. 188-215.]

The adenoid is covered by a pseudostratified ciliated columnar epithelium that is plicated to form numerous surface folds The nasopharyngeal epithelium lines a series of mucosal folds, around which the lymphoid parenchyma is organized into follicles and is subdivided into 4 lobes by connective tissue septa Seromucous glands lie within the connective tissue, and their ducts extend through the parenchyma and reach the nasopharyngeal surface.

Collect&Apply

965. All of the following are features of enlarged adenoids except?

a) Otitis media

b) Nasal obstruction

c) Failure to thrive of child

d) Esophagitis

Correct Answer - D

Ans. is 'd' i.e., Esophagitis ***[Ref Dhingra Vie p. 254]***

Clinical features of enlarged adenoids

Enlarged and infected adenoids may cause nasal, aural (ear), and general symptoms.

1) Nasal symptoms

- Nasal obstruction is the commonest symptom. This result in mouth breathing. As the respiration and feeding cannot take place simultaneously, child fails to thrive.
- Other symptoms are nasal discharge (wet bubbly nose), sinusitis, epistaxis and toneless voice with loss of nasal quality (Rhinololia clausa).

2) Aural symptoms

- Tubal obstruction
- Otitis media :- Recurrent acute otitis media, CSOM, serous otitis media

3) General symptoms

- Adenoidfacies: Elong at edface with dullex pression,open mouth,prominent & crow dedup per teeth, hit chedup perlip, pinched in appearance of nose and high arched palate. Pulmonary hypertension, aprosexia (lack of concentration).

CollegeApply

966. Anterior tonsillar pillar is formed by?

a) Palatopharyngeal fold

b) Palatoglossal fold

c) Pterygopalatine arch

d) Valleculae

Correct Answer - B
Ans. is 'b' i.e., Palatoglossal fold
Anterior tonsillar pillar- Palatoglossal fold
Posterior tonsillar pillar- Palatopharyngeal fold

KollegeApply

967. One of the following is true regarding Zenker diverticulum ?

a) It is a pulsion diverticulum

b) It projects anteriorly

c) Commonly seen in young males

d) It is between superior and middle constrictor

Correct Answer - A

Ans. is 'A' i.e., It is a pulsion diverticulum

Hypopharyngeal diverticulum or Zenker's diverticulum or pharyngeal pouch

It is a pulsion diverticulum where pharyngeal mucosa herniates through the Killian's dehiscence, a weak area between two parts of the inferior constrictor.

It is the most common esophageal diverticulum.

The diverticula arise posteriorly in the midline of neck. The mouth of the diverticula is in the midline but projects laterally (usually left laterally)

Zenker's diverticula are rarely seen below 30 yrs of age, most patients are over 50.

CollegeApply

968. All of the following are extrinsic laryngeal membranes except?

a) Quadrangular membrane

b) Hyoepiglottic ligament

c) Cricotracheal membrane

d) Thyrohyoid membrane

Correct Answer - A

Ans. is 'a' i.e., Quadrangular membrane

[Ref Merati AL, Bielamowicz SA. Textbook of Laryngology. San Diego: Plural Publishing Inc 2006.]

Quadrangular membrane

1. Aryepiglottic ligament (superior border of membrane)
2. Vestibular ligament (Inferior border of membrane

Kollege Apply

969. All of the following are true about Spasmoidic Dysphonia except ?

a) It may be of adductor or abductor type

b) Abductor type is characterized by Whispering quality of voice

c) Adductor type is characterized by Breathlessness

d) It is focal Laryngeal dystonia

Correct Answer - C

Ans. is 'c' i.e., Adductor type is characterized by Breathlessness

[RefiSulica L (December 2004). "Contemporary management of spasmodic dysphonia". Current Opinion in Otolaryngology & Head and Neck Surgery. 12 (6)]

KottageApply

970. Which of the following cancers do not present with cervical lymphnode involvement?

a) Glottic Cancer

b) Subglottic Cancer

c) Papillary thyroid cancer

d) Oral cancer

Correct Answer - A

Ans. is 'a' i.e., Glottic Cancer ***[Ref Dhingra 5th Ie p. 327; 41' p. 283]***

True vocal cords are devoid of lymphatic, hence less chance of cervical nodal metastasis

KollegeApply

971. Which of the following is not a premalignant condition oral cancer?

a) Leukoplakia

b) Erythroplakia

c) Oral submucous fibrosis

d) Systemic Sclerosis

Correct Answer - D

Ans. is 'd' i.e., Systemic Sclerosis [***Ref Devita 7"Ve p. 982; Bailey & love 25`Ve p. 735]***

Lesions with increased risk of malignancy in oral cancer

- Premalignant condition :- Leukoplakia, Erythroplakia, Speckled erythroplakia, chronic hyperplastic candidiasis.
- Conditions increasing risk :- Oral submucous fibrosis, syphilitic glossitis, sideropenic dysphagia (Peterson Kelly syndrome).
- Risk is doubtful : - Oral lichen planus, DLE, Dyskeratosis congenita.

FoundApply

972. Which is the narrowest portion of the esophagus?

a) At the cricopharyngeal sphincter

b) At the crossing of the left main bronchus

c) At the level of the aortic arch

d) At the diagphragmatic aperture

Correct Answer - A
Ans. is 'a' i.e., At the cricopharyngeal sphincter
[Gray H. Chapter 35: Mediastinum. Standring S, ed. Gray's Anatomy: The Anatomical Basis of Clinical Practice. 40`Ve New York, NY: Churchill Livingstone Elsevier; 2008. 939-57.]
Cricopharyngeal sphincter is the narrowest portion of esophagus

Kollege Apply

973. All of the following are indications for tracheostomy except ?

a) Coma after head injury

b) Maxillofacial injury

c) Bilateral abductor palsy

d) Superior laryngeal nerve palsy

Correct Answer - D

Ans. is 'd' i.e., Superior laryngeal nerve palsy ***[Ref Ajay Yadav $^{z}i^{th}$ie p. 215; Dhingra 5thie p. 337]***

<u>Tracheostomy</u>

- A tracheostomy is a surgical procedure to create an opening through the neck into the anterior wall of trachea.
- A tube is usually placed through this opening to provide an airway and to remove secretions from the lungs. The tube is called *tracheostomy tube.*

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974. In Caldwell Luc operation, the approach is through the?

a) Sublabial Approach leading to opening of mandibular antrum

b) Through the sphenopalatine recess

c) Opening of maxillary antrum through gingivolabial approach

d) Superior meatus

Correct Answer - C

Ans. is 'c' i.e., Opening of maxillary antrum through gingivolabial approach *[Ref Dhingra S^{ti}le p. 422]*

Caldwell-Luc operation is a process of opening the maxillary antrum through canine fossa by sublabial approach and dealing with the pathology inside the antrum.In this surgery, antrum is reached through a incision in gingivolabial sulcus (from lateral incisor to 2$^{"d}$ molar) and then opening of antrum in this area.

Kollege Apply

975. Caldwell Luc Surgery has its approach to the maxillary antrum through ?

a) Gingivolabial sulcus

b) Inferior orbital rim

c) Nasal septum

d) Cribriform plate

Correct Answer - A

Ans. is 'a' i.e.,Gingivolabial sulcus *[Ref Dhingra 5th Ie p. 422]*

KollegeApply

976.

KollegeApply

Submucosal resection is the treatment of choice of?

a) DNS in adults

b) DNS in children

c) Sluder's Neuralgia

d) Nasal polyp

Correct Answer - A

Ans. is 'a' i.e., DNS in adults *[Ref Dhingra 5th /e p. 423]*

Submucous resection (SMR) is a surgical procedure to correct the deformity of nasal septum.

The principle of this procedure is to remove deviated cartilage and bone from beneath the mucosal lining of nasal septum, leaving a corrected septum largely composed of scar tissue.

Submucous resection is not advocated in children upto 17 years of age as it may interfere with development of the facial bones.

Knlege Apply

977. All of the following are removed in vertical hemilaryngectomy except?

a) Half Glottis

b) Half Supraglottis

c) Half tongue

d) Half Subglottis

Correct Answer - C

Ans. is 'c' i.e., Half tongue ***[Ref Dhingra 4th/e p. 284; http://128.255.52.245/oto/Beta/database/contents]***

Vertical hemilaryngectomy means excision of one half of the larynx on one side, i.e., vertical half is removed which include vertical half of supraglottis, glottis and subglottis.

Horizontal hemilaryngectomy is the excision of supraglottis only, also known as supraglottic laryngectomy.

Apply

978. All of the following are complications of maxillary sinus lavage and insufflation except?

a) Air embolism

b) Orbital injury

c) Epistaxis

d) Facial nerve injury

Correct Answer - D

Ans. is 'd' i.e., Facial nerve injury ***[Ref Schlemmer KD, Naidoo SK. Complicated sinusitis in a developing country, a retrospective review. Int J Pediatr Otorhinolaryngol. 2013 May 17]***

<u>Complication of Maxillary sinus lavage and insufflation</u>

- Complications of nonendoscopic drainage procedures can be minor or severe.
- The most common complication is failure to enter the sinus because of improper positioning of the trocar, incomplete penetration of the sinus mucosa, or the presence of a hypoplastic antrum.
- Epistaxis may occur because of laceration of the nasal mucosa or preexisting coagulopathies necessitating packing.
- Severe complications include orbital injury, air embolism, and death secondary to injection of air into the sinus.

KollegeApply

979. Miracle fruit is used to change the taste from?

a) Sour to Bitter

b) Sour to Sweet

c) Bitter to sweet

d) Salty to sweet

Correct Answer - B

Ans. is 'b' i.e., Sour to Sweet ***[Ref Peter Hanelt, ed. (2001).Mansfeld's encyclopedia of agricultural and horticultural crops 2. Springer. p. 1660. ISBN 3-540-41017-1.]***

Miracle Fruit contains a glycoprotein called miraculin, which binds to the tongue's taste buds when the fruit is consumed.

Miraculin acts as a sweetness inducer when it comes in contact with acids, causing sour foods to taste sweet, temporarily.

KnowledgeApply

980. The main muscle affected in congenital muscular torticollis is?

a) Sternocleidomastoid

b) Trapezius

c) Scalenus Anticus

d) Omohyoid

Correct Answer - A

Ans. is 'a' i.e., Sternocleidomastoid

[Ref: Cooperman, Daniel R. (1997). Karmel-Ross, Karen, ed. "The Differential Diagnosis of Torticollis in Children". Physical & Occupational Therapy in Pediatrics. 17 (2): 1-11]

- The cause of congenital muscular torticollis is unclear. Birth trauma or intrauterine malposition is considered to be the cause of damage to the sternocleidomastoid muscle in the neck. Other alterations to the muscle tissue arise from repetitive microtrauma within the womb or a sudden change in the calcium concentration in the body which causes a prolonged period of muscle contraction.

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981. Where is the auditory cortex located inside the brain?

a) Superior temporal gyrus

b) Inferior temporal gyrus

c) Area 3,1,2

d) Cingulate gyrus

Correct Answer - A
Ans. is 'a' i.e., Superior temporal gyrus *[Ref Pickles, James* 0. *(2012). An Introduction to the Physiology of Hearing (4th ed.). Bingley, UK: Emerald Group Publishing Limited, pp. 215-217.]*
Primary Auditory Cortex is located bilaterally, roughly at the upper sides of the temporal lobes - in humans on the superior temporal plane, within the lateral fissure and comprising parts of Heschl's gyrus and the superior temporal gyrus, including planum polare and planum temporale (roughly Brodmann areas 41, 42, and partially 22).

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982. All of the following are features of Tubotympanic CSOM except ?

a) Profuse discharge

b) Hearing loss

c) Extreme pain

d) Sometimes paradoxical improvement in hearing is seen

Correct Answer - C

Ans. is 'c' i.e., Extreme pain [Ref Dhingra 5th/e p. 77; Pediatric otolaryngology 2"/e p. 478]

Clinical features of tubotympanic CSOM

- Profuse mucopurulent discharge which is not foul smelling, i.e., non-foul smelling discharge
- Hearing loss (conductive type). If sensorineural component also occurs (i.e., mixed type), it arouses the suspicion of toxic deafness.
- Sometimes, patient reports a paradoxical effect, i.e., hears better in the presence of discharge than when the ear isdry. This is due to round window shielding effect produced by discharge which helps to maintain phase differential.
- There is no pain, if it occurs it is due to associated otitis externa not due to otitis media.
- Since the infected area is open at both ends, discharge does not accumulate in the middle ear cavity
- Ossicular chain is mostly uninvolved, if involved only long process of incus is involved.

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983. Features of Usher's Syndrome include all except ?

a) Night Blindness

b) Visual Impairment

c) Multiple Neurofibromas

d) Hearing deficit

Correct Answer - C

Ans. is 'c' i.e., Multiple Neurofibromas [Ref Mets MB, Young NM, Pass A, Lasky JB (2000). "Early diagnosis of Usher syndrome in children". Transactions of the American Ophthalmological Society. 98: 237-45.]

Usher syndrome

- Usher syndrome is a relatively rare genetic disorder caused by a mutation in any one of at least 11 genes resulting in a combination of hearing loss and visual impairment, and is a leading cause of deafblindness. Usher syndrome is incurable at present.
- Other names for Usher syndrome include Hallgren syndrome, Usher-Hallgren syndrome, retinitis pigmentosa dysacusis syndrome, and dystrophia retinae dysacusis syndrome.
- This syndrome is characterized by hearing loss and a gradual visual impairment. The hearing loss is caused by a defective inner ear, whereas the vision loss results from retinitis pigmentosa (RP), a degeneration of the retinal cells.Usually, the rod cells of the retina are affected first, leading to early night blindness and the gradual loss of peripheral vision. In other cases, early degeneration of the cone cells in the macula occurs, leading to a loss of central acuity. In some cases, the foveal vision is spared, leading to "doughnut vision"; central and peripheral vision are intact, but an annulus exists

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around the central region in which vision is impaired.

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984. Which *eye* muscle has radial, longitudinal and circular fibres?

a) Sphinctor Pupillae

b) Dilator Pupillae

c) Levator palpebrae Superioris

d) Ciliary muscle

Correct Answer - D

Ans. D. Ciliary muscle

The ciliary muscle is a ring of smooth muscle in the eye's middle layer (vascular layer) that controls accommodation for viewing objects at varying distances and regulates the flow of aqueous humour into Schlemm's canal.

It changes the shape of the lens within the eye.

The ciliary fibers have circular, longitudinal (meridional) and radial orientations.

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985. In primary open-angle glaucoma pilocarpine eye drops lowers the intraocular pressure by its direct action on the:

a) Trabecular meshwork

b) Ciliary epithelium

c) Longitudinal fibres of the ciliary muscle

d) All of the above

Correct Answer - D
Ans. D
Pilocarpine as eye drops it is **used** to manage **angle closure glaucoma** until surgery can be performed, ocular hypertension, primary **open angle glaucoma**, and to bring about constriction of the pupil following its dilation.
Mechanism of **Action:**
Pilocarpine is used as a miotic and in the treatment of glaucoma
Pilocarpine contracts the ciliary muscle, causing increased tension on the scleral spur and opening of the trabecular meshwork spaces to facilitate outflow of aqueous humor. Outflow resistance is **reduced**, **lowering intraocular pressure** (**IOP**).

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986. Axial length of eye ball is:
March 2005

a) 16 mm

b) 20 mm

c) 24 mm

d) 28 mm

Correct Answer - C

Ans. C: 24 mm

The eye of the newborn is hypermetropic and the average axial length is about 18mm.At the age of 3 years it is 23 mm and from age 3-14 years it increases by 1 mm.

In the emmetropic eye, the axial length (from the posterior corneal surface to the retina) varies from 22 to 26 millimeters. In the emmetropic eye (which has no refractive error), the range of corneal refracting power is between 39 and 48 diopters, while the range of lenticular refracting power is between 15 and 24 diopters.

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987. Required for IOL power calculation ?

a) Corneal topography

b) Gonioscopy

c) Indirect Ophthalmoscopy

d) Keratometry

Correct Answer - D
Ans, D. Keratometry
IOL power calculation requires keratometry and biometry (axial length of eyeball).

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988. Sturm's conoid refers to configuration of the rays refracted through:

a) Concave spherical surface

b) Convex spherical surface

c) Toric surface

d) Irregular surface

Correct Answer - C
Ans. Toric surface
SturmS Conoid
It is an optical condition in which the refractive power of lens or cornea is not the same in all meridians, hence two focal points separated by a focal interval are formed which is called the Sturm's Conoid.

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989. True about imaging spectrometry is ?

a) Allows simultaneous measurements of reflectance spectra along a line

b) Is useful in diagnosing against the rule astigmatism

c) Spectrometry is an essential investigation before trabeculectomy

d) It is based on the principle of Sturm's Conoid

Correct Answer - A

Ans. A. Allows simultaneous measurements of reflectance spectra along a line

'Imaging sPectrometry is a new technique that permits simultaneous measurements of reflectance spectra at different locations along a line.

Results are three-dimensional images, whose coordinates are location, wavelength, and reflectance.

A conventional fundus camera is adapted to a spectrograph and an intensified charge coupled device (CCD) matrix detector system.

Considering the radiation transPort in single fundus layers, the local distribution of the concentration-thickness product of xanthophyll, melanin, and choroidal blood can be calculated'

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990. Refractory error measured by all except ?

a) Keratometry

b) Retinoscopy

c) Refractometry

d) Spectrometry

Correct Answer - D

Ans. D. Spectrometry

The procedure of determining and correcting refractive errors is termed as reftaction. The refraction comprises two complementary methods : -

1. Objective methods: Objective methods of refraction include :- (i) Retinoscopy, (ii) Refractometry, (iii) Keratometry,
2. Subjective methods: These are :- (i) Subjective verification of refraction, (ii) Subjective refining of refraction, (iii) Subjective binocular balancing.

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991. Ansiokonia is ?

a) Projection of different coloured images into visual cortex

b) Projection of different shaped images into visual cortex of two retinae

c) Change in the velocity of perceived objects

d) Partial intermittent visual loss

Correct Answer - B

Ans. B. Projection of different shaped images into visual cortex of two retinae

Anisoeikonia is defined as a condition wherein the images projected on the visual cortex from the two retinae are abnormally unequal in size or shape-

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992. Most powerful refractory surface of eye is -

a) Conjunctiva

b) Cornea

c) Vitreous

d) Lens

Correct Answer - B

Ans. B. Cornea

The cornea, with the anterior chamber and lens, refracts light, with the cornea accounting for approximately two-thirds of the eye's total optical power.

In humans, the refractive power of the cornea is approximately 43 dioptres.

The diopteric power of reduced eye is + 5OD, of which + 44D is contributed by cornea and + 16D by the crystalline lens.

Total diaopteric power of schematic eye is + 58D, of which cornea contributes +43D and the lens +15D.

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993. Strabismic amblyopia is more common in patients with:

a) Intermittent squint

b) Alternate squint

c) Constant squint

d) Latent squint

Correct Answer - C
Ans. Constant squint

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994. Astigmatism is defined as ?

a) Refractory error wherein refraction varies along different meridians

b) Refractory error due to long AP length of eye ball

c) Varying refractory error in both eyes

d) Varying Shape perception by both eyes

Correct Answer - A

Ans. A. Refractory error wherein refraction varies along different meridians

- Astigmatism is a type of refractive error wherein the refraction varies in the different meridia.
- Consequently, the rays of light entering in the eye cannot converge to a point focus but form focal lines.
- The refractive error of the astigmatic eye stems from a difference in degree of curvature refraction of the two different meridians (i.e., the eye has different focal point in different planes).
- For example, the image may be clearly focused on retina in the horizontal plane, but not in the vertical plane.
- The most common cause of astigmatism is abnormality of corneal curvature.
- Other less common cause are lenticular (curvature abnormality of lens,oblique position of lens) and retinal (oblique placement of macula).

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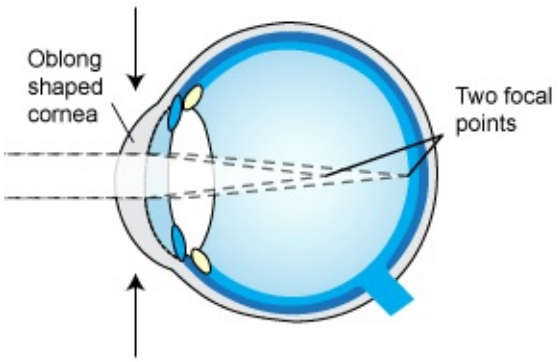
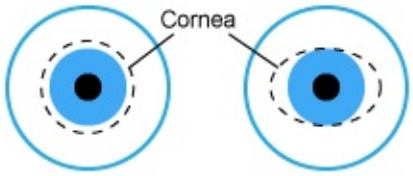


The front of the eye



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995. What is regular astigmatism?

a) Astigmatism in which the principal meridians are parallel

b) Astigmatism in which the principal meridians are perpendicular

c) Asymptomatic astigmatism

d) Astigmatism as a result of cataract surgery

Correct Answer - B

- **Regular stigmatism → Principal meridians are pendicular**
- **Irregular astigmatism → Principal meridians are not perpendicular.**

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996. Anteroposterior change in length of *eye* is called ?

a) Anisokonia

b) Curvatural anisotropia

c) Axial Ametropia

d) Emmetropia

Correct Answer - C

Ans. C. Axial Ametropia

- Ametropia (a condition of refractive error) is defined as a state of refraction, wherein the parallel rays of light coming from infinity are not focused on retina, rather focused either in front (in myopia) or behind (in hypermetropia) the sensitive layer of retina.

Axial Ametropia:

- It is the commonest form of ametropia (both myopia and hypermetropia).
- In hypermetropia, there is an axial shortening of eyeball.
- So, image is formed behind the retina.
- In myopia, there is an axial lengthening of eyeball.
- So, image is formed in front of the retina.
- 1 mm change in axial length leads to ametropia of 3D.
- For example 1 mm shortening in axial length causes hypermetropia of 3D.

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997. In a case of myopia, LASIK will provide correction upto ?

a) 20D

b) 12D

c) 6D

d) 4D

Correct Answer - B

Ans. B. 12D

Surgical Procedure	**Myopia correction**
Radial Keratomy	-2to - 6D
Photorefractive keraotomy	2to 6D
LASIK	Upto - 12D
Extraction of lens	-16to -18D
Phakic IOL	>-12D
Intercorneal ring (ICR)	1-6D

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998. What is reverse hypopyon?

a) Collection of pus in the vireous

b) Collection of emulsified silicon oil in anterior chamber

c) Abscess in the orbit

d) Seen in corneal ulcer close to being ruptured

Correct Answer - B

Ans, B. Collection of emulsified silicon oil in anterior chamber
Reverse hypopyon

- Collection of silicon oil in the anterior chamber may lead to the appearance of a reverse hypopyon.
- This is due to the emulsified oil being less denser than the aqueous layer

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999. Pterygium all are true except:

a) Arise from any part of conjunctiva

b) Can cause astigmatism

c) Surgery is treatment of choice

d) UV exposure is risk factor

Correct Answer - A
Ans. Arise from any part of conjunctiva

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1000. Silk retina is seen in ?

a) Hypermetropia

b) Myopia

c) Astigmatism

d) Presbyopia

Correct Answer - A
Ans. A. Hypermetropia
Clinical findings of hypermetropia
1. Small eyeball and cornea
2. Shallow anterior chamber
3. Fundus shows pseudopapillitis and shot silk appearance.
4. Degenerative retinoschisis

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1001. Pseudopapilitis with silk shot appearance is seen in?

a) Hypermetropia

b) Myopia

c) Astigmatism

d) Presbyopia

Correct Answer - A
Ans.A. Hypermetropia
Clinical findings of hypermetropia
1. Small eyeball and cornea
2. Shallow anterior chamber
3. Fundus shows pseudopapillitis and shot silk appearance.
4. Degenerative retinoschisis

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1002. 1mm change axial length of the eyeball would change the refracting power of the *eye* by ?

a) 1D

b) 2D

c) 3D

d) 4D

Correct Answer - C
Ans. C. 3D
1 mm change in axial length leads to ametropia of 3D.
For example I mm shortening in axial length causes hypermetropia of 3D.

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1003. Lensometer detects ?

a) Correct power of a pair of glasses

b) Corneal topography

c) Biochemical constitution of lens

d) Power of IOL

Correct Answer - A

Ans. A. Correct power of a pair of glasses

Lensometer

- A lensmeter or lensometer, also known as a focimeter or vertometer, is an ophthalmic instrument.
- It is mainly used by optometrists and opticians to verify the correct prescription in a pair of eyeglasses, to properly orient and mark uncut lenses, and to confirm the correct mounting of lenses in spectacle frames.
- Lensmeters can also verifr the power of contact lenses, if a special lens support is used.

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1004. All of the following are treatments of myopia except?

a) LASIK

b) Phakic intraocular lens

c) Radial Keratotomy

d) Holmium laser thermoplasty

Correct Answer - D

Ans. D. Holmium laser thermoplasty

Refractive surgeries for myopia

- Radial keratotomy
- Laser insitu keratomileusis (LASIK)
- Phakic intraocular lens (IOL)
- Orthokeratology
- Photorefractive keratotomy (PRK)
- Extraction oflens (Fucala's operation)
- Intercorneal ring implantation

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1005. Index myopia is seen in ?

a) Nuclear cataracts

b) Chorioretinitis

c) Choroidal melanoma

d) Posterior uveitis

Correct Answer - A
Ans. A. Nuclear cataracts
Nuclear changes of aging induce a modification of refractive index of lens and produce an index myopia.
'Nuclear cataracts cause a general decrease in the transperancy of the lens nucleus. They are associated with index myopia"

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1006. Sudden painless loss of vision- All are causes except?

a) CRAO

b) CSR

c) Acute congestive glaucoma

d) Vitereous Hemorrhage

Correct Answer - C
Ans. C. Acute congestive glaucoma

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1007. All are true regarding cornea except:

a) Endothelium help in maintaining dehydrated state

b) Oxygen is mostly derived by epithelium directly from the air through tear film

c) Glucose supply for corneal metabolism is mainly derived from the aqueous

d) Corneal thickness is more at center than periphery

e) Richly vascular

Correct Answer - D:E

Answer- (D) Corneal thickness is more at center than periphery (E) Richly vascular

Outer & fibrous coat of EYEBALL.

Transparent, anterior 1/6th segment of eyeball.

Non-vascular

Most of the refraction in eye occur at anterior surface of cornea (air-tear interface) ,i.e., Anterior surface of cornea is the most important refractive structure of eye.

The most actively metabolising layers of the cornea are epithelium & endothelium.

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1008. All of the following are causes Crystal keratopathy except?

a) Cystinosis

b) Schnyder's Dystrophy

c) Bietti's Dystrophy

d) Diabetes

Correct Answer - D
Ans. D. Diabetes
Causes of Crystalline Keratopathy :- Infections, Schnyder corneal dystrophy, Bietti corneoretinal dystrophy, Cystinosis, Lymphoproliferative disorders, Medication-induced.

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1009. Corneal tattooing may be done with:

a) Gold chloride

b) Calcium chloride

c) Copper sulfate

d) Potassium permanganate

Correct Answer - A
Ans. Gold chloride

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1010. Subconjunctival hemorrhages are evident in the following cases except ?

a) Whooping cough

b) Scurvy

c) Purpura

d) Pellagra

Correct Answer - D

Ans. is 'd' i.e., Pellagra

Subconjunctival haemorrhage

- Occurs due to the rupture of small vessels.
- The condition, though unsightly, is trivial. This can occur spontaneously in elderly people with fragile vessels or those with systolic hypertension or after local ocular trauma or eye surgery.
- Very minute ecchymoses, or possibly thromboses, are seen in severe conjunctivitis; large extravasations accompany severe straining, especially in old people, as on lifting heavy weights or vomiting.
- They are not infrequently seen in children with whooping cough and may occur in scurvy, blood diseases such as purpura, or in malaria.
- Recurrent subconjunctival haemorrhages warrant investigations for a bleeding diatheses or leukaemia. The differential diagnosis includes Kaposi sarcoma.
- More serious are the large sub-conjunctival ecchymoses which seep forwards from the fonix following head injuries. They are due to an extravasation of blood along the floor of the orbit, secondary to a fracture of the base of the skull.
- In fractures of the sphenoid the blood appears later on the temporal side than elsewhere.

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- Haemorrhages also result from severe or prolonged pressure on the thorax and abdomen, as in persons squeezed in a crowd or by machinery.
- The blood gradually changes colour and gets absorbed in 1 to 3 weeks without treatment.
- The use of aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) should be avoided and if mild ocular irritation is present, artificial tears can be prescribed four to six times a day.

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1011. **Kayser Fleischer ring is found in which layer of cornea?**

a) Bowman's Capsule

b) Substantia propria

c) Descemet’s membrane

d) Endothelium

Correct Answer - C

Kayser-Fleischer rings take the form of a crescentic rusty-brown discoloration of the deepest layer of the cornea **(Descemet membrane).** In the purely hepatic stage of the disease, the rings may not be evident (in 25 percent of cases), but they are virtually always present (if properly sought) once the neurologic signs manifests. A slit-lamp examination may be necessary for their early detection, particularly in brown-eyed patients, but in the majority of patients with neurologic signs the rings can be visualized with the naked eye or with the aid of an indirect ophthalmoscope focused on the limbus.

Also Know:

Kayser-Fleischer rings are a sign of Wilson's disease, which involves abnormal copper handling by the liver resulting in copper accumulation in the body and is characterised by abnormalities of the basal ganglia of the brain, liver cirrhosis, splenomegaly, involuntary movements, muscle rigidity, psychiatric disturbances, dystonia and dysphagia. ***The combination of neurological symptoms, a low blood ceruloplasmin level and KF rings is diagnostic of Wilson's disease.***

Ref: Ropper A.H., Samuels M.A. (2009). Chapter 37. Inherited Metabolic Diseases of the Nervous System. In A.H. Ropper, M.A. Samuels (Eds),Adams and Victor's Principles of Neurology, 9e.

1012. **Kayser- Fleischer rings (KF rings) are seen in:**

a) Pterygium

b) Hematochromatosis

c) Wilson's disease

d) Menke's kinked hair syndrome

Correct Answer - C
Wilson's disease

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1013. Posterior staphyloma is seen in:
September 2005

a) Myopia

b) Hypermetropia

c) Astigmatism

d) Presbyopia

Correct Answer - A
Ans. A: Myopia
Staphyloma is the term given to an eye whose sclero-uveal coats are stretched (also known as ectasia). This most commonly occurs posteriorly, athough anterior staphyloma also is recognised.
Posterior staphyloma

- Progressive myopia (or mega myope) most common cause.
- Glaucoma
- Scleritis
- Necrotizing infection
- Surgery/trauma
- Radiotherapy

Posterior staphyloma affects the posterior pole of the eye and is lined by the choroid.
The ectatic portion is not visible externally but can be detected by fundoscopy and B-scan USG.
Anterior staphyloma
The most common cause for anterior staphyloma is sloughing corneal ulcer winch perforates and heals with the formation of a pseudocornea by the organization of exudates and laying down of fibrous tissue.
Differential diagnoses

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- Buphthalmos (congenital glaucoma)
- Axial myopia
- Macrophthalmos: seen in neurofibromatosis typel (NF1)
- Coloboma

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1014.

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A 30 year old man presents to the clinic with pain in the eye, watering, redness and photophobia. Examination of his eyes shows circumcorneal congestion and keratic precipitates.

Assertion: KPs are proteinaceous deposits occurring in a triangular fashion in the inferior part of cornea.

Reason: Mutton fat KPs are seen in granulomatous iridocyclitis and is composed of epitheloid cells and macrophages.

a) Both Assertion and Reason are true, and Reason is the correct explanation for Assertion

b) Both Assertion and Reason are true, and Reason is not the correct explanation for Assertion

c) Assertion is true, but Reason is false

d) Assertion is false but reason is true

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Correct Answer - B

Keratic precipitates are proteinaceous deposits occurring in a triangular fashion in the inferior part of cornea due to convection currents in the aqueous humor. Mutton fat KPs are seen in granulomatous iridocyclitis and is composed of epithelioid cells and macrophages. They are usually 10-15 in number.

Ref: Comprehensive Ophthalmology by AK Khurana, 4th Edition, Page 142

1015. Scleritis is most commonly associated with:
March 2005

a) Diabetes

b) Osteoarthritis

c) Rheumatoid arthritis

d) Hypertension

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Correct Answer - C
Ans. C: Rheumatoid arthritis
Scleritis is a severe, destructive, chronic, painful, and potentially blinding inflammatory disease of the Conjunctiva, Sclera and Episclera tissues.
Symptoms includes redness and severe eye pain, which may radiate to adjacent areas, the forehead, cheek, or behind the eye. This is usually associated with light sensitivity, teary, and in some cases, reduced or poor vision. The affected eye often has a bluish hue or becomes an intense purple.
There are several different sub-types of Scleritis

- Nodular Scleritis is characterized by a focal area of inflammation, immovable, and tender, inflamed nodules on the eye.
- Diffuse Scleritis
- Diffuse Anterior Scleritis is the most common type, and is characterized by widespread inflammation of the Anterior portion of the Sclera, the white of the eye. The Diffuse type of Scleritis is, fortunately, the most benign form of Scleritis and the most responsive to therapy.
- Necrotizing Scleritis is likely the worst form of the disease,

sometimes leading to loss of the eye from multiple complications, severe pain, or occasionally perforation of the globe. It is often associated with severe systemic disease and involvement of multiple organs. An associated type of vascular inflammation, called Vasculitis, may threaten the lives of those patients afflicted. Pain with this condition is usually extreme, and damage to the Sclera is often marked. Necrotizing scleritis also known as Scleromalacia perforans is characterized by severe thinning of the Sclera of the Eye, allowing for local outpouchings of the underlying dark Uveal tissue. There are large abnormal blood vessels crossing areas of Scleral loss. The condition occurs in an otherwise white and "quiet" Eye, without pain. This type of Scleritis is associated with severe Rheumatoid Arthritis, occasionally seen in Wegener's Granulomatosis and Relapsing Polychondritis.

- Posterior Scleritis is quite rare, but usually presents with poor or double vision, severe pain, proptosis (forward displacement of the eye), Uveitis (inflammation inside the Uvea Tract), and limitation of eye movement. An exudative Retinal detachment (fluid under the Retina) may cause severe visual loss, Angle-Closure Glaucoma from Choroidal effusion.
- About 50% of Scleritis patients are associated with systemic autoimmune disorders including rheumatoid arthritis, gout, wegener granulomatosis, Relapsing Polychondritis, Systemic Lupus Erythematosus, Polyarteritis Nodosa, Ankylosing Spondylitis, with infections, or chemical or physical injuries.
- It occurs most often in people between the ages of 30 and 60 (it is rare in children). Scleritis may be the initial or only presenting clinical manifestation of these potentially lethal disorders.

1016. Unilateral frontal blisters with upper lid edema with conjunctivitis is seen in ?

a) Acanthamoeba Keratits

b) Herpes Simplex

c) Herpes Zoster Ophthalmicus

d) Neuroparalytic Keratitis

Correct Answer - C

Ans. C. Herpes Zoster Ophthalmicus

Ocular lesions : Combination of 2 or more of the following with subsidence of skin eruptions : -

i) Conjunctivitis (Most common ocularlesion)

ii) Zoster keratitis :

- Punctate keratitis, Microdendritic corneal ulcer (Pseudodendritic Keratitis.), nummular anterior stromal keratitis, Disciform keratitis, neuroparalytic ulceration, exposure keratitis, mucous plaque keratitis, Keratouveitis with endothelitis , Sclerokeratitis (least common).
- The endothelium is a favoured site of attack and acute endothelial cell loss occurs during herpes zoster keratouveitis.

iii) Episcleritis/Scleritis, Iridocyclitis (Uveitis).

iv) Acute retinal necrosis, anterior segment necrosis, phthisis bulbi.

v) Secondary glaucoma.

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1017. Which organism can peneterate corneal endothelium?

a) Aspergillus fumigatus

b) Staphylococcus Aureus

c) Neisseriae Gonorrhae

d) Hemophilus influenza

Correct Answer - A
Ans. A. Aspergillus fumigatus
Fungi - Can penetrate intact corneal endothelium
Neisseria sp, C. Diptheriae, H,Aegyptus, Listeria- Can penetrate intact corneal epithelium

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1018. **All of the following are true about Keratoconus, except:**

a) Increased curvature of corneaAstigmatism

b) Astigmatism

c) K.F ring cornea

d) Thick cornea

Correct Answer - D
The main pathological changes in Keratoconus are thinning and ectasia of the lens which occur as a result of defective synthesis of mucopolysaccharide and collagen tissue.

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1019. All of the following are true for sympathetic ophthalmitis except:

a) Affects the injured eye

b) Mostly results from a penetrating wound

c) Autoimmune etiology

d) Dalen Fuch's nodules may be seen

Correct Answer - A
Ans. A: Affects the injured eye
Sympathetic ophthalmitis is a condition in which serious inflammation attacks the sound eye after injury to the other eye.

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1020. Red keratic precipitates are seen in ?

a) Granulomatous uveits

b) Hemorrhagic uveitis

c) Old healed uveitis

d) Acute anterior uveitis

Correct Answer - B
Ans. is .b i.e., Hemorrhagic uveitis
Keratic precipitates (KPs)

- KPs are proteinaceous cellular deposits occurring at the back of cornea (corneal endothelial deposits). Keratic precipitates are formed by the aggregation of polymorphonuclear cells, lymphocytes, and epitheloid cells. In the setting of uveitis, the bimicrosopic appearance of KP may yeild important diagnostic clues for the identification of the underlying inflammatory disorder :?

Mutton fat KP :- Large, yellowish KPs, are characteristic ofgranulomatous uveitis. These are composed of epitheloid cells and macrophages. They are large, thick fluffy, lardaceous KPs, having a greasy or waxy appearance.
Small or medium KPs (granular KPs):- These are composed of lymphocytes and are characteristic of non- granulomatous uveitis. These are small, round and whitish precipitates
Red KPs :- Composed of RBCs and inflammatory cells. These are seen in hemorrhagic uveitis.
Old KPs :- In healed uveitis. The above described KPs shrink, fade, become pigmented and irregular in shape with crenated margins.

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1021. The zonules suspending the lens are attached to the?

a) Root of iris

b) Ciliary body

c) Anterior vitreous

d) Limbus

Correct Answer - B
Ans. B. Ciliary body
The ciliary zonules (Zonules of zinn or suspensory ligaments of lens) hold the lens in position and enable the ciliary muscle to act on it. These consist essentially of a series of fibres which run from the ciliary body and fuse into the outer layer of the lens capsule around the equatorial zone.

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1022. Lens attached to ciliary body via ?

a) Limbus

b) Zonules

c) Vitreous Humour

d) Root of iris

Correct Answer - B
Ans. B. Zonules

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1023. Cataract is caused by ?

a) Hypoparathyroidism

b) Cigrate smoking

c) Non-ionizing radiation

d) All of the above

Correct Answer - D
Ans. is 'd' i.e., All of the above

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1024. All of the following are causes of posterior subcapsular cataract except -

a) Myotonic dystrophy

b) Wilson's Disease

c) Ionizing radiation

d) Congenital cataract

Correct Answer - D

Answer- D. Congenital cataract

- Myotoic dystrophy
- Wilson's disease
- Atopic dermatitis
- Corticosteroids
- Trauma
- Galactosemia
- Infrared/heat cataract (glass-blower's or glass worker)

KollegeApply

1025. The intraocular lens in cataract surgery is placed in ?

a) Surface of iris

b) Capsular bag

c) Over the face of viterous

d) Around the limbus

Correct Answer - B
Ans. B. Capsular bag
A saclike structure remaining within the eye following extracapsular cataract extraction or Phacoemulsification.
The implanted intraocular lens is placed within this structure to recreate the usual phakic state.

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1026. Non foldable lens is made of -

a) Silicon

b) Acrylic

c) PMMA

d) Hydrogel

Correct Answer - C

Ans. C. PMMA

Types of IOL

Depending on the material of manufacturing, following types of IOLs are there

1. Rigid IOLs:- Made entirely from polyrnethyl methacrylate (PMMA) .
2. Foldable IOLs:- Are used after phacoemulsification and are made of silicon, acrylic, hydrogel and collamer.
3. Rollable IOIs: Ultra-thin IOLs and are sued after phokonit technique (micro- incision: 1 mm).
These are made of hydrogel.

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1027. Rigid gas permeable lens are made of-

a) Plymethymethacrylate

b) Hydroxymethylmethacrylate

c) Co polymer of PMMA, Silicon containing monomer & cellulose acetyl butyrate

d) Cellulose acetae Butyrate

Correct Answer - C

1. Hard lenses:

- **Made of pokymethylmethacrylate (PMMA)**

2. Rigid gas permeable (RGP) lenses:

- Copolymer of PMMA, silicon containing vinyl monomer & cellulose acetate butyrate (CAB) are used to manufacture RGP lenses.

3. Soft lenses:

- These are made up of **hydroxymethymethacrylate (HEMA)**

KollegeApply

1028. Axial length of eye ball is measured by ?

a) A mode Ultrasonography

b) B mode Ultrasonography

c) M mode Ultrasonography

d) Both a and b

Correct Answer - A

Ans. is 'a' i.e., A mode Ultrasonography

Ultrasonographv in Ophthalmology

A Mode

- Transducer is coupled directly to the eye through the use of methyl cellulose.
- Recording are done in a graphic mode. Height of the recorded spike on vertical axis is a measure of the amplitude of the echo, the position of the spike along the horizontal axis indicates the arrival of the echo on the tranducer.
- Diagnosis is based on the basis of amplitude, position, extent and movement of the abnormal echoes alonwith the sound attenuating properties of the abnormality.
- It has a special role in biometry i.e. axial length which is very essential for surgical planning. B mode
- The transducer is coupled to the eye by either the gel applied to the closed lid or by a saline bath
- Is is a display of two - dimensional cross sectional images.
- The echoes in B scan are displayed as spots and the brightness of echoes indicates its amplitude.

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1029. Snowflake cataract is associated with: *September 2008*

a) Hypertension

b) Adult diabetes

c) Trauma

d) Juvenile diabetes

Correct Answer - D
Ans. D: Juvenile diabetes
Snowflake Cataracts: This type of cataract represents dots of various sizes (and sometimes various colours) distributed throughout the cortex surrounding the nucleus for 360°.
This is the most common cataract seen in Down Syndrome (extra copy of chromosome 21 also called trisomy 21) and juvenile diabetes mellitus.
These usually have very little effect on vision.
Adult diabetic cataract shows cortical and/or nuclear and/or subcapsular (same as age related)

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1030. What is the type of Galactosemia cataract?

a) Snowflake

b) Oil drop

c) Blue dot

d) Polychromatic lustre

Correct Answer - B
Ans, B. Oil drop

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1031. Rosette cataract is seen due to:

a) Trauma

b) Copper foreign body

c) Diabetes

d) Hyperparathyroidism

Correct Answer - A
Ans. Trauma

KollegeApply

1032. Vossius ring occurs in

a) Lens dislocation

b) Concussion injury

c) Penetrating injury

d) Extra capsular extraction

Correct Answer - B
B i.e. Concussion injury

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1033. Most common etiolopathogenetic cause of glaucoma is:
March 2012

a) Raised pressure in episcleritic veins

b) Decreased outflow

c) Increased formation of aqueous humour

d) Increased scleral outflow

Correct Answer - B
Ans: B i.e. Decreased outflow
A sustained increase in intraocular pressure may be due to increased formation of the aqueous humour, difficulty in its exit, or a raised pressure in the episcleral veins of these, the first & last rarely occur, and it follows that raised intraocular pressure is essentially due to an increased resistance to the circulation of the aqueous at the pupil and/ or its drainage through the angle of the anterior chamber.

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1034. Feature (s) of Infantile glaucoma is/are except:

a) Aniridia may be associated

b) Treatment includes trabeculotomy

c) Buphthalmos can occur

d) Cornea is thin & clear

e) May be associated with Sturge-weber syndrome

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Correct Answer - D

Answer- D. Cornea is thin & clear

Answer- D. Cornea is thin & clear

Primary infantile glaucoma is a rare developmental defect in the iridocorneal filtration angle of the anterior chamber that prevents aqueous fluid from properly draining from the eye. This obstruction increases the intraocular pressure, which, if untreated, damages the optic nerve. Infantile glaucoma can cause complete blindness if left untreated.

Glaucoma can also occur in infants after trauma or intraocular surgery (eg, cataract extraction). Glaucoma associated with another ocular disorder, such as aniridia, Lowe syndrome, or Sturge-Weber syndrome, is called secondary glaucoma.

Buphthalmos (blue and thin sclera, streched limbus) is seen.

Treatment: Trabeculotomy, Goniotomy, combined trabeculotomy and trabeculotomy +/- MMC(Mitomycin)

1035. What is not true about congenital glaucoma of eye?

a) Photophobia is most common symptom

b) Haab's Striae maybe seen

c) Thin and blue sclera seen

d) Anterior chamber is shallow

Correct Answer - A
Ans. A. Photophobia is most common symptom

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1036. Descemet membrane breach is seen in ?

a) Angle closure glaucoma

b) Buphthalmos

c) Acute Iridocyclitis

d) Subconjunctival hemorrhage

Correct Answer - B
Ans. B. Buphthalmos
Haab striae are discrete corneal opacities appear as lines with double contour due to rupture in Descemet's membrane.

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1037. Earliest sign of primary congenital glaucoma ?

a) Corneal edema with watering

b) Haab's Striae

c) Blue sclera

d) Myopia

Correct Answer - A
Ans., A. Corneal edema with watering
Mostcommon symptom - Watering (lacrimation)
2d most common symptom - Photophobia
Most troublesome symptom - Photophobia (Child avoids light)
First sign - Corneal edema with watering

KollegeApply

1038. Selective alpha 2 agoinst used in glaucoma ?

a) Tirriolol

b) Epinephrine

c) Dipivefrine

d) Brimonidine

Correct Answer - D
Ans. is 'd' i.e., Brimonidine

KollegeApply

1039. Latanoprost used topically in glaucoma primarily acts by?

a) Decreasing aqueous humor formation

b) Increasing uveoscleral outflow

c) Releasing pupillary block

d) Increasing trabecular outflow

Correct Answer - B
Ans. is 'b' i.e., Increasing uveoscleral outflow
Ans. is 'b' i.e., Increasing uveoscleral outflow

- **Latanoprost is an analog of prostaglandin F2a that increases uveoscleral outflow and induces miosis.**
- **Antiglaucoma Drugs: Mechanism of Lowering Intraocular Pressure (IOP):**

Drugs that increase trabecular outflow
? Miotics (e.g., pilocarpine)
? Epinephrine, dipivefrine
? Bimatoprost
Drugs that increase uveoscleral outflow
? Prostaglandins (latanoprost)
? Epinephrine, dipivefrine
? Brimonidine
? Apraclonidine
Drugs that decrease aqueous production
? Carbonic anhydrase inhibitors (e.g., acetazolamide, dorzolamide)
? Alpha receptor stimulators in ciliary process (e.g., epinephrine, dipivefrine, clonidine, brimonidine, apraclonidine)
? Beta-blockers
Hyperosmotic agents - (e.g., glycerol, mannitol, urea).

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1040. Mioitcs are treatment of choice for ?

a) Angle closure glaucoma

b) Open angle glaucoma

c) Buphthalmos

d) Sympathetic Ophthalmia

Correct Answer - A
Ans. A. Angle closure glaucoma

KollegeApply

1041. Which of the following drug is alpha 2 agonist?

a) Apraclonidine

b) Timolol

c) PG analogues

d) Verampamil

Correct Answer - A
Ans. A. Apraclonidine
Apraclonidine – Selective alpha 2 agonist.
Useful in glaucoma.
Alpha agonists (Brimonidine and apraclonidine) are contraindicated in hypertensive crisis.
Dipivefrin is a prodrug which is converted into epinephrine inside ttre eyeUall, so can safely be used in hypertension.

CollegeApply

1042. What is the cause of glaucoma in retinoblastoma?

a) Blockge of trabecular network

b) Neovascularisation

c) Mass effect of the tumour

d) Lysis of the lens

Correct Answer - B
Ans. B. Neovascularisation
Retinoblastoma is a cause of neovascular glaucoma,

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1043. Glaucoma drainage devices ?

a) Drain aqueous humour to the posterior segment

b) Drain aqueous humour to an external device

c) Open the trabeculae mechanically

d) Reduce the aqueous secretion by compressing the ciliary epithelium

Correct Answer - B

Ans. B. Drain aqueous humour to an external device

Glaucoma drainage devices are designed to divert aqueous humor from the anterior chamber to an external reservoir, where a fibrous capsule forms about 4-6 weeks after surgery and regulates flow. These devices have shown success in controlling intraocular pressure (IOP) in eyes with previously failed trabeculectomy and in eyes with insufficient conjunctiva because of scarring from prior surgical procedures or injuries.

They also have shown success in complicated glaucomas, such as uveiticglaucoma, neovascular glaucoma, and pediatric and developmental glaucomas, among others.

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1044. A 44 year old woman presents Sudden painless loss of vision with history of previous similar episode fundoscopy shows no glow. What could be the possible diagnosis?

a) Vitreous Hemorrhage

b) Rhegmatogenous Retinal Detachment

c) Acute congestive glaucoma

d) Fungal Keratitis

Correct Answer - A

Ans., A. Vitreous Hemorrhage

Vitreous hemorrhage refers to bleeding into the vitreous chamber or a space created by vitreous detachment.

Patients present with sudden onset of floaters (black spots in front of the eye)where the hemorrhage is small, and there may be sudden painless loss ofvisionif the hemorrhage is large.

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1045. All of the following are true for retinopathy of prematurity except:

a) Occurs in premature infants due to late crying

b) Due to hypoxia there occurs neovascularization followed by fibroproliferation

c) End result is bilateral blindness

d) Blindness can be prevented by early diagnosis and ablation of vascular premature retina with cryotherapy or photocoagulation

Correct Answer - A
Ans. Occurs in premature infants due to late crying

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1046. Retinopathy of prematurity is commonly predisposed by-

a) Less gestation age

b) Low birth weight

c) O_2 toxicity

d) Carbohydrate excess

Correct Answer - A
Ans. is 'a' i.e., Less gestation age

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1047. Eales disease is:

a) Recurrent optic neuritis

b) Recurrent pappilloedema

c) Recurrent periphelbitis retinae

d) None

Correct Answer - C
Ans. Recurrent periphelbitis retinae

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1048. What is false about Eale's disease amongst the followwing?

a) Retinal detachment may occur

b) AKT is given

c) Optic neuritis

d) Vitreous Hemorrhage

Correct Answer - C
Ans. C. Optic neuritis

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1049. Snowball appearance is seen in ?

a) Posterior uveitis

b) Sarcoidosis

c) Anterior uveitis

d) Vitreous Hemorrhage

Correct Answer - B

Ans. B. Sarcoidosis

Causes of intermediate uveitis, thus Snowball Opacities of Vitreous –

- Candidiasis
- TB, syphilis
- Sarcoidosis
- Multiple sclerosis
- Lyme disease.

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1050. Prutchners retinopathy in associated with -

a) Diabetes Mellitus

b) Wilson's disease

c) Head trauma

d) Rheumatoid arthritis

Correct Answer - C

Ans. C. Head trauma

Purtscher’s retinopathy

- Near-confluent cotton-wool spots clustered around an otherwise normal optic nerve head in an eye of a patient who had sustained a severe blunt injury to the head and chest.
- Later, it was discovered to be associated with several non-traumatic systemic diseases.

Conditions associated:

- Severe head, chest & long bone diseases.
- Fat embolism syndrome.
- Amniotic fluid embolism
- Actuepancreatitits.
- SLE

CollegeApply

1051. Subhyaloid hemorrhage is ?

a) Boat shaped

b) Crescent shaped

c) Round

d) Flame shaped

Correct Answer - A
Ans,. A. Boat shaped
Retrohyaloid (subhyaloid) hemorrhage ('Boat- shaped or scaphoid) :- Located anterior (internal) to the retina, within the retrohyoid space. (note - the term hyaloid refers to hyaloid body, another name for vitreous humor).

KollegeApply

1052. What is true about retinal hemorrhage in new born?

a) More common in instrumented deliveries

b) Resolve in 6 - 8 months

c) Commonly unilateral

d) Associated with intrauterine infection

Correct Answer - A

Ans. A. More common in instrumented deliveries

Birth-rdated RH in infants occurs in one-quarter of normal deliveries and are far more common after instrumental deliveries.

Commonly bilateral, they were predominantly intraretinal, posterior, resolved rapidly, and very rarely persisted beyond 6 weeks.

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1053. Most common age related change in vitreous ?

a) Anterior vitreous detachment

b) Posterior vitreous detachment

c) Vitreous hemorrhage

d) Vitritis

Correct Answer - B
Ans. B. Posterior vitreous detachment
Yanoff Writes (Most common age related event in vitreous is posterior vitreous detachment'

KollegeApply

1054. Muscae volitantes is seen in ?

a) Vitreous detachment

b) Vitreous Hemorrhage

c) Remains of primitive hyaloid vasculatur

d) Eale's disease

Correct Answer - C
Ans, C. Remains of primitive hyaloid vasculatur
Muscaevolitantes are physiological vitreous opacities and represent the residues ofprimitivehyaloid vasculature.

KollegeApply

1055. All are true regarding optic neuritis except:

a) Decreased visual acuity

b) Decreased pupillary reflex

c) Abnormal electroretinogram

d) Abnormal visual evoked response retinogram

Correct Answer - C
C i.e. Abnormal electroretinogram
Electroretinogram *indicates the activity of retinal (esp. rods & cones) function and has no role in assessing the functional integrity of the optic nerve Q.* So it can't be abnormal in optic neuritis.

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1056. Anisocoria in Horner's syndrome is due to

a) Oculo sympathetic palsy

b) Oculo parasympathetic palsy

c) Oculomotor nerve palsy

d) Abducens nerve palsy

Correct Answer - A

Answer- A. Oculo sympathetic palsy

Anisocoria is a condition characterized by an unequal size of the eyes' pupils.

It can be an entirely harmless condition or a symptom of more serious medical problems.

Anisocoria has various causes:

- Physiological anisocoria: About 20% of normal people have a slight difference in pupil size which is known as physiological anisocoria. In this condition, the difference between pupils is usually less than 1 mm.[3]
- Horner's syndrome

Horner's syndrome is oculo sympathetic palsy.

- Horner's syndrome consists of classical triad of ipsilateral:-

1. Ptosis,
2. Miosis,
3. Anhydrosis (loss of sweating)

- Other features are :- Loss of cilio-spinal reflex, Enophthatnos, Heterochromia (ipsilateral iris is of light colour), the pupil is slow to dilate, slight elevation of inferior eyelid, normal pupillary reflex.

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1057. The most common type of strabismus seen in myopes is?

a) Intermittent Exotropia

b) Intermittent Esotropia

c) Esotropia hypotropia complex

d) Exoptropia Hypotropia complex

Correct Answer - A

Ans. A. Intermittent Exotropia

Myopia and Intermittent exoptropia

- Traditionally, it is believed that the presence of myopia may be associated with a decreased demand for accommodation and hence lower convergence.
- This may predispose to an increased risk ofdeveloping exotropia
- Alternately, it is hypothesized that intermittent exotropia may lead to development of rnyopia due to increased accommodative demand and increased convergence may be necessary to control the exodeviation that can contribute to increased acommodation and myopia in intermittent distance exotropia.

CollegeApply

1058. Dalrymple's sign of ocular Graves' disease refers to:

a) Retraction of the upper lid

b) Lid lag

c) Proptosis

d) All of the above combinedly

Correct Answer - A
Ans. Retraction of the upper lid

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1059. **Macular sparing is associated with lesions in:**

a) Optic nerve

b) Lateral geniculate body

c) Occipital cortex

d) Optic chiasma

Correct Answer - C

Macular sparing, that is, loss of peripheral vision with intact macular vision, is also common with occipital lesions

Ref: Ganong's Review of Medical Physiology 23rd edition, Chapter 12.

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1060.

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Pupillary reflex pathway- All of the following are a part except ?

a) Edinger Westphal nucleus

b) Pretectal nudes

c) Medial geniculate body

d) Retinal ganglion cell

Correct Answer - C
Ans. C. Medial geniculate body
Sensory efferent) component of light rfiex = Optic (1st) nerve
Motor (efferent) component of light reflex = Occulomotor (3rd) nerve

KollegeApply

1061. Sixth cranial nerve palsy causes of left eye causes?

a) Accomodation paresis in left gaze

b) Ptosis of left eye

c) Adduction weakness of left eye

d) Diplopia in left gaze

Correct Answer - D

Ans. D. Diplopia in left gaze

Sixth nerve supplies lateral rectus, therefore its palsy results in abduction weakness (not adduction weakness).

In left gaze, there is abduction ofleft eye and adduction ofright eye. Ifthere is paralysis oflateral rectus of left eye (66 nerve paralysis), abduction ofleft eye will not be possible in left gaze, while adduction of right eye is normal.

Therefore, there will be diplopia in left gaze.

KollegeApply

1062. D Shaped pupil is seen in ?

a) Iridodialysis

b) Iridodonesis

c) Anterior Uveitis

d) Anterior synechiae

Correct Answer - A
Ans., A. Iridodialysis
Iridodtalysis is detachment of lris from its root at the ciliary body. It results in D shaped pupil and a black biconvex area seen at the periphery.

KollegeApply

1063. Best method of detection of retained glass intraocular foreign body is:

a) CT scan

b) Radiography

c) Ultrasonography

d) Tonography

Correct Answer - A
Ans. CT scan

KollegeApply

1064. Pulsatile proptosis is a feature of ?

a) Orbital varix

b) Retinoblastoma

c) Cortico-cavernous fistula

d) Covernous sinus thrombosis

Correct Answer - C
Ans. is 'c' i.e., Cortico-cavernous fistula
Proptosis

- Proptosis is bulging of the eyeball (forward bulging) beyond the orbital margins. Though the word exophthalmos is synonymous with proptosis; some source define xophthalmos as a protrusion of globe greater than 18mm and proptosis as a protrusion equal to or less than 18 mm. Proptosis may be classified as follows : ?
- Unilateral Proptosis Proptosis of one eye.
- Inflammatory lesions :- Orbital cellulitis, abscess, cavernous sinus thrombosis, etc.
- Vascular disturbances :- Haemorrhage, varicose orbital veins, haemangioma, etc.
- Cysts and tumour :- Dermoid cyst, osteoma, lymphoma, lymphosarcoma, glioma, meningioma of optic nerve, retinoblastoma and metastatic deposits in orbit Neuroblastoma, breast, prostate, lung, GIT, Kidney, Ewing's tumor, melanoma, wilms tumor (Nephroblastoma)].
- Systemic diseases - Leukemias and endocrine disturbances such as Graves' disease and thyrotropic exophthalmos in initial stages.
- Paralysis of extraocular muscles as in complete ophthalmoplegia.
- Mucocele of PNS' - Frontal (most common), ethmoid, maxillary.

Bilateral Proptosis Proptosis of both eyes.

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- evelopmental anomalies of the skull- Oxycephaly (tower skull).
- Endocrine exophthalmos, both thyrotoxic and thyrotropic.
- Inflammatory lesions - Cavernous sinus thrombosis.
- Tumours - lymphosarcoma, lymphoma, pseudotumour, nephroblastoma, Ewing's sarcoma.
- Systemic disease - Histocytosis (Hand - schuller christon disease), amyloidosis, wegner's granulomatosis.

Intermittent proptosis

- Proptosis developing intermittently and rapidly in one eye when venous stasis is induced by forward bending or lowering the head, turning the head forcibly, hyperextension of the neck, coughing, forced expiration with or without compression of the nostrils, or pressure on jugular veins. The most important casue is orbital varix (varicocele).
- Pulsatile proptosis : - Pulsatile proptosis is seen in caroticocovernous fistula; saccular aneurysm of ophthalmic artery; and due to transmitted cerebral pulsation as seen in meningocele, neurofibromatosis and traumatic or operative hiatus.

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1065. In which of the following conditions Berlin's edema is

a) Open angle glaucoma

b) After cataract surgery

c) After concussional trauma

d) Diabetic retinopathy

Correct Answer - C
C i.e. After concussion trauma
Blunt trauma to eye may produce *Berlin's edema or commotio retinae Q* which is a cloudy swelling characterized by a grey appaerance, most frequently in the temporal region. It may also manifest as cherry red spot in the foveal region.

KottageApply

1066. All of the following are complications of traumatic hyphema except?

a) Rebleeding

b) Pupillary Block

c) Corneal Ulcer

d) Posterior synechiae

Correct Answer - C
Ans. C. Corneal Ulcer
Complications of traumatic hyphema
1. Obstruction of trabecular meshwork with associated intraocular pressure elevation
2. Peripheral anterior synechiae (PAS)
3. Posterior synechiae
4. Cornealbloodstaining
5. Rebleeding: Can occur when the initial clot retracts and lyses allowing for a second episode ofbleeding. Rebleeds are generally more severe than the initial bleed, more likely to lead to glaucoma, corneal blood staining, and synechiae formation. It has been reported to occur 3.5% to 38% ofthe timeand probably 5-10% overall.
6. Pupillaryblock
7. Amblyopia (pediatric patients)

KollegeApply

1067. All of the following drugs increase the risk of postoperative nausea and vomiting after squint surgery in children except ?

a) Halothane

b) Opiods

c) Propofol

d) Nitrous Oxide

Correct Answer - C
Ans, C. Propofol
Strabismus surgery on children is an independent risk factor for postoperative nausea and vomiting.
Propofol Is Used In Predisposed Individuals As It Has VeryLessEmetogenecity

KollegeApply

1068. What is the most common eye lesion in HIV?

a) Kaposi Sarcoma of Lid

b) CMV Retinitis

c) Cotton wool spots

d) Choroiditis

Correct Answer - C
Ans. C. Cotton wool spots
The most common abnorrnal finding on fundoscopic examination is cofton-wool spots.

KollegeApply

1069. Features of Usher's Syndrome include all except ?

a) Night Blindness

b) Visual Impairment

c) Multiple Neurofibromas

d) Hearing deficit

Correct Answer - C

Ans. C. Multiple Neurofibromas

Usher syndrome

- Usher syndrome is a relatively rare genetic disorder caused by a mutation in any one of at least I I genes resulting in a combination of hearing loss and visual impairment, and is a leading cause of deafblindness.
- Usher syndrome is incurable at present.
- Other names for Usher syndrome include Hallgren syndrome, Usher-Hallgren syndrome, retinitis pigmentosadysacusissyndrome, and dystrophia retinae dysacusis syndrome.
- This syndrome is characterized by hearing loss and a gradual visual impairment. The hearing loss is caused by a defective inner ear, whereas the vision loss results from retinitis pigmentosa (RP), a degeneration of the retinal cells.
- Usually, the rod cells of the retina are affected first, leading to early night blindness and the gradual loss of peripheral vision.
- In other cases, early degeneration of the cone cells in the macula occurs, leading to a loss of central acuity.
- In some cases, the foveal vision is spared, leading to 'doughnut vision"; central and peripheral vision are intact, but an annulus exists around the central region in which vision is impaired.

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1070. Pilocarpine is used in all of the following except:
September 2006

a) Primary, Open Angle Glaucoma

b) Malignant Glaucoma

c) Acute Angle Closure Glaucoma

d) Chronic Synechial Angle Closure Glaucoma

Correct Answer - B
Ans. B: Malignant Glaucoma
Management of angle-closure secondary to ciliochoroidal effusion is directed at two processes:

- The first is uveal inflammation, which is treated with oral steroids to reduce the effusion and allow the chamber to deepen spontaneously as the inflammation subsides.
- The second is anterior rotation of the lens-iris diaphragm, which is reversed with cycloplegics. The pressure is treated in the acute setting with aqueous suppressants and oral carbonic anhydrase inhibitors. Pilocarpine is contraindicated because it will cause anterior rotation of the lens-iris diaphragm.

CollegeApply

1071. CHARGE syndrome includes all except ?

a) Eye Coloboma

b) Congenital heart disease

c) Urinary tract defects

d) Esophageal Atresia

Correct Answer - D
Ans, D. Esophageal Atresia
CHARGE SYNDROME

- C - Coloboma of the eye, central nervous system anomalies.
- H-Heartdefects.
- A - Atresia ofthechoanae.
- R - Retardation of growth and/or development.
- G - Genital and/or urinary defects (Hypogonadism, undescended testicles, besides hypospadias).
- E - Ear anomalies and/or deafrress and abnormally bowl-shaped and concave ears, known as 'lop ears".

CollegeApply

1072. Parasitosis of extraocular eye muscles is seen in?

a) Trichinosis

b) Cysticercosis

c) Amoebiasis

d) Ascariasis

Correct Answer - A
Ans, A. Trichinosis
'Although many parasites can theoretically involve the extraocular muscle the most frequent form of parasitic infestation of extraocular muscles is trichinosis'

KollegeApply

1073. The principle of total internal reflection is used by?

a) Gonioscope

b) Pachymeter

c) Ophthalmoscope

d) Lensometer

Correct Answer - A

Ans. A
Gonioscopy is an essential diagnostic tool and examination technique used to visualize the structures of the anterior chamber angle.
Mastering the various techniques of gonioscopy is crucial in the evaluation of glaucoma patients.
Gonioscopy is required to visualize the chamber angle because under normal conditions light reflected from the angle structures undergoes total internal reflection at the tear–air interface. At the tear–air interface, the critical angle (approximately 46°) is reached and light is totally reflected back into the corneal stroma. This prevents direct visualization of the angle structures. All gonioscopy lenses eliminate the tear–air interface by placing a plastic or glass surface adjacent to the front surface of the eye. The small space between the lens and cornea is filled by the patient's tears, saline solution, or a clear viscous substance. Depending on the type of lens

CollegeApply

1074. Immediate treatment of acute dacryocystitis is?

a) Antibiotics and drainage of abscesss if present

b) Dacryocystorhinostomy

c) Dacryocystectomy

d) Nasal decongestants

Correct Answer - A
Ans. A. Antibiotics and drainage of abscesss if present

KollegeApply

1075. Which of the following is the common cause of respiratory failure type 2 ?

a) Chronic bronchitis exacerbation

b) Acute attack asthma

c) ARDS

d) Pneumonia

Correct Answer - A
Answer- A. Chronic bronchitis exacerbation
Type II respiratory failure occurs due to alveolar hypoventilation

KollegeApply

1076. Aspirin-sensitive asthma is associated with:

a) Obesity

b) Urticaria

c) Nasal polyp

d) Extrinsic asthma

Correct Answer - C

The answer is C (Nasal polyp):

`Aspirin associated Asthma usually begins with perennial vasomotor rhinitis that is followed by hyperplastic rhinosinusitis with nasal polyps' — Harrisons

Aspirin associated Asthma:

- Primarily affects adults, although the condition may occur in childhood.
- Usually begins with perennial vasomotor rhinitis that is followed by hyperplastic rhinosinusitis with nasal polyps.
- Progressive asthma then appears.
- On exposure to even very small quantities of aspirin, affected individuals typically develop ocular and nasal congestion and acute, often severe episodes of airways obstruction.
- Death may follow ingestion of aspirin.

CollegeApply

1077. Which of the following is seen in sarcoidosis

a) Hypercalcemia

b) Hypocalcemia

c) Hyperphosphatemia

d) Hypophosphatemia

Correct Answer - A
Answer- A. Hypercalcemia
Granuloma of sarcoidosis can secret 1-25 (OH)2 vitamin D. Therefore, patients of sarcoidosis may develop hypercalcemia.

KollegeApply

1078. Central bronchiectasis is seen with

a) Cystic Adenomatoid Malformation

b) Cystic fibrosis

c) Broncho carcinoma

d) Tuberculosis

Correct Answer - B
Ans. is'b' i.e., Cystic fibrosis
The distribution ()I- bronchiectasis mar be important diagnostically
A central → *Perihilar allergic bronchopulmonary aspergillosis.*
Predominant upper lobe o Middle and lower lobe → *Cystic fibrosis or one of its variants. Distribution is consistent with PCD*
Lower lobe involvement is → Middle lobe and lingular segment of the LUL involvement is characteristic of non tuberculous mycobacteria (NTM). Idiopathic bronchiectasis

PulseApply

1079. Bronchiectasis Sicca is seen with

a) Tuberculosis

b) Pertussis

c) Cystic fibrosis

d) Kartagener syndrome

Correct Answer - A

Ans. is 'a' i.e., Tuberculosis

Bronchiectasis Sicca or Dry Bronchiectasis is typically associated with Tuberculosis.

- Tuberculosis is associted with a type of dry bronchiectasis called Bronchiectasis Sicca, which is predominantly seen in upper lobes.
- Dry Bronchiectasis (Bronchiectasis Sicca) is typically characterized by absence of copious amount of sputum which is usually a hall mark of bronchiectasis.
- Dry cough associated with hemoptysis is the typical presentation
- Endobronchial tuberculosis commonly leads to bronchiectasis, either from bronchial stenosis or secondary traction from fibrosis. Traction bronchiectasis characteristically affects peripheral bronchi (which lack cartilage support) in areas of end-stage fibrosis

CollegeApply

1080. In a patient with COPD, best management option is

a) Quit smoking

b) Bronchodilators

c) Low flow oxygen

d) Mucolytics

Correct Answer - C
Answer- C. Low flow oxygen
Therapy is started with short-acting bronchodilator (beta-agonist or anticholinergic).
Long-term oxygen therapy is used in all patients with COPD who have chronic hypoxemia

KollegeApply

1081. In a patient there is dyspnea in upright position which is relieved in supine position, Diagnosis ?

a) Tachypnea

b) Orthopnea

c) Paroxysmal nocturnal dyspnea

d) Platypnea

Correct Answer - D
Answer- D. Platypnea
Platyapnea (Orthodeoxia)

- Dyspnoea when a patient moves to sitting or standing position from a recumbent position.

KollegeApply

1082. Most common cause of idiopathic interstitial pneumonia is

a) Sarcoidosis

b) Organizing pneumonia

c) Idiopathic pulmonary fibrosis

d) Lipoid pneumonia

Correct Answer - C
Answer- C. Idiopathic pulmonary fibrosis
Idiopatic pulmonary fibrosis
Idiopathic nonspecific interstitial pneumonia

KollegeApply

1083. Clicking noise in Pneumomediastinum is known as

a) Hamman sign

b) Trail sign

c) Kussmaul sign

d) None

Correct Answer - A
Answer- A. Hamman sign
Crunching or clicking noise heard synchronously with the heart beat on auscultation and best heard in the left lateral decubitus position. It is associated with "Pneumomediastinum".

KollegeApply

1084. Emphysema presents with all except

a) Cyanosis

b) Barrel shaped chest

c) Associated with smoking

d) Type I respiratory failure

Correct Answer - A

Answer- A. Cyanosis

- Dyspnoea
  Cough or wheezing (some patient)
- Weight loss
  Barrel-Chest
- FEVC and FEV1 are reduced. TLC, RC, and FRC are increased due to hyperinflation.
- Cyanosis is rare (in contrast to chronic bronchitis)
- Emphysema (COPD) causes type-1 respiratory failure

KollegeApply

1085. All are seen in emphysema except

a) Decreased vital capacity

b) Hyperinflation

c) Rhonchi

d) Reduced Dlco

Correct Answer - C
Answer- C. Rhonchi
Cough or wheezing (some patient)

- Weight loss

Barrel-Chest

- FEVC and FEV1 are reduced. TLC, RC and FRC are increased due to hyperinfcation.
- Cyanosis is rare (in contrast to chronic bronchitis)
- Emphysema (COPD) causes type-1 respiratory failure

KollegeApply

1086. Most common cause of pleural effusion in AIDS patients

a) Kaposi sarcoma

b) TB

c) Pneumocystis Jiroveci

d) Mycoplasma

Correct Answer - A
Ans. is 'a' i.e., Kaposi sarcoma
Ophthalmological diseases

- The most common abnormal findings on fundoscopic examination are cotton wool spots.
- CMV retinitis is the most severe ocular complication and occurs when CD4 T-cells count is less than 50/ml. It typical presents as perivascular hemorrhage and exudae with Cottage-Cheese appearance.
- Acute retinal necrosis syndrome, also called progressive outer retinal necrosis (PORN) is caused by HSV and VZV
- Other manifestations are chorioretinitis by toxoplasma and P carinii, kaposi sarcoma of eyelid, and lymphoma.

KollegeApply

1087. Most common cause of lung abscess is comatose patient

a) Staph aureus

b) Oral anaerobes

c) Klebsiella

d) Tuberculosis

Correct Answer - B

Answer- B. Oral anaerobes

- Most lung abscesses in moribund intubated patients are due to anaerobic bacteria, like peptostreptococcus, Bacteroides etc. Lung abscess
- The term pulmonary abscess describes a local suppurative process within the lung, characterized by necrosis of lung tissues

Etiology

- As aspiration of oropharyngeal secretions is the most common cause, organisms most commonly causing lung abscess are those normally found in oral cavity, i.e., Anaerobic bacteria (Bacteroides, Fusobacterium, peptococcus species). Other organisms are S. aureus, Klebsiella, Nocardia and gram negative bacteria.

CollegeApply

1088. If a person is having ventriular tachycardia, extra systoles appears to

a) P wave

b) QRS complex

c) T wave

d) R wave

Correct Answer - B

Answer- B. QRS complex

Extra systole in ventricular tachycardia appears in QRS complex when an irritable focus in any part of the ventricular myocardium activates the ventricles before the arrival of the next normal wave of depolarisation from the atria a ventricular extrasystole is produced.

KollegeApply

1089. Most common arrhythmia in ICU patients -

a) Atrial flutter

b) Atrial fibrillation

c) PSVT

d) NPAT

Correct Answer - B
Answer- B. Atrial fibrillation
Most common arrhythmia in I.C.U. patient → Atrial fibrillation
Most common arrhythmia in a patient with Cardiac arrest → Ventricular fibrillation

KollegeApply

1090. Most common mechanism of arrhythmia

a) Re-entry

b) Early after depolarization

c) Late after depolarization

d) Automaticity

Correct Answer - A
Ans. is 'a' i.e., Re-entry
The most common arrhythmia mechanism is re-entry.

- *Fundamentally, re-entry is defined as the circulation of an activation wave around an inexcitable obstacle.*
- Re-entry appears to be the basis for most abnormal sustained Supra Ventricular Tachycardias (SVTs) and Ventricular tachycardia.

Examples of re-entry are:-

- Polymorphic Ventricular tachycardia *in patients with a genetically determined ion channel abnormality such as the Brugada syndrome, catecholaminergic polymorphic Ventricular tachycardia.*

CollegeApply

1091. Patient of 1st degree heart block complains of dizziness. Best treatment for this patient is

a) Atropine

b) Isoprenaline

c) Adrenaline

d) Pacemaker

Correct Answer - D

Answer- D. Pacemaker

The most definitive or reliable treatment for patient with symptomatic A. V. conduction system is temporary or permanent pacing.

KollegeApply

1092. All are used for secondary prevention of MI except

a) Aspirin

b) Statins

c) Beta blockers

d) Warfarin

Correct Answer - D

Answer- D. Warfarin

Medicines used in the secondary prevention of M.I.

- Long term dual antiplatelet therapy with aspirin and P2Y12 receptor blocker.
- Statins (high intensity).
- Angiotensin converting enzyme inhibitors in patient with diabetes heart failure, left ventricular ejection fraction.
- f3 blockers.

KollegeApply

1093. Not recommended in coronary artery disease patients

a) Daily exercise

b) Potassium

c) Vitamin-E

d) Statins

Correct Answer - C
Answer- C. Vitamin-E
Intervention studies using vitamin E to prevent cardiovascular disease or cancer have not shown efficacy

KolleegeApply

1094. Digitalis is used in mitral stenosis when patient develops

a) Atrial fibrillation

b) Right ventricular failure

c) Acute pulmonary edema

d) Myocarditis

Correct Answer - A

Answer- A. Atrial fibrillation

Drugs useful in slowing the ventricular rate of patients with AF

- Beta blockers,
- Nondihydropyridine calcium channel blockers (e.g., verapamil or diltiazem), and
- Digitalis glycosides

KollegeApply

1095. Which one of the following is not an early complication of acute myocardial infarction ?

a) Papillary muscle dysfunction

b) Ventricular septal defect

c) Paricarditis

d) Dressler's syndrome

Correct Answer - D

Answer- D. Dressler's syndrome

Dressler's syndrome is a late complication of myocardial infarction. It usually occurs 1-8 weeks after myocardial infarctions

KollegeApply

1096. Most common malignant tumor of heart in adults

a) Sarcoma

b) Rhabdomyoma

c) Lipoma

d) Paraganglioma

Correct Answer - A
Answer- A. Sarcoma
Almost all primary cardiac malignancies are sarcomas.

KollegeApply

1097. Which is the best way to differentiate between stable angina and NSTEMI?

a) ECG

b) Cardiac-biomarker

c) Trans thoracic Echocardiography

d) Multi uptake gated Acquisition scan

Correct Answer - B
Answer- B. Cardiac-biomarker
The differentiating feature between Angina and MI is the elevation of cardiac markers°.(no elevation is seen in Angina)

KollegeApply

1098. Aetiology of Dressler Syndrome is

a) Viral

b) Autoimmune

c) Idiopathic

d) Toxin mediated

Correct Answer - B
Answer- B. Autoimmune
Immunological factors are thoughts to be of primary importance. The immune complexes hat are generated are deposited into the pericardium, pleura and lungs.

KollegeApply

1099. Predisposing factors for coronary artery disease include, all Except:

a) Homocysteinemia

b) ↑ Lipoprotein B

c) ↑ Fibrinogen

d) ↑ plasminogen activator inhibitors 1

Correct Answer - B
Answer is B (↑· Lipoprotein B)
Predisposing factors for coronary artery disease include an increased lipoprotein 'a' and not lipoprotein '6'.

KollegeApply

1100. Murmur heard in aortic stenosis

a) Right 2nd intercistal, low pitch murmur

b) Apex, low pitch murmur

c) Left Sternal area, low pitch murmur

d) Pen-systolic murmur, high pitch murmur

Correct Answer - A
Answer- A. Right 2nd intercistal, low pitch murmur
Typically heard at the base of the heart in Aortic area (second intercostal space).
Harsh quality.
Generally begins after Si and end S before S2.

KollegeApply

1101. Which of the following statements about atrial myxomas is true

a) Most common in Left Atrium

b) More common in Males

c) Distant metastasis are seen

d) Most myxomas are familial

Correct Answer - A

Answer is A (Most common in Left Atrium)

Cardiac Myxomas are usually located in the atria, most common in the left.

Cardiac myxomas

- Are the most common type of primary cardiac tumors[Q]
- Occur at *all ages* and show *no sex preference (mixes equally with both sexes)*[Q]
- *Most cardiac myxomas are sporadic,* while some may be familial

Sporadic myxomas :

- Are solitary [Q]
- Located in Atria, most commonly in the left [Q]
- Unlikely to have post-op recurrence [e]
- Occur in younger individuals [Q]

Familial myxomas :

- Are multiple °
- More likely to have post op recurrence *e*

Myxomas are benign tumors and therefore distant metastasis are not seen.?

KollegeApply

1102. Duroziez's sign is seen in

a) Aortic Regurgitation

b) Tricuspid RegurgitationMitral stenosis

c) Pericardial effusion

d) None

Correct Answer - A

Answer- A. Aortic Regurgitation

- In severe aortic regurgitation, gradual pressure over the femoral artery leads to a systolic and diastolic bruit.
- Refers to systolic and distolic murmurs heard over the femoral artery while partially compresslng the vessel with the diaphragm of the stethoscope.

KollegeApply

1103. Becks triad is seen in

a) Constrictive pericarditis

b) Restrictive cardiomyopathy

c) Cardiac tamponade

d) None of the above

Correct Answer - C
Answer- C. Cardiac tamponade
Beck's triad is characteristic of cardiac Tamponade, it includes :

- Increased venous pressure
- Decreased arterial pressure
- Muffled heart sounds, silent heart (due to presence of fluid in pericardium).

KollegeApply

1104. The severity of mitral stenosis can be judged by-

a) Intensity of murmur

b) Duration of murmur

c) Left ventricular S3

d) Loud S1

Correct Answer - B
Answer- B. Duration of murmur
Duration depends on severity of MS.
In severe MS, the mid diastolic murmur is long and merges with the presystolic murmur to produce holodiastolic murmur..

KollegeApply

1105. Wide pulse pressure is seen in all except:

a) PDA

b) Aortic stenosis

c) Aortic Regurgitation

d) A.V. malformation

Correct Answer - B
Answer *is* B (Aortic Stenosis)
Aortic Stenosis is associated with a narrow pulse pressure. Patent Ductus Arteriosus (PDA), Aortic Regurgitation and AV Malformations (Arteriovenous shunting) are all associated with a wide pulse pressure.

KolleegeApply

1106. All are true for transplanted kidney except

a) Humoral antibody responsible for rejection

b) CMI is responsible for rejection

c) Previous blood transfusion

d) HLA identity similarity seen in 1:100 people

Correct Answer - D

Answer- D. HLA identity similarity seen in 1:100 people

- Within any particular family, sibling's have a 7:4 chance of being HLA identical. In contrast among unrelated
- people, the probabilities of HLA identity in several thousand depending upon phenotype involved' It is due to the fact that
- HLA complex is inherited intact as two haplotypes.

KollegeApply

1107. All are seen in Nephrotic syndrome except

a) Atherosclerosis

b) Thrombo-embolism

c) Increased protein C levels

d) Lipiduria

Correct Answer - C
Answer- C. Increased protein C levels
Nephrotic syndrome is a clinical complex characterized by a number of renal and extrarenal features, most prominent of which are
Proteinuria (in practice > 3.0 to 3.5gm/24hrs),
Hypoalbuminemia, Edema
Hypertension
Hyperlipidemia, Lipiduria
Hypercoagulabilty(result of Loss of Antithrombin III)

KolleegeApply

1108. Basket weave appearance of glomerular basement membrane on electron microscopy is seen in

a) Alport syndrome

b) Acute post stretptococcal GN

c) Polyarteritis nodosa

d) Giant cell arteritis

Correct Answer - A

Answer- A. Alport syndrome

Basketweave appearance of glomerular basement membrane on Electron Microscopy is seen in Alport's syndrome.

In Alport's Syndrome, the glomerular basement membrane shows irregular thinning and thickening with a lamellated basket-weave appearance in the thickened area due to extensive remodeling and injury of the basement membrane.

CollegeApply

1109. All of the following causes acute renal failure except

a) Pyelonephritis

b) Snakebite

c) Rhabdomyolysis

d) Analgesic nephropathy

Correct Answer - D
Answer- D. Analgesic nephropathy
Analgesic nephropathy causes chronic interstitial nephritis and presents with chronic kidney disease.
AKI is a serious complication of snakebites by the viperidae family

KolleegeApply

1110. Features of Hepatorenal syndrome are

a) Urine sodium < 10 meq/1

b) Normal renal histology

c) Renal function abnormal even after liver become normal

d) a and b

Correct Answer - D

Answer is A & B (urine Na < 10 meq/l and Normal Renal Histology)

Hepatorenal syndrome is associated with normal renal histology and supported by a urine sodium excretion l0meq/L

Hepatorenal syndrome

- Hepatorenal syndrome is defined as a state of functional renal failure (Reduced GFR) in patients with severe liver disease
- *Structurally /Histologically the kidneys are normal and recover function after successful liver transplantation.*
- The pathogenetic hallmark of hepatorenal syndrome is intense renal vasoconstriction with coexistent systemic vasodilatation
- The diagnosis of hepatorenal syndrome is considered in accordance with the following diagnostic criteria.

Diagnostic of Hepatorenal Syndrome

Major criteria

- *Low glomerular filtration rate. as indicated by serum creatinine > 1.5 mg/dL or 24-hr creatinine clearance < 40 mL/min*
- *Absence of shock, ongoing bacterial infection, fluid losses, and current treatment with nephrotoxic drugs*
- *No sustained improvement in renal function (decrease in serum creatinine to 1.5 nig/dL or increase in creatinine clearance to 40 mL/min) after diuretic withdrawal and expansion of plasma volume*

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with 1.5L of a plasma expander

- *Proteinuria mg/d1, and no uhrasonographic evidence of obstructive uropathy or parenchymal renal disease Additional criteria*
- *Urine volume < 500 mL/d*
- *Urine sodium < 10 meq/L*
- *Urine osmolality greater than plasma osmolality*
- *Urine red blood cells <50/high- power field*
- *Serum sodium concentration < 130 niEqL*

Note: All major criteria must be present for the diagnosis of hepatorenal syndrome.
Additional criteria are not necessary for the diagnosis but provide supportive evidence.

KollegeApply

1111. All are true about GFR except

a) 30-40% decrease after 70 years of age

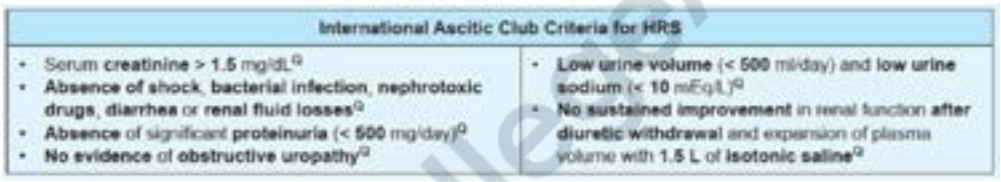
b) Best estimated by creatinine clearance

c) C.K.D is defied as GFR < 30 ml/min/1.732 for 4 weeks

d) GFR is dependent on height in children

Correct Answer - C

Answer- C. C.K.D is defied as GFR < 30 ml/min/1.732 for 4 weeks



International Ascitic Club Criteria for HRS	
• Serum **creatinine** > **1.5** mg/dL[Q] • **Absence of shock, bacterial infection, nephrotoxic drugs, diarrhea** or **renal fluid losses**[Q] • **Absence** of significant **proteinuria** (< **500** mg/day)[Q] • **No evidence** of **obstructive uropathy**[Q]	• **Low urine volume** (< **500** ml/day) and **low urine sodium** (< **10** mEq/L)[Q] • **No sustained improvement** in renal function **after diuretic withdrawal** and expansion of plasma volume with **1.5 L** of **isotonic saline**[Q]

KollegeApply

1112. Dialysis indications

a) Hypertension

b) Hypokalemia

c) Pericarditis

d) Metabolic alkalosis

Correct Answer - C
Answer- C. Pericarditis
Indications of dialysis in chronic renal failure
Pericarditis or pleuritis (urgent indication).
Progressive uremic encephalopathy or neuropathy, with signs such as confusion, asterixis, myoclonus, wrist or foot drop, or,in severe cases, seizures (urgent indication).
A clinically significant bleeding diathesis attributable to uremia (urgent indication).
Persistent metabolic disturbances that are refractory to medical therapy;these include hyperkalemia, metabolic acidosis, hypercalcemia, hypocalcemia, and hyperphosphatemia.
Fluid overload refractory to diuretics.
Hypertension poorly responsive to antihypertensive medications.
Persistent nausea and vomiting.
Evidence of malnutrition.

KalpaApply

1113. Polyuria with low fixed specific gravity urine is seen in ?

a) Diabetes mellitus

b) Diabetes insipidus

c) Chronic glomerulonephritis

d) Potomania

KollegeApply

Correct Answer - C

- **Answer- C. Chronic glomerulonephritis**
- Polyuria with fixed low specific gravity is a feature of chronic glomerulonephritis.
- Specific gravity measures the kidney's ability to concentrate or dilute urine about plasma.
- Because urine is a solution of minerals, salts, and compounds dissolved in water, the specific gravity is greater than 1.000. The more concentrated the urine, the higher the urine specific gravity.
- An adult's kidneys have a remarkable ability to concentrate or dilute urine.
- In infants, the range for specific gravity is less because immature kidneys are not able to concentrate urine as effectively as mature kidneys.
- A low specific gravity occurs in three situations.
- In diabetes insipidus, there is an absence or decrease of anti-diuretic hormone. Without anti-diuretic hormone, the kidneys produce an excessive amount of urine, often up to 15 to 20 liters per day with low specific gravity.
- Glomerulonephritis and pyelonephritis cause decreased urine volume and low specific gravity. In these diseases, damage to the kidney's tubules affects the ability of the kidney to re-absorb water. As a result, the urine remains to dilute.
- The third reason for low specific gravity is renal failure, which results in a fixed specific gravity between 1.007 and 1.010. In renal failure, the remaining functional nephrons undergo compensatory structural and hypertrophic changes. These compensatory changes result in urine that is almost isotonic with plasma. Therefore, a patient experiencing renal failure will present with specimens measuring the same, or fixed, specific gravity regardless

- of water intake.

KollegeApply

1114. Which of the following microorganism is incriminated in infection after hemodialysis

a) Chlamydia

b) Gram positive organisms

c) Gram negative

d) Anaerobes

Correct Answer - B

Answer- B. Gram positive organisms

Hemo-dialysis catheter-related bloodstream infections (CRBSIs) are a major complication of long-term catheter us in HD. Gram positive organism are seen followed by gram negative organisms.

KottieApply

1115. Disease, does not recur in the kidney after renal transplant is :

a) Alport syndrome

b) Amyloidosis

c) Good Pasteur's syndrome

d) Diabetic nephropathy

Correct Answer - A
Answer is A (Alport's syndrome):
Alport is syndrome has not been mentioned to recur in kidney after a renal tansplant.

KollegeApply

1116. Low serum copper due to ATP 7A gene is due to?

a) Dubin-johnson's syndrome

b) Wilson disease

c) Menke disease

d) Gilbert's disease

Correct Answer - C
Answer- C. Menke disease
Menke's disease, also known as kinky hair disease, is an X-linked neurodegenerative disease of impaired copper transport, due to ATP 7A gene located on Xp12-13.

CollegeApply

1117. Significant weight loss is defined as:

a) 5% weight loss in 1-2 months

b) 5% weight loss in 2-3 months

c) 10% weight loss in 1-2 months

d) 10% weight loss in 2-3 months

Correct Answer - A
Answer is A (5% weight loss in 1-2 months):
Significant weight loss is defined as 5% weight loss in I month.
Percent weight change over a period of time is calculated using the person's current body weight and person's usual body weight. Usual weight — Current weight Percent weight change = Usual weight

KollegeApply

1118. Hepatic Encephalopathy is predisposed by all, Except:

a) Hyperkalemia

b) Dehydration

c) Constipation

d) GI Bleeding

Correct Answer - A
Answer is A (Hyperkalemia):
Hepatic Encephalopathy is predisposed by Hypokalemia and not by Hyperkalemia

KollegeApply

1119. Which is not true about alcoholic hepatitis :

a) Gamma glutamyl transferase is raised

b) SGPT is raised > SGOT

c) SGOT is raised > SGPT

d) Alkaline phosphatase is raised

Correct Answer - B

Answer is B

SGOT/SGPT ratio greater than 2 is highly suggestive of alcoholic hepatitis and cirrhosis.

AST is synonymous with SGOT & ALT is synonymous with SGPT

In general AST and ALT levels rise parallel to each other. In alcoholic liver disease the AST rises out of proportion to ALT such that the ratio of AST and ALT may become greater than 2:

***Stigmata* of Alcoholic hepatitis / cirrhosis that aid in diagnosis :**

1. Bilateral enlarged parotids Q
2. Gynaecomastia Q
3. Testicular atrophy with loss of body hair Q
4. Wasting of muscle mass Q
5. Duputyrens contracture Q

AST (SGOT) out of proportion to ALT (SGPT) seen in Q

1. Alcoholic hepatitis Q
2. Fatty liver in pregnancy Q

Gamma Glutamyl transferase levels correlate with levels of Alkaline phosphatase and are a sensitive indicater of biliary tract disease — obstructive jaundice. *It is not an indicator of alcoholic liver disease.*

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Remember :GGT is the most sensitive indicator of bilian, tract disease

KollegeApply

1120. Rockall score is used for prognosis of patients of

a) Upper GI bleeding

b) Lower GI bleeding

c) Hepatic encephalopathy

d) IBD

Correct Answer - A

Answer- A. Upper GI bleeding

ROCKALL SCORE

- For Risk of Rebleeding and Death After Admission to the Hospital for Acute GI Bleeding

Variable	Score 0	1	2	3
Age (yrs)	< 60	60-79	≥ 80	
Comorbidity	No or mild coexisting	Moderate coexisting (e.g., hypertension)	Severe coexisting (e.g., CHF)	Life threatening (e.g., RF)
Hemodynamic status	No shock P < 100 Syst BP ≥ 100	P ≥ 100 plus Sys BP ≥ 100	Hypotension	
Diagnosis	MW tear, normal endoscopy with no blood seen	All other diagnosis	Malignancy of UGI tract	
Major stigmata of recent hemorrhage	None or dark spot		Blood in UGI tract Adherent clot, visible or spurting vessel	

KolleseApply

1121. Which is a hormone dependent liver tumor ?

a) Adenoma

b) Hemangioma

c) Hepatocellular carcinoma

d) Hemangiopericytoma

Correct Answer - A
Answer- A. Adenoma
Adenomas are associated with contraceptive hormone use.

KollegeApply

1122. Which of the following is not true regarding amoebic liver abscess

a) Multiple abscesses is more common

b) May rupture into the pleural cavity

c) For asymptomatic luminal carriers diloxanide furoate is the drug of choice

d) Mostly involving the right lobe of liver

Correct Answer - A

Ans. is 'a' i.e., Multiple abscesses are more common

- Amoebic liver abscess is the most common extra-intestinal manifestation of amoebiasis.
- It is the involvement of **liver** tissue by trophozoites of the organism Entamoeba histolytica and of its **abscess** due to necrosis.
- Most common in the posterosuperior surface of the right lobe. Usually, there is one large solitary abscess.-
- The necrotic contents of liver abscess are classically described as anchovy-sauce pus.
- Pleuropulmonary involvement of the most frequent complication of amoebic liver abscess.
- ALA is usually solitary and pyogenic liver abscess is usually multiple.
- Multiple ALA, although rare, are frequently confused with pyogenic liver abscess.
- However, Tayal et al., from India showed that the existence of multiple ALA is not uncommon as previously thought and superinfection or co-infection with pyogenic organisms is common in such cases.

Treatment

Treatment depends on the type of infection:

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1) Asymptomatic carrier --> Luminal agents (Iodoquinol, Paromomycine) --> Diloxanide furoate is the DOC.
2) Acute colitis(dysentery) --> Metronidazole or Tinidazole + Luminal agent.
3) Liver abscess --> Metronidazole or Tinidazole or Ornidazole + Luminal agent.

KollegeApply

1123. Poikilocytosis and anisocytosis is seen in

a) Megaloblastic anaemia

b) Iron deficiency anaemia

c) Nutritional deficiency anaemia

d) Thalassemia

Correct Answer - B
Answer- B. Iron deficiency anaemia
Anisocytosis means that RBC's are unequal in size indicating that some of the RBC's are either too big or too small.
Poikilocytosis means that some of the RBC's are abnormally shaped.

KollegeApply

1124. All of the following are characteristic features of treatment of iron deficiency anemia with oral iron supplements, except

a) Bioavailability is enhanced with vitamin C

b) The proportion of iron absorbed reduces as hemoglobin improves

c) The reticulocyte count should begin to increase in two weeks and peak in 4 weeks this suggests good response to treatment

d) The treatment should be discontinued immediately once hemoglobin normalizes to prevent side effects of iron

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Correct Answer - D

Answer- D. The treatment should be discontinued immediately once hemoglobin normalizes to prevent side effects of iron

The reticulocyte count begin to increase within 4-7 days after initiation of therapy and peak at 1.5 weeks.

Typically for iron replacement therapy, up to 200mg of elemental iron per day is given, usually as three or four iron tablets (each containing 50-65mg elemental iron) given over the course of the day.

A dose of 200 mg of elemental iron per day should result in absorption of iron upto 50 mg/day. This supports a red cell production level of 2-3 times normal in an individual with a normally functioning marrow and appropriate erythropoietin stimulus.

As the hemoglobin level rise, erythropoietin stimulation decreases, and the amount of iron absorbed is reduced.

The goal of therapy in individuals with iron-deficiency anemia is not

only to repair the anemia, but also to provide stores of at least 0-5-1 g of iron.
This sustained treatment for a period of 6-12 months after correction of the anemia will be necessary.

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1125. Which of the following is not expected in a case of Microcytic Hypochromic anemia

a) Reduced serum Iron

b) Reduced total RBC distribution width

c) Normal Ferritin levels

d) Increased TIBC

Correct Answer - B

Answer- B. Reduced total RBC distribution width

The first change in iron deficiency anemia is decreased in iron store, which is manifested as decreased serum ferritin level.

Bone marrow iron decreases earlier than serum iron.

There is microcytic hypochromic anemia (microcytosis precedes hypochromia).

KollegeApply

1126. Zieve syndrome is characterized by all except

a) Alcohol abuse

b) Hemolysis

c) Hypertriglyceridemia

d) Pancreatic lipase deficiency

Correct Answer - D
Answer- D. Pancreatic lipase deficiency
Zieve's syndrome is an acute metabolic condition that can occur during withdrawal from prolonged alcohol abuse
Zieve syndrome is a rare condition characterized by hemolytic anemia in conjunction with secondary hyperlipidemia in patients suffering from alcohol-related toxic liver damage.

KollegeApply

1127. Hemoglobin with zeta 2 and gamma 2 chains are seen in which of the following

a) Gower I

b) Gower II

c) Portland

d) Fetal Gb

Correct Answer - C

Answer- C. Portland

- Hb Gower I → Zeta 2 / epsilon 2
- Hb Portland → Zeta 2 /gamma 2
- Hb Gower H Alpha 2 / epsilon 2

KollegeApply

1128. HAM test is based upon :

a) GPI Anchor Proteins

b) Complement

c) Spectrin protein

d) Mannose binding proteins

Correct Answer - B
Answer is B (Complements)
HAM test is based upon susceptibility of RBC's to complement mediated lysis in patients with PNH.
HAM test is usedfbr the diagnosis of PNH (Paroxysmal Nocturnal Haemoglobinuria). HAM test (Acidified serum lysis test) demonstrates lysis of RBC after activation of complement by acid. In acidified serum complement is activated by the alternate pathway. In patients with PNH, RBC are unusually susceptible to complement, and undergo lysis when incubated with acidified fresh serum.

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1129. **All of the following are major complications of massive transfusion, except:**

a) Hypokalemia

b) Hypothermia

c) Hypomagnesemia

d) Hypocalcemia

Correct Answer - A
Ans:A.)Hypokalemia.

Complications usually seen with massive blood transfusion are

- 1) hyperkalemia,
- 2) hypocalcemia,
- 3)hypomagnesemia
- 4) hyperammonemia,
- 5) hypothermia,
- 6) Acidosis
- 7)dilutional coagulopathies and DIC (most worrisome problem after massive transfusion and is the usual cause of death after massive blood transfusion) and
- 8) ARDS.

The lethal triad of acidosis, hypothermia, and coagulopathy associated with MT is associated with a high mortality rate.

KollegeApply

1130. All are true about CNS leukemia except

a) CNS irradiation is given

b) Intrathecal methotrexate is given

c) Seen with acute myeloid leukemia

d) Single blast in CSF is sufficient for diagnosis

Correct Answer - C

Answer- C. Seen with acute myeloid leukemia

Most children with leukemia have subclinical CNS involvement at the time of diagnosis.

Few children show central nervous system involvement at the time of diagnosis, most are asymptomatic but some have features of raised intracranial tension.

CNS involvement is mostly due to ALL. CNS involvement is more common in ALL than AML.

KollegeApply

1131. The tissue of origin of the Kaposi's sarcoma is *?*

a) Lymphoid

b) Vascular

c) Neural

d) Muscular

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Correct Answer - B
Ans is 'b' i.e., Vascular
Kaposi Sarcoma

- Kaposi sarcoma is an intermediate grade, multicentric *vascular, tumour*
  * The pathogenesis of kaposi sarcoma is complex, fundamentally it is *an angioproliferative disease* that is not a true neoplastic sarcoma.
- It is a manifestation of excessive proliferation of spindle cells that are believed to be of vascular origin and have features in common with endothelial and smooth muscle cells.
  * Grossly-Three stages of the disease can be identified
    Patch (1st stage)
    Plaque (intermediate stage)
    LI Nodule (last stage)
  * Histologically-The changes are nonspecific in the early patch stage and more characteristic in the nodular stage which show sheets of plump proliferating spindle cells and endothelial in the dermis or subcutanous tissue

1132. Thrombocythemia is characterized by

a) Platelets elevation

b) Low platelets

c) Neutrophilia

d) Monocytosis

Correct Answer - A
Answer- A. Platelets elevation
Thrombocythemia or thrombocytosis is the elevation of platelets.

KollegeApply

1133. Which of the following is required for proper effects of Insulin?

a) Selenium

b) Iron

c) Copper

d) Chromium

Correct Answer - D

In association with insulin, chromium promotes the utilization of glucose
Chromium is a component of a protein namely chromodulin which facilitates the binding of insulin to cell receptor sites
Chromium

- It is an essential nutrient for the maintenance of normal glucose tolerance
- Its deficiency causes insulin resistance.
- Chromium administration has also been shown in several studies to lower glucose and insulin levels in patients with type 2 diabetes.
- It has been classified as not essential for mammals. (Cr (III) or Cr3+).
- Chromium deficiency is controversial or is at least extremely rare.
- It has been attributed to only three people on parenteral nutrition, which is when a patient is fed a liquid diet through intravenous drips.
- In contrast, hexavalent chromium (Cr (VI) or Cr6+) is very toxic and mutagenic when inhaled.
- Cr (VI) has not been established as a carcinogen when in solution, although it may cause allergic contact dermatitis (ACD).

Dietary supplements for chromium include chromium (III) picolinate,

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chromium (III) polynicotinate, and related materials.

- Glutathione peroxidase requires selenium
- Copper is an important constituent of catalse, cytochrome oxidase and tyrosinase.
- Zinc is also necessary for the storage and secretion of insulin

KollegeApply

1134. Glucose fever is related with -

a) Glucagon

b) Parathyroid

c) GH

d) Aldosterone

Correct Answer - D
Answer- D. Aldosterone
Hypoglycemia in Addison disease is managed with hydrocortisone/dexamethasone.
Administration of I.V. glucose in Addison leads to development of fever and is called as "glucose fever".
In patients with adrenal insufficiency, who have not received glucocorticoids glucose infusion may cause high fever (glucose fever) followed by collapse and death.

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1135. Not associated with diabetes mellitus

a) Cushing syndrome

b) Acromegaly

c) Hypothyroidism

d) Pheochromocytoma

Correct Answer - C
Ans. is 'c' i.e., Hypothyroidism

KollegeApply

1136. Patient on insulin in CKD stage 4. What is the dose adjustment of insulin required ?

a) Increased insulin

b) Decreased insulin

c) Normal insulin

d) Add DPP-4 inhibitors

Correct Answer - B

Answer- B. Decreased insulin

Insulin requirements show a biphasic course in diabetic patients with renal disease. It is not uncommon for glucose control to deteriorate as renal function deteriorates, as increasing insulin resistance can affect both type I and type 2 diabetics.

KollegeApply

1137. Which is the best indicator for short term control (2-3 weeks] of blood glucose ?

a) Serum fructosamine

b) HbA lc

c) Blood sugar

d) Urine sugar

Correct Answer - A
Answer- A. Serum fructosamine
Serum fructosamine → Tells sugar fluctuations in 2-3 weeks
Glycosylated hemoglobin → Tells sugar fluctuations in previous 6-8 weeks.

KollegeApply

1138. Post Prandial capillary glucose should be mg/dl for adequate diabetes control

a) < 100mg / dl

b) < 140 mg / dl

c) < 180 mg/dl

d) < 200 mg/dl

Correct Answer - C
Answer- C. < 180 mg/dl
HbA IC- two
Preprandial capillary plasma glucose- 70-130 mg/d1 <
Peak post prandial capillary plasma glucose -180 mg/d1 <
Blood pressure- 130/80

KollegeApply

1139. Hyperpigmentation is seen with which hormone?

a) FSH

b) LH

c) TSH

d) ACTH

Correct Answer - D

Answer- D. ACTH

- Hyperpigmentation of the skin and mucous membranes often precedes all other symptoms by months to years.
- It is caused by the stimulant effect of excess adrenocorticotrophic hormone (ACTH) on the melanocytes to produce melanin.
- The hyperpigmentation is caused by high levels of circulating ACTH that bind to the melanocortin 1 receptor on the surface of dermal melanocytes.
- Other melanocyte-stimulating hormones produced by the pituitary and other tissues include alpha-MSH (contained within the ACTH molecule), beta-MSH, and gamma-MSH. When stimulated, the melanocyte changes the color of the pigment to a dark brown or black.
- The increased MSH in Addison's causes melanocytes to disperse melanin in the epidermis thus increasing pigmentation.

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1140. The most common cause of Cushing's syndrome is:

a) Pituitary adenoma

b) Adrenal adenoma

c) Ectopic ACTH

d) Iatrogenic steroids

Correct Answer - D
Answer is D (Iatrogenic steroids):
"The most common cause of Cushing's syndrome is Iatrogenic administration of steroids for a variety of reasons."

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1141. The most common cause of malignant adrenal mass is

a) Adrenocortical carcinoma

b) Malignant phaeochromocytoma

c) Lymphoma

d) Metastasis from another solid tissue tumor

Correct Answer - D

Ans. is 'd' i.e., Metastasis from another solid tissue tumor

The most common cause of adrenal tumors is metastasis from another solid tumor like breast cancer and lung cancer.

Malignant	Percentage
Adrenocortical carcinoma	2-5%
Malignant pheochromocytoma	<I%
Adrenal neuroblastoma	<0- 1%
Lymphomas (incl. primary adrena lymphoma)	<1%
Metastases (most frequent : Breast, lung)	*15%*

Kollege Apply

1142. Primary Hyperaldosteronism can be diagnosed by all of the following criteria, except:

a) Diastolic Hypertension without edema

b) Hyperaldosteronism which is not supressed by volume expansion

c) Low Plasma Renin Activity

d) Metabolic Acidosis

Correct Answer - D
Answer **is** D (Metabolic Acidosis)
Class,Triad of Biochemical Criteria for diagnosis of Primary Hyperaldoteronism

- Hypokalemia with inappropriate kaliuresis (Metabolic alkalosis)
- Suppressed plasma renin activity
- *Elevated Aldosterone levels* that do not fall **appropriately** in response to volume expansion or sodium load
- Taken from Manual of Endocrinology & Metabolism 41h/150

KollegeApply

1143. Most common cause of Addison's Disease in India is:

a) Autoimmune

b) Postpartum

c) HIV

d) Tuberculosis

Correct Answer - D
Answer *is* D (Tuberculosis):
'The commonest cause of adrenal insufficiency (Addison's disease) in underdeveloped countries is Tuberculosis

KolleegeApply

1144. Female with blood sugar of 600 mg% and sodium of 110 mEq. Insulin was given, what will happen to serum sodium levels ?

a) Sodium increase

b) Sodium decrease

c) Sodium unaffected

d) Relative sodium deficiency

Correct Answer - A

Answer- A. Sodium increase

As the glucose level decreases, there is decrease in the osmolarity of extracellular fluid. This causes movement of intracellular fluid back into the cellular compartment producing increase in serum sodium.

KollegeApply

1145. Which of the following presents with hypokalemia and metabolic acidosis ?

a) Diarrhea

b) Vomiting

c) Nasogastic suction

d) Nasogastic suction

Correct Answer - A
Ans- A. Diarrhea
Diarrhea causes hypokalemia with metabolic acidosis.
Vomiting nosogastric suction and conn's syndrome cause metabolic alkalosis.

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1146. Hypertension with Hypokalemia is seen in:

a) Bartter Syndrome

b) Liddle's Syndrome

c) Gitelman's Syndrome

d) All of the above

Correct Answer - B

Answer is B (Liddle's Syndrome)

Liddle's Syndrome is typically associated with Hypokalemia and Hypertension. Rartter's Syndrome and Gitelman's Syndrome are also associated with hypokalemia but without hypertension.

Liddle's Syndrome : Review

Pathophysiology:

- *Autosomal dominant disorder.*
- *Genetic defect in the collecting tubule sodium channel, resulting in in*

of inhibition by higher levels of intracellular sodium

Age of Presentation

- *Often diagnosed at young age, but can present in adulthood due to p*

Clinical presentation

- *Classic triad of hypertension, metabolic alkalosis, and hypokalemia.*
- *Consider iffamily histor^{y} of hypertension and/or hypokalemia. at you*

Lab data

- *Metabolic alkalosis, hrpokalemia (although some are low normal), lo*

Treatment:

- *Lifelong. Potassium-sparing diuretic which closes the sodium channe*

Spironolactone does not work because aldosterone is not causing the s

KollegeApply

1147. In cobalamin deficiency which is not seen

a) Microcytic anemia

b) Long tract signs

c) Loss of proprioception

d) Rhomberg sign

Correct Answer - A
Answer- A. Microcytic anemia
Cobalmine deficiency causes megaloblastic (macrocytic) anemia (not microcytic).
Cobalamine deficiency also causes subacute combined degeneration of spinal cord due to involvement of posterior column, affecting vibration, fine touch, and imbolance (Romberg sign).

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1148. Hypernatremia causes all EXCEPT

a) Seizure

b) Thrombus

c) Brain hemorrhage

d) Central pontine myelinosis

Correct Answer - D

Answer- D. Central pontine myelinosis

- Complication of hypernatremia are brain hemorrhage, seizures, coma, thrombotic complications and raised ICT.
- Central pontine myelinosis is classically associated with overlay rapid correction of hyponatremia.

Clinical features-

- Patients are irritable, restless weak and lethargic
- Some have high pitched cry and hyperpnea.
- Alert patient are very thirsty.
- Hypernatremia causes fever although many patients have underlying process that contributes to the fever.

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1149. All of the following are associated with hyponatremia except

a) anorexia

b) Convulsions

c) Drowsiness

d) Myalgia

Correct Answer - D
Answer- D. Myalgia
Anorexia, nausea & vomiting
Coma
Convulsions
Drowsiness
Headache
Circulatory failure and hypotension
Hyponatremia can also cause muscle cramps and weakness.

KollegeApply

1150. Most common type of multiple sclerosis?

a) Relapsing remitting type

b) Secondry progressive multiple sclerosis

c) Progresive relapsing multiple scelrosis

d) Primary progresive multiple sclerosis

Correct Answer - A
Answer- A. Relapsing remitting type
Repapsing-remitting multiple sclerosis (RRMS)
This is the most common form of multiple sclerosis.
About 85% of people with M.S. are initially diagnosed with relapsing-remitting multiple sclerosis.

KollegeApply

1151. In EEG which type of waves are seen in metabolic encephalopathy

a) Alpha

b) Beta

c) Gamma

d) Delta

Correct Answer - D

Answer- D. Delta

E.E.G. has been widely used to evaluate metabolic encephalopathy. The E.E.G. findings are abnormal in acute encephalopathy stages

Metabolic encephalopathy	**'vthm**
Grade I (almost normal)	Dominant activity is rhythm with minima, theta activity
Grade II (mildly abnormal)	Dominant theta background with some alpha and delta activities
Grade II (morderately abnormal)	Continuous delta activety predominates, little activity of faster frequencies
Grade IV (severely abnormal)	Low-amplitude delta activity or suppression-burst pattern
Grade V (extremely abnormal)	Nearly "flat" tracing or electrocerebral inactivity

KollegeApply

1152. Glasgow coma scale motor 4 represents?

a) Withdrawal or flexion

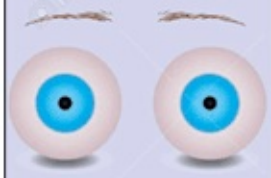
b) Decorticate posturing

c) Decorticate posturing

d) Localise pain

Correct Answer - A

Answer- A. Withdrawal or flexion

Behaviour	Response
 Eye Opening Response	4. Spontaneously 3. To speech 2. To pain 1. No response
Verbal Response	5. Oriented to time, person and place 4. Confused 3. Inappropriate words 2. Incomprehensible sounds 1. No response
Motor Response	6. Obeys command 5. Moves to localised pain 4. Flex to withdraw from pain 3. Abnormal flexion 2. Abnormal extension 1. No response

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1153. A patient after an accident was unconscious. On physical examination there was unilateral pupillary dilatation Possible reason for the same is

a) Uncal herniation

b) Tonsillar herniation

c) Cingulate herniation

d) Transcalvarial herniation

Correct Answer - A

Answer- A. Uncal herniation

Transtentorial herniation is the displacement of medial temporal lobe into the tentorial opening it is usually seen after extradural hemorrhage.

KollegeApply

1154. Increased ICT is shown by

a) Miosis

b) Systemic hypotension

c) Tachycardia

d) Reduction in GCS

Correct Answer - D
Answer- D. Reduction in GCS
Increased ICT leads to bradycardia with Hypertension. Uncal herniation of brain leads to ipsilateral pupillary dilatation. Reduction in GCS due to damage to reticular activating system leads to development of coma.

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1155. **Lateral medullary syndrome is due to the occlusion of which of the following vessels?**

a) Posterior superior cerebellar artery

b) Anterior inferior cerebellar artery

c) Basilar artery

d) Vertebral artery

Correct Answer - D

Lateral medullary syndrome is otherwise known as Wallenberg's syndrome or PICA syndrome or vertebral artery syndrome.
Occlusive disease of the intracranial segment of the vertebral artery is a much more frequent cause of the lateral medullary syndrome.
Signs and symptoms include:
Ipsilateral side
Horner's syndrome
Decrease in pain and temperature sensation on ipsilateral side of face
Cerebellar signs (ataxia)
Contralateral side:
Decreased pain and temperature on contralateral body
Dysphagia, dysarthria, hoarseness, paralysis of vocal cord
Vertigo, nausea, vomiting, hiccups
Nystagmus, diplopia
No facial or extremity muscle weakness seen in this syndrome.

Ref: Physical Medicine and Rehabilitation Board Review By Sara Cuccurullo, 2004, Page 11 ; Harrison's Internal Medicine 17th ed Chapter 364. Cerebrovascular Diseases, Brainstem disorders by Peter P Urban, Louis R Caplan page 205-207.

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1156. Most common site of hypertensive intraparenchymal hemorrhage in brain: *March 2013*

a) Pons

b) Thalamus

c) Putamen

d) Cerebellum

Correct Answer - C
Ans. C i.e. Putamen
Sites of intracerebral hemorrhage includes putamen (55%), thalamus (20-3-%), cerebrllum (10%), pons (5-7%) and subcortical white matter (10-15%)

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1157. Plaques jaunes are seen in

a) Syphilis

b) Head injury

c) Endocarditis

d) Atherosclerosis

Correct Answer - B
Answer- B. Head injury
Plaque Jaunes is a term used to describe the characteristic gross appearance of old traumatic contusions on the surface of brain from previous head injuries.

KollegeApply

1158. Rademecker complex in EEG is seen in -

a) SSPE

b) vCJD

c) cCJD

d) Kuru

Correct Answer - A

Answer- A. SSPE

- Characteristic periodic activity (Rademecker complex) is seen on EEG showing widespread cortical dysfunction in SSPE.
- It is characterised by high voltage spike occuning at higlr lrequency of 0.5- 1.5 seconds.

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1159. Commonest cause of cerebro vascular accident

a) Infarction

b) Infarction

c) Embolism

d) Aortic dissection

Correct Answer - A

Answer- A. Infarction

1. Ischemic (85%) (infarction) : Causes are embolism (75% of ischemic stroke) and thrombosis (25% of ischemic stroke).
2. Hemorrhagic (15%) : Intraparenchymal, subdural, epidural, subarachnoid.

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1160. Which of the following sites is responsible for the amnestic defect in Wernicke's Korsakoff syndrome:

a) Mamillary body

b) Thalamus

c) Periventricular Grey matter

d) Hippocampus

Correct Answer - B

Answer is B (Thalamus):

The Amnestic effect in Wernicke's Korsakoff Syndrome is related to lesions in the dorso-medial nuclei of the thalamus.

`Lesions in the dorsomedial nucleus of the thalamus seem to be the best correlate of the memory disturbance and confabulation' - Robbins

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1161. Criteria for Brainstem death includes:

a) Positive Doll's eye Reflex

b) Absent pupillary light reflex and delated pupils

c) Pinpoint pupils

d) Positive vestibulo-ocular reflex

Correct Answer - B

Answer is B (Absent pupillary light reflex and delated pupils):

Brainstem death is defined by the absence of all brainstem mediated cranial nerve reflexes.

Pupillary Light Reflex is a brainstem mediated cranial nerve reflex that is absent in brainstem death. The pupils are usually midsized but may be dilated (should not however be small).

Occulo-cephalic (Doll's eye) reflex and Vestibulo-ocular (Caloric) reflex are both brainstem mediated cranial nerve reflexs that should be absent in Brainstem death.

Criteria for Brain Death/Brainstem death

The definition of Brain stem death requires simultaneous demonstration that the patient has irreversibly lost the capacity of consciousness (Coma) and the capacity to breathe (Apnoea) both of which are dependent on intact brainstem.

Clinical assessment of the integrity of Brainstem has two components including assessment of the integrity of brainstem mediated cranial nerve reflexes and the Apnea test.

Deep Unresponsive Coma

Patients with brain death show the deepest coma possible with total unresponsiveness to all stimuli.

- No spontaneous movement
- No response to external stimuli (Verbal/ Deep pain)

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Absence of all Brainstem Cranial Reflexes

All reflexes mediated by cranial nerve must be absent

- Absent Pupillary Light reflex (CN II, III)
  (Pupils are usually midsized but may be enlarged but they should not be small)
- Absent Corneal Reflex (CN V, VII)
- Absent Vestibulocochlear Reflex (CN III, IV, VI, VIII) (No eye movement in response to caloric irrigation of ears)
- Absent Oculocephalic Reflex
  (Absent Doll's eye reflex) Eyes will move with the head
  (No occular movements on rapid turning of head).
- Absent Gag Reflex (CNIX, X)
- Absent Tracheal Cough Reflex (CNX)
- Absent Central Motor Response to Pain (CN V, VII) (No response to deep somatic stimulation).

Complete Aponea in pressure of hypercarbia (Absence of Brainstem Respiratory Reflex)

- No respiratory effort in response to hypercarbia needs to be demonstrated to show that aponea is due to brainstem (medullary) damage
- Absent respiratory movement during disconnection from the ventilator with the $PaCO_2$ > 60 mm Hg is required for the test to be valid

Cranial nerve reflexes in Brain Stem Death testing:

Reflex	Cranial nerves	Notes
Pupillary light reflex	HAI	Use bright light source (not ophthalmoscope) in a dimmed environment. Look for both direct and consensual reaction. Important reflex that interrogates at level of midbrain
Corneal reflex	V, VII	Stroke cornea with gauze, whilst gently holding eyes open; avoid trauma to cornea. The various nuclei of V are found throughout the whole length of the

		brainstem, whilst that of VII (facial nerve) is in the upper medulla.
Central response to deep somatic stimulation	V, VII	Apply deep pressure stimulation centrally (e.g. supra-orbital ridge) and peripherally (e.g. nail bed). Look for central motor response in the distribution of the facial nerve. Peripheral stimulation may illicit peripheral spinal reflexes.
Cold caloric vestibulo-ocular reflex	III, IV, VI, VIII	Check patency of external auditory canal with auroscope. Flex head to 30° (or apply 30° head up tilt if cervical spine injury is suspected). Slowly irrigate canal with 5OrriL ice-cold water over 60s. Observe for nystagmus for a further 30s. Contra-indicated in trauma-related otorrhea. The nuclei of III and IV lie withjin the midbrain, whilst those of VI and VIII are in the medulla.
Oculocephalic reflex (Doll's eye reflex)	VIII, Ill, VI	Rapid lateral movement of the head normally results in eye deviation to the contralateral side, testing brainstem gaze mechanism. In brainstem death eyes remain in a fixed position within the orbit.
Gag reflex	IX, X	Stimulate uvula under direct vision with throat spatula, observing for contraction of soft palate. The nuclei of IX and X lie in the medulla.
Tracheal cough reflex	X	Expose patient to umblicus. Stimulate trachea to level of carina by introduction of sterile suction catheter down endotracheal tube. Observe for cough response

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tube. Observe for cough response

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1162. Which of the following is the most common initial presenting feature of multiple sclerosis:

a) Optic Neuritis

b) Cerebellar Ataxia

c) Internuclear ophthalmoplegia

d) Diplopia

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Correct Answer - A
Answer is A (Optic Neuritis):
Optic Neuritis is the most frequent initial presenting feature of MS amongst the options provided.
The most common earliest presenting features of multiple sclerosis are transient sensory defects followed by visual disturbances due to optic neuritis.

Initial Symptoms of MS

Symptom	Percent of Cases	Symptom	Percent of Cases
Sensory loss	37	*Lhermitte's*	3
Optic neuritis	36	*Pain*	3
Weakness	35	*Dementia*	2
Paresthesias	24	*Visual loss*	2
Diplopia	15	*Facial palsy*	1
Ataxia	11	*Impotence*	1
Vertigo	6	*Myokymia*	1
Paroxysmal attacks	4	*Epilepsy*	1
	4		1

Bladder	4	*Falling*	1

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1163. Absence of Corpus callosum leads to

a) Hemiparesis

b) Hemisensory loss

c) Astereognosis

d) No neurological manifestations

Correct Answer - D
No neurological manifestations [Ref: *Internet reference]*

- Agenesis of corpus callosum is a rare birth defect (congenital disorder) in which there is *complete* or *partial absence* of corpus callosum.
- Corpus callosum is a band of tissue *connecting the two hemispheres of the brain.* Fibres of corpus callosum arise from the superficial layers of the cerebral cortex and they project to the *homotypic regions* of the contralateral cortex by passing through the corpus collosum while crossing the midline.

Clinical features of Agenesis of corpus callosum

- *Signs and symptoms of agenesis of corpus callosum vary greatly among individuals.*
- *Patients usually do not have any neurological manifestations.*
- However, some features common in agenesis of corpus callosum are:- *Vision impairment*

* *Low muscle tone (hypotonia)*
Poor motor coordination
* *Delay in motor milestones such as sitting and walking.*
Low perception of pain
* *Delayed toilet training*
* *Chewing and swallowing difficulties*
* *Early speech and language delays*

Social difficulties

- Other characteristics sometimes associated with callosal disorders are:- *Seizures*

** Spasticity*

** Early, feeding difficulties and or gastric reflux-.*

** Hearing impairments*

** Abnormal head and facial features*

** Mental retardation*

Investigation

- CT and MRI reveal "Bat wing" deformity of the ventricles.

Treatment

- There are currently no specific medical treatments for callosal disorders.

An important point

- *The neurological abnormalities associated with corpus callosum are not caused by absence of corpus callosum per se.*

** These conditions are believed to be caused due to associated cerebral anomalies rather than in corpus callosum per sc.*

* The most common associated brain anomalies with absent corpus callosum are

** Dandy walker malformation*

** Interhenfispheric cyst with hydrocephalus*

** Migrational disorder*

** Absence of the inferior vertnis*

** The children who had the best prognosis without any significant neurological sequale were those with isolated agenesis of corpus collosum.*

** The children with the worst prognosis and neurological sequale were those with agenesis of corpus callosum and migrational disorder with or without Dandy — walker malformation.*

** Hence prognosis is determined primarily by the underlying or associated malformation.*

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1164. Which one of the following is correct regarding Eaton-Lambert syndrome-

a) It commonly affects the ocular muscle

b) Neostigmine is the drug of choice for this syndrome

c) Repeated electrical stimulation enhances muscle power in it.

d) It is commonly associated with adenocarcinoma of lung

Correct Answer - C

Answer is C (Repeated electrical stimulation enhances muscle power):

'Patients with Lambert – Eaten myaethenic syndrome show incremental rather than decremental response on repeated nerve stimulation' – Harrison 17th/2674

'Muscle response to stimulation of its motor nerve increases remarkably if nerve is stimulated repeatedly even in muscles that are clinically weak' - CMDT

Lambert Eaten Myasthenia Syndrome commonly involves proximal limb muscles and muscles of trunk

Extraocular muscles are the most commonly involved in Myaesthenia Gravis and not in Lambert Eaten Myasthenia Syndrome

Neostigmine is not considered the drug of choice

Plasmapharesis and immunosuppression form mainstay of treatment 3, 4 Diaminopyridine is the drug of choice for enhancement of neuromuscular transmission.

Pyridostigmine (or Neostigmine) may be sympatomatically helpful but their response is variable – *Harrison & CMDT*

Lambert Eaten Myasthenia Syndrome is associated with small cell carcinoma of lung

Lambert Eaten Myasthenia Syndrome is associated with small cell carcinoma of lung and not adenocarcinoma

KollegeApply

1165. The following are components of Brown Sequard syndrome except :

a) Ipsilateral extensor plantar response

b) Ipsilateral pyramidal tract involvement

c) Contralateral spinothalamic tract involvement

d) Contralateral posterior column involvement

Correct Answer - D

Answer is D (Contralateral posterior column involvement):

Brown – Sequard syndrome or hemisection of the spinal cord leads to loss of joint position and vibratory sense (posterior columtn movement) on the ipsilateral side and not on the contralateral side. – Harrison 16th / 2441, 144

Brown sequard syndrome: Hemisection of spinal cord

- Ipsilateral involvement of corticospinal tract : ipsilateral loss of motor power.
- Ipsilateral involvement of posterior column : ipsilateral loss of joint position and vibratory sense.
- Contralateral involvement of spinothalamic tract : contralateral loss of joint position and vibratory sense.

Segmental signs such as radicular pain muscle atrophy or loss of deep tendon reflexes arc unilateral (Lower motor neuron signs at level of lesion).

KalpaApply

1166. First Symptoms of parkinsons disease is -

a) Postural instability

b) Rigidity

c) Tremors

d) Bradykinesia

Correct Answer - C
Answer- C. Tremors
Parkinsonism is a progressive degenerative, extrapyramidal disorder of muscle movement, due to dysfunction in basal ganglia, comprising four cardinal features
Bradykinesia or hypokinesia
Muscle rigidity
Resting tremor

KollegeApply

1167. Which of the following metal ions is associated with secondary Parkinsonisms:

a) Mangnese (Mn)

b) Magnesium (Mg)

c) Selenium (Se)

d) Molybednum (Me)

Correct Answer - A

Answer *is* A (Mangnese (Mn)):

Manganese ion exposure is implicated in the free radical damage of the basal ganglia causing Parkinsonism.

Toxins Implicated in Parkinsonism *(Harrison)*

- Manganese (Mn)
- MPTP (1 Methyl - > Phenyl –1, 2, 3, 6 tetrahydropyridine)
- Carbonmonoxide
- Carbondisulphide
- Ctanide
- Hexane
- Methanol

Toxins reported to induce Parkinonism: (Handbook of Atypical Parkinsonism)

- Betel nut (plus antiPsychotics)
- Carbon monoxide
- Contrast agent for cardiac catheterization
- Cyanide
- Ethanol intoxication, ethanol withdrawal
- Ethylene glycol

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- Herbicides (paraquat, diquat, glyphosate)
- Heroin
- Hydrogen sulfide
- Kava-kava
- Manganese
- Maneb (Manganese Ethylene-Bis-Dithiocarbamate)
- Mercury
- Methanol
- Methcathinone (manganese ephedrone)
- MPTP (I-methyl-4-phenyl-1,2,3,6-tetrahydropyridine)
- Organic solvents (carbon disulfide, n-hexane, toluene, trichloroethylene)
- Organophosphate insecticide poisoning
- Petroleum products

KollegeApply

1168. Isaac syndroma is characterised by -

a) Peripheral nerve excitability

b) Opsoclonus

c) Encephalomyelitis

d) Limbic encephalitis

Correct Answer - A

Answer- A. Peripheral nerve excitability

Isacc syndrome (neuromyotonia)

- Peripheral nerve hyperexcitability
- Spontaneous and continuous muscle fiber activity of peripheral nerve origin.
- Clinical features include cramps, muscle twitching (fasciculations or myokymia)
- Stiffness
- Delayed
- Muscle relaxation (pseudomyotonia)
- Spontaneous or evoked carpal or pedal spasms.

KollegeApply

1169. In Alzheimer's disease (AD) which of the following is not seen:

a) Aphasia

b) Acalculia

c) Agnosia

d) Apraxia

Correct Answer - C

Ans. None > C. Agnosia *tRej. Kaplan ana[l] Jaadock s Synopsis of Psychiatry 10/c pi-t?*

Aphasia, Apraxia, Acalculia and Agnosia may all be seen in Alzheimer's Dementia. Agnosia in Alzheimer's disease usually presents late in the disease and is not included in the ICD-10 Diagnostic criteria for dementia in Alzheimer's disease with early onset and hence may be selected as the single best answer by exclusion

KollegeApply

1170. DOC for treatment of SSPE -

a) Abacavir

b) Inosine pranobex

c) Glatiramer

d) Interferon

Correct Answer - B

Answer- B. Inosine pranobex

- Inosine pranobex is used as an immune-modulator for the management of patients with-
- Immune-depression sufereing from viral infections as SSPE recurrent herpes simplex genital warts.

KollegeApply

1171. Most common acute complication of dialysis is

a) Hypotension

b) Bleeding

c) Dementia

d) Muscle cramps

Correct Answer - A
Ans. is 'a' i.e., Hypotension

- Hypotension is the most common acute complication of hemodialysis particularly among patients with diabetes mellitus.
- Factors involved are :-
- *Excessive ultrafiltration, with inadequate compensatory vascular filling, impaired vasoactive or autonomic response, osmolar shifts, overzealous use of antihypertensives*

CollegeApply

1172. Which vitamin toxicity is associated with excessive sweating -

a) Choline

b) Biotin

c) Folic cid

d) Vitamin B

Correct Answer - A

Answer- A. Choline

Toxicity from choline results in -

- Hypotension
- Cholinergic sweating
- Diarrhea
- Salivation
- Fishy body odor

KollegeApply

1173. Dermatitis may be a clinical manifestation of deficiency states of all of following nutrients except -

a) Biotin

b) Niacin

c) Pyridoxine

d) Thiamine

Correct Answer - D
Answer- D. Thiamine
Vitamin B3 (Niacin) deficiency causes dermatitis. Biotin and Vitamin B6 (pyridoxin) deficiency causes seborrheic dermatitis.

KollegeApply

1174. Aspirin decreases the risk of development of which of the following -

a) Colorectal cancer

b) Stomach cancer

c) Carcinoid

d) MALToma

Correct Answer - A
Ans. A. Colorectal cancer
Regular aspirin use reduces the risk of colon adenomas and carcinomas as well as death from large-bowel cancer

KollegeApply

1175. Lafora's disease presents with -

a) G.T.C.S

b) Myoclonic epilepsy

c) Petit mal epilepsy

d) Partial seizures

Correct Answer - B
Answer- B. Myoclonic epilepsy
Lofora disease is an autosomal recessive poliencephalopathy of late childhood or early adult life.
It is characterized by progressive dementia, dysarthria, visual loss, pyramidal & cerebellar signs, and myoclonic & other seizures.
The diagnostic pathological finding is lofora bodies.

KollegeApply

1176. Mosaic pattern of coment line is characteristically seen in -

a) Hyperthyroidism

b) Paget's disease of bone

c) Renal osteodystrophy

d) Osteomalacia

Correct Answer - B
Answer- B. Paget's disease of bone
Mosaic pattern of cement line is characteristically associated with paget's disease of the bone

KollegeApply

1177. Kaposi sarcoma is commonly seen in ?

a) Upper limbs

b) Lower limbs

c) Head and Neck

d) Trunk

Correct Answer - B
Ans. is 'b' i.e., Lower limbs
" It occurs predominantly on the skin and can involve virtually any organ, perhaps except the brain. The initially described form, now known as classic KS, predominantly involves the lower extremities of elderly men. KS is now the most common tumor seen in HIV-infected patients"- Devita's Oncology

KollegeApply

1178. Most common cause of death in cancer is -

a) Bleeding

b) Infection

c) Respiratory failure

d) Renal failure

Correct Answer - B

Answer- B. Infection

The most common causes of death in patients with cancer are infection (leading to circulatory failure), respiratory failure, hepatic, and renal failure. Intestinal blockage may lead to inanition and starvation.

KolleegeApply

1179. Hyperuricemia can be caused by all except -

a) Ethanol

b) Thiazide

c) Furosemide

d) None

Correct Answer - D
Ans. is. D. None
Causes of drug or diet induced hyperuricemia
Diuretics (thiazides and loop diuretics)

- Cyclosporine and tacrolimus
- Low dose salicylates.
- Ethambutol
- Pyrazinamide
- Ethanol
- Levodopa
- Methoxyflurane
- Laxative abuse (alkalosis)
- Salt restriction

KolleegeApply

1180. All of the following are true about Gout, except:-

a) Occurs due to accumulation of urate crystals in joint

b) Can be pptd by pyrazinamide

c) Birefringement crystals are present in joint

d) Occurs more in females

Correct Answer - D
Answer is D (Occurs more in females):
Gout is more widespread in men than in women.
Women represent only 5-20% of patients with gout.
Women are seldom affected until after menopause.

KolleboApply

1181. Most common organism associated with reactive arthritis is:

a) Staphylococcus

b) Shigella

c) Chlamydia

d) Yersinia

Correct Answer - C
Chlamydia *[Ref: Harrison 17/e p2113; http://www.emedicine.com/derm/TOPIC207.HTM; http://www.entedicine.com/med/TOPIC1998.11TM]*

- Reactive arthritis is a systemic disorder of unknown etiology that is defined by the development of conjunctivitis, urethritis, arthritis, and mucocutaneous lesions following an episode of infection elsewhere in the body.
- In 1916, Hans Reiter described the triad of nongonococcal urethritis, conjunctivitis, and arthritis in a young German officer with bloody dysentery.The classic triad of the disease, namely urethritis, arthritis, and conjunctivitis, is present in only one third of the patients.
- Reactive arthritis is frequently associated with the *human leukocyte antigen B27* (1-ILA-B27) haplotype.
- The etiology of reactive arthritis remains uncertain. The most accepted theory about the pathophysiology of reactive arthritis involves initial activation by a microbial antigen, followed by an autoimmune reaction that involves the skin, eyes, and joints.
- Two forms are recognized: a sexually transmitted form and a dysenteric form. Gastrointestinal infections with *Shigella, Salmonella, and Campylobacter* species and other microorganisms, and genitourinary infections especially with *Chlamydia trachomatis*

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have been found to trigger reactive arthritis.

- Young children tend to have the post dysenteric form, whereas adolescents and young men are most likely to acquire reactive arthritis after they have urethritis.
- *It's not clear which organism is most commonly associated with reactive arthritis. Both Shigella and Chlamydia appear to he most common. After going through many articles from journals on the net, Chlamydia appears to he the most common. We would prefer to go with Chlamydia. (However if any one finds a reliable reference documenting the most common organism, please mail us at our email id.*
- The article on Reactive Arthritis in the journal "Best Practice & Research Clinical Rheumatology" Vol. 20, No. 6, pp. 1119e1137, 2006 writes- *"The prevalence is estimated to be 30-40 cases per 100,000 adults; the annual incidence is estimated to be 4.6/100,000 for Chlamydia-induced arthritis and 5/100,000 for enterobacteria-induced reactive arthritis.4,5 However, real numbers may be significantly higher?*
- The following article "Frequency of triggering bacteria in patients with reactive arthritis and undifferentiated oligoarthritis and the relative importance of the tests used for diagnosis" in Ann Rheum Dis. 2001 April; 60(4): 337343 at the following website- *http://www.pubmedcentralmih.gov/articlerenderfcgi?artid=1753604* writes its conclusion as:
"CONCLUSIONS—Chlamydia trachomatis, yersinia, and salmonella can be identified as the causative pathogen in about 50% of patients with probable or possible ReA if the appropriate tests are used."

1182. In long standing rheumatoid arthritis which will be seen -

a) Milk alkali syndrome

b) Nephrolithiasis

c) Paradoxical aciduria

d) Secondary amylodosis

Correct Answer - D
Answer- D. Secondary amylodosis
Reactive amyloid A (AA) amyloidosis, one of the most severe complications of RA, is serious, potentially life threatening disorder caused by deposition of AA amyloid fibrils in multiple organs

KolleegeApply

1183. Which is the most common tumor leading to death in adults?

a) Lung cancer

b) Prostate cancer

c) Colorectal cancer

d) Leukemia

Correct Answer - A
Answer- A. Lung cancer
Lung cancer constitutes upto29% of all cancer related deaths in males and 26% of all cancer related death in woman.

KolleegeApply

1184. A 23-year old woman has experienced episodes of myalgias, pleural effusion, pericarditis and arthralgias without joint deformity over course of several years. The best laboratory screening test to diagnose her disease would be -

a) CD, lymphocyte count

b) Erythrocyte sedimentation rate

c) Antinuclear antibody

d) Assay for thyroid hormones

Correct Answer - C
Answer- C. Antinuclear antibody
Sensitive test for SLE → Antinuclear antibodies (ANA)
Specific test for SLE → Anti dsDNA, Anti Sm

CollegeApply

1185. Which of the following antibodies is highly specific for systemic lupus erythematosus -

a) Anti-Sm

b) Anti-RO-1

c) Anti-UIRNP

d) Anti-Centromere

Correct Answer - A
Answer- A. Anti-Sm
Sensitive test for SLE → Antinuclear antibodies (ANA)
Specific test for SLE → Anti dsDNA, Anti Sm

KollegeApply

1186. Gaisbock syndrome is known as

a) Primary Familial Polycythemia

b) High Altitude Erythrocytosis

c) Spurious Polycythemia

d) Polycythemia Vera

Correct Answer - C
Answer is C (Spurious Polycythemia)
Gaisbock syndrome refers to Spurious Polycythemia or Relative Erythrocytosis due to decreased plasma volume.

KollegeApply

1187. Alzehiemer type II astrocyte are seen in -

a) Hepatic encephalopathy

b) Alzehiemer's

c) Parkinsonism

d) Biswanger disease

Correct Answer - A
Answer- A. Hepatic encephalopathy
Swollen astrocytes in hepatic encephalopathy are called Alzheimer type II astrocytes. Their nuclei are large and appear clear in H & E stains. They are also seen in Wilson disease.

KolleegeApply

1188. Polyarticular onset JRA involves more than how many joints -

a) 3

b) 4

c) 5

d) 6

Correct Answer - C

Answer- C. 5

Polyarticular JRA

- It is characterized by involvement of 5 or more joints.

There are two subtypes :-

i) Polyarticular RA positive

- It is characterized bysymmetrical joint involvement along with Uveitis, and rheumatoid nodules.
- RA factor and ANA are positive.

ii) Polyarticular RA negative

- RA factor and rheumatoid nodules are not seen.

CollegeApply

1189. Streptococcus bovis infection is associated with -

a) CLL

b) Hairy cell leukemia

c) Colorectal cancer

d) Multiple myeloma

Correct Answer - C
Answer- C. Colorectal cancer
Colon and rectal tumors Streptococcus bovis (bacteremia)

KollegeApply

1190. Which of the following is given to decrease Serum Triglycerides?

a) Fibrates

b) Statine

c) Ezetimibe

d) Niacin

Correct Answer - A
Answer- A. Fibrates
Fibrates are drugs of choice for hypertriglyceridemia (type IV) and chylomicronemia (type I).

KollegeApply

1191. Chvostek sign is seen in:
March 2013

a) Hypercalcemia

b) Hypoparathyroidism

c) Insulinoma

d) Diabetes mellitus

Correct Answer - B
Ans. B i.e. Hypoparathyroidism
Hypocalcemia
Idiopathic hypoparathyroidism is associated with:
Genetic syndrome of hypoparathyroidism,
- Addison's disease and
– Mucocutaneous candid iasis

- Pseudohypoparathyroidism: No deficiency of parathormone, but target organ (bone and kidney) are unresponsive to its action
- Chvostek's sign: Contraction of facial muscles, elicited by light tapping of the facial nerve
- ECG changes: Prolongation of QT interval

CollegeApply

1192. Blood transfusion associated acute lung injury occurs due to -

a) Nosocomial infections

b) HLA mediated

c) Auto-immune disorder

d) Genetic susceptibility

Correct Answer - B
Answer- B. HLA mediated
TRALI usually results from the transfusion of donor plasma that contains high titre anti HLA class II antibodies that bind recipient leucocytes.
The leucocytes aggregate in the pulmonary vasculature and release mediators that increase capillary permeability.
Testing the donor's plasma for Anti HLA antibodies can support this diagnosis.

CollegeApply

1193. I.R.I.S. is -

a) Immune reconstitution idiopathic syndrome

b) Immune reconstitution immunological syndrome

c) Immune reconstitution inflammatory syndroma

d) Inflammatory reconstitution immune syndrome

Correct Answer - C
Answer- C. Immune reconstitution inflammatory syndroma
The term "immune reconstitution inflammatory syndrome" (IRIS) describes a collection of inflammatory disorders associated with paradoxical worsening of preexisting infectious processes following the initiation of highly active antiretroviral therapy.

KollegeApply

1194. Dietary deficiency of which vitamin usually does not exist -

a) Vitamin-B6

b) Thiamine

c) Vitamin-E

d) Vitamin-D

Correct Answer - C
Answer- C. Vitamin-E
Dietary deficiency of vitamin E does not exist.

KollegeApply

1195. Manifestations of vitamin E.deficiency are all except -

a) Hemolytic anemia

b) Posterior column abnormalities

c) Cerebellar ataxia

d) Autonomic dysfunction

Correct Answer - D

Answer- D. Autonomic dysfunction

The clinical manifestations are edema, hemolytic anemia (due to fragile red cell's membrane as a result of lipid peroxidation) and thrombocytosis. Nerve and muscle membrane damage may occur. Vitamin E deficiency causes axonal degeneration of the large myelinated axons and results in posterior column and spinocerebellar symptoms.

KollegeApply

1196. Martel sign is seen in -

a) Gout

b) Ankylosing spondylitis

c) Osteoarthritis

d) Rheumatoid arthritis

Correct Answer - A
Answer- A. Gout
Martel's sign is not present in all cases of gouty arthritis.
Martel's sign, which is a radiological sign (straight arrow) to describe the overhanging margin of the new bone alone the edge of erosion.

KollegeApply

1197. HIV RNA by PCR can detect as low as

a) 30 copies viral RNA/ml of blood

b) 40 copies viral RNA/ml of blood

c) 50 copies of viral RNA/ml of blood

d) 60 copies of viral RNA/ml of blood

Correct Answer - B
Ans. is 'b' i.e., 40 copies viral RNA/ml of blood

- This assay generates data in the form of number of copies of HIV RNA per milli litre of serum or plasma and can reliably detect as few as 40 copies of HIV RNA per mili litre of plasma.
- Research based assay can detect down to one copy/ml.

KollegeApply

1198. All are seen in carney's triad except -

a) Atrial myxoma

b) GIST

c) Chondroma

d) Paraganglioma

Correct Answer - A
Answer- A. Atrial myxoma
Extra-adrenal paraganglioma (e.g. extra adrenal phaeo-chromocytoma)
Gastrontestinal stromal tumors previously known as gastric epithelioid leiomyosarcoma
Pulmonary chondroma hamartoma only 2 of the 3 tumors are present at the time of diagnosis typically affects young people.

KollegeApply

1199. All are true about cross-matching of blood except -

a) Mandatory in all cases except emergency

b) Recipient serum is tested against donor packed cells

c) Donor serum is tested against recipient packed cells

d) Involves visible agglutination

Correct Answer - C

Answer- C. Donor serum is tested against recipient packed cells

Cross matching involves testing the patients serum with donor cells to determine whether the patient has an antibody which may cause a hemolytic transfusion reaction

KottageApply

1200. Smoking may be associated with all of the following cancers, except:

a) Ca Larynx

b) Ca Nasopharynx

c) Ca Bladder

d) None

Correct Answer - D
Ans is None > Ca Nasopharynx
All the given options are mentioned by Harrison:

- *Harrison 17/e p2737 writes- "Tobacco smoking causes cancer of the lung, oral cavity, naso-, oro-, and hypopharynx, nasal cavity and paranasal sinuses, larynx, esophagus, stomach, pancreas, liver, kidney (body and pelvis), ureter, urinary bladder, and uterine cervix and also causes myeloid leukemia. There is evidence suggesting that cigarette smoking may play a role in increasing the risk of colorectal and possibly premenopausal breast cancer, but there is no association with postmenopausal breast cancer. There does not appear to be a causal link between cigarette smoking and cancer of the endometrium, and there is a lower risk of uterine cancer among postmenopausal women who smoke."*
- Thus the answer should be none, however Nasopharyngeal carcinoma is found to be least associated with smoking. Head & Neck Cancers by Enslow Jacobs 2003e p492 *writes-"Association between smoking and nasopharyngeal carcinoma has been shown only by a few studies. If the association of tobacco and NPC is real, the possible mechanism of tumor induction would be the nitrosamines and its precursors in tobacco."*

CollegeApply

1201. In which of causes of oral ulcer, Auto-antibodies are not seen?

a) Behcet disease

b) SLE

c) Pemphigus

d) Celiac disease

Correct Answer - A
Answer- A. Behcet disease
Behcet's disease is classified among the vasculitides laboratory diagnostic does not include regularly autoantibodies associated with vascular manifestations of systemic autoimmune disease.

KolleboApply

1202. Incorrect about LAMB syndrome -

a) Lentigines

b) Atrial Myxoma

c) Myaesthenic syndrome

d) Blue Nevi

Correct Answer - C

Answer- C. Myaesthenic syndrome

LAMB syndrome is characterized by presence of :-

- Lentigines
- Atrial Myxoma
- Blue nevi.

KollegeApply

1203. Best management after human bite -

a) Ampicillin plus sulbactam

b) Clindamycin plus TMP-SMX

c) Fibroquinolone

d) Doxycycline

Correct Answer - A
Answer- A. Ampicillin plus sulbactam
1. Ampicillin/sulbactam
2. Imipenem
3. Cefoxitin in penicillin allergics

KollegeApply

1204. The Vitamin which has inhibitory effect on wound healing is -

a) Vitamin -A

b) Vitamin - E

c) Vitamin -C

d) Vitamin B-complex

Correct Answer - B
Ans. is 'b' i.e., Vitamin-E.

- *Systemic vitamin E and glucocorticoids inhibit the inflammatory response and collagen synthesis, thereby possibly impeding the healing process.*

KollegeApply

1205. Number of barr bodies in klinfellter's syndrome is -

a) 0

b) 1

c) 2

d) 3

Correct Answer - B
Answer- B. 1
Found in female But -

- Kleinefelter syndrome is male with one Barr body.
- Turner syndrome is female without Barr body.

KollegeApply

1206.

KollegeApply

Which of these is not a part of extracellular matrix:

a) Laminin

b) Fibronectin

c) Integrins

d) Collagen

Correct Answer - C
C i.e. Integrins
- Extracellular matrix proteins are collagen, elastin, fibrillin, fibronectin, laminin and proteoglycans (GAGs) Mn- "Call Ela For Last Prose" Whereas cell adhesion molecules present in cytoplasm or cell membrane include *integrins, selectins, cadherins and immunoglobulin family CAMsQ.*
- Integrins are *cell surface adhesion protein* that provide linkage between cell outside & inside, between cell- cell and between cell & extracellular matrix.

CourseApply

1207. Which of the following substances is primarily found in tendons?

a) Collagen

b) Fibrin

c) Fibrillin

d) Protedglycans

Correct Answer - A
Answer- A. Collagen
Tendon is primarily made up of collagen.

KollegeApply

1208. Which of the following condition does not cause multiple painful ulcers on tongue?

a) TB

b) Sacroidosis

c) Herpes

d) Behcet disease

Correct Answer - B
Answer- B. Sacroidosis
Painful ulcers in mouth

- Apthous ulcers
- Behcet disease
- Denture stomatitis
- Thermal burns
- Tuberculosis
- Herpes
- Carcinoma tongue
- Arsenic poisoning

KollegeApply

1209. DOC for acute attack of Hereditary angioneurotic edema

a) Danazol

b) Cl, inhibitor concentrate

c) Icatibant

d) Methylprednisolone

Correct Answer - B
Ans. is 'b' i.e., Cl inhibitor concentrate
Medication

- *C_1 inhibitor concentrate (Plasma-derived) (Berinert, Berinert P, Cinryze.*
- R*ecombinant C_1 inhibitor Conestat alfa (Ruconest, Rhucin).*
- *Bradykinin $B_z$receptor antagonist Icatibant (Firazyr).*
- *Kallikrein inhibitor Ecallantide (Kalbitor)*
- *Plasma*

CollegeApply

1210. In a patient who was brought to casualty after RTA with pulse rate 108, SBP 80. Which fluid is to be given ideally?

a) Plasma

b) Normal Saline

c) Blood

d) 5% dextrose

Correct Answer - B

Answer- B. Normal Saline

Initial resuscitation requires rapid reexpansion of the circulating intravascular blood volume along with interventions to control ongoing losses.

Volume resuscitation is initiated with the rapid infusion of either isotonic saline or a balanced salt solution such as Ringer's lactate

KollegeApply

1211. Which can be give in hemorrhagic stroke ?

a) Normal saline

b) Colloids

c) Blood transfusion

d) Hypertonic fluids

Correct Answer - A
Answer- A. Normal saline
Normal saline initially should be used for maintenance and replacement fluids :
Hypotonic fluids are contraindicated as they may exacerbate cerebral edema and intracranial pressure.
Hypervolemia should be avoided as it may worsen cerebral edema.

KollegeApply

1212. Flushing with niacin in reduced by -

a) Laropiprant

b) Premedication with aspirin

c) Tachyphylaxis

d) All of the above

Correct Answer - D
Answer- D. All of the above
Laropiprant (selective prostaglandin D2 receptor antagonid)
Premedication with aspirin
Flushing as subject to tachyphylaxis and often improves with time.

KollegeApply

1213. True abour drug induced SLE is except ?

a) Female: Male ratio=9:1

b) Anti-histone Antibodies

c) CNS involvement not common

d) Renal involvement not common

Correct Answer - A
Answer- A. Female: Male ratio=9:1
It is predominant in caucasians
It has less female preddiction than SLE
It rarely involves kidneys or brain
It is rarely associated with anti Ds DNA
It is commonly associated with antibodies to histones
It usually resolves over several weeks after discontinuation of the offending medication.

CollegeApply

1214. Obesity is seen in all except

a) Cushing syndrome

b) Pickwinian syndrome

c) Prader willi syndrome

d) Sipple syndrome

Correct Answer - D
Ans. is `d' i.e., Sipple syndrome
Important syndromes associated with obesity

- Albright hereditary osteodystrophy (pseudohypoparathyroidism type la)
- Alstrom syndrome
- Bardet-Biedl syndrome
- Beckwith-Wiedemann syndrome
- Carpenter syndrome

Cohen syndrome • *Prader-willi syndrome*

KollegeApply

1215. Man working in hot environment & drinking lots of water without intake of salts is liable to develop -

a) Heat hyperpyrexia

b) Heat cramps

c) Heat stroke

d) Heat encephalopathy

Correct Answer - B
Answer- B. Heat cramps
Heat cramps/Miner's cramps/Stoker's cramp/Firemen's cramp
These are painful spasm of voluntary muscles which follow sternous work in a hot atmosphere.
These are caused by loss of water and salt in profuse prespiration (sweating).

KollegeApply

1216. After Road traffic accident a patient presented to casualty with vitals showing BP of 90/60 mm Hg with heart of 56 bpm. Which kind of shock occurs ?

a) Cardiogenic

b) Neurogenic

c) Distributive

d) Hypovolemia shock

Correct Answer - B

Answer- B. Neurogenic

Neurogenic shock is a distributive type of shock resulting in low blood pressure, occasionally with a slowed heart rate, that is attributed to the disruption of the autonomic pathways within the spinal cord.

It can occur after damage to the central nervous system such as spinal cord injury.

CollegeApply

1217. Intracranial pressure may be increased by all of the following drugs except -

a) Hypervitaminosis A

b) Corticosteroids

c) Quinolones

d) Aminoglycosides

Correct Answer - D
Ans. is 'd' i.e., Aminoglycosides

KollegeApply

1218. Drainage of cervical abscess is an example of -

a) Clean contaminated wound

b) Clean uncontaminated wound

c) Unclean uncontaminated wound

d) Dirty infected wound

Correct Answer - D
Answer- D. Dirty infected wound
Class IV: This class of wound is considered dirty-contaminated. These include wounds that have been exposed to fecal material. Cervical drainage abscess is an example of Class IV wound.

KolleegeApply

1219. Most common location of ectopic salivary gland is -

a) Cervical lymph nodes

b) Anterior mediastinum

c) Posterior triangle

d) Parathyroid gland

Correct Answer - A

Answer- A. Cervical lymph nodes

Salivary gland heterotopia is where salivary gland acini cells are present in an abnormal location without any duct system.

The most common location is the cervical lymph nodes.

Other reported sites of heterotopic salivary gland tissue are the middle ear, parathyroid glands, thyroid gland, pituitary gland, cerebellar pontine angle, soft tissue medial to sternocleidomastoid, stomach, rectum and vulva

CollegeApply

1220. Classic triad inRenal cell carcinoma includes all of the following, Except:

a) Hematuria

b) Hypertension

c) Flank mass

d) Abdominal Pain

Correct Answer - B
Answer is B (Hypertension):
Hypertension may be seen in patients with Renal cell carcinoma but it does not firm part of the classically described triad.
Classic Triad of Renal cell carcinoma (seen in 10-20% of patients)

- *Hematuria (Gross)*
- *Pain (Abdominal / Flank)*
- *Mass (Abdominal /Flank)*

KolleegeApply

1221. All of the following are paraneoplastic syndromes for renal cell carcinoma except -

a) Fever

b) Anaemia

c) Amyloidosis

d) Acanthosis Nigricans

Correct Answer - D
Answer- D. Acanthosis Nigricans
Hypertension
Abnormal liver function (Stauffers syndrome ie non metastatic hepatic dysfunction)
Hypercalcemia
Neuromyopathy
Amyloidosis
Increased ESR (MC paraneoplastic syndrome)
Dysfibrogenemia
Galactorrhoea
Feminization and masculanization

KollegeApply

1222. ESWL is contraindicated in which of the following stones -

a) Cysteine stones

b) Oxalate Stones

c) Urate stones

d) Phosphate stones

Correct Answer - A
Answer- A. Cysteine stones
Contraindications for ESWL -
1. Uncorrected Bleeding disorder
2. Cysteine stones
3. Weight greater than 300 pounds
4. Pregnancy
5. Cardiac Pacemaker
6. Severe Orthpaedic deformity
7. UTI
8. Severe renal Failure

KollegeApply

1223. **Surgery for undescended testis is recommended at what age?**

a) 6 months

b) 12 months

c) 24 months

d) 36 months

Correct Answer - A

Optimum age for surgery in case of undescended testis is 6 months.

The surgical procedure done is called orchidopexy.

Earlier intervention (Six months of age) should be considered in order to theoretically prevent the complications of crytorchidism that may be manifested before 1 year of age.

Ref: Nursing care of the pediatric surgical patient By Nancy Tkacz Browne, Page 147-8; CPDT, 20th Edition, Page 974; Campbell's Urology, 9th Edition, Page 3775

KollegeApply

1224. Pseudoclaudication is caused by

a) Femoral Artery stenosis

b) Popliteal Artery stenosis

c) Lumbar canal stenosis

d) Radial Artery stenosis

Correct Answer - C
Ans is C i.e. Lumbar Canal Stenosis
Pseudoclaudication is the term used for neurogenic claudication caused due to lumbar canal stenosis. Its symptoms mimic intermittent claudication of PVD.
Neurogenic claudication, consists of back and buttock or leg pain induced by walking or standing and relieved by sitting or changing posture. Symptoms in the legs are *usually bilateral.* Unlike vascular claudication, symptoms are often provoked by standing without walking.
Spinal stenosis can be acquired, congenital, or due to a combination of these factors. Congenital causes include achondroplasia, idiopathic. Acquired causes are degenerative diseases (spondylosis, spondylolisthesis, scoliosis), trauma, spine surgery, metabolic or endocrine disorders (epidural lipomatosis, osteoporosis, acromegaly, renal osteodystrophy, hypoparathyroidism), and Paget's disease.
Difference between Vascular and Neurogenic claudication

- Patients with vascular claudication always have pain when they walk a relatively constant distance on level ground; they do not have variable days when they can walk for considerably greater distances without pain. Patients of vascular claudication, often know exactly how far or for how long they can walk before the symptoms will

occur. This is in contrast to patients with neurogenic claudication where the symptoms occasionally occur at rest or at with highly variable walking distances. Pain in neurogenic claudication can even occur on standing.

- Pain of vascular claudication gets relieved on stopping within few minutes, and this resolution of pain occurs even if the patient simply stops and stands in place. Patients with neurogenic claudication usually have to sit down to relieve their pain. Neurogenic claudication pain gets relieved by changing posture and leaning forwards.
- Patients with neurogenic claudication often can walk further on an incline, whereas vascular claudication is marked worsened if the patient is on an incline.

KollegeApply

1225.

KollegeApply

Which of the following is the most conservative neck dissection -

a) Supraomohyoid neck dissection

b) Radical neck dissection

c) Modified radical neck dissection

d) All are conservative

Correct Answer - A

Answer- A. Supraomohyoid neck dissection

Selective neck dissection - Preservation of any of the levels I through V during neck dissection is known as Selective neck dissection - The principle behind preservation of certain nodal groups is that specific primary sites preferentially drain their lymphatics in a predictable pattern. Types of SND include the supraomohyoid neck dissection, the lateral neck dissection, and the posterolateral neck dissection.

CollegeApply

1226.

KollegeApply

Supraomohyoid dissection is a type of -

a) Selective neck dissection

b) Modified radical neck dissection

c) Radical neck dissection

d) Posterolateral dissection

Correct Answer - A
Answer- A. Selective neck dissection
Selective neck dissection - Preservation of any of the levels I through V during neck dissection is known as Selective neck dissection - The principle behind preservation of certain nodal groups is that specific primary sites preferentially drain their lymphatics in a predictable pattern. Types of SND include the supraomohyoid neck dissection, the lateral neck dissection, and the posterolateral neck dissection.

KollegeApply

1227. Alagille syndrome- all of the following are true except -

a) Mutation in JAG 1 And Notch2 gene are seen

b) Can Cause Autoimmune hepatitis

c) Autosomal Recessive Disease

d) Valvular anomalis of heart seen

Correct Answer - C
Answer C. Autosomal Recessive Disease
Autosomal dominant disease
JAG I and NOTCH 2 mutation
Affects the liver and Heart
Heart
Pulmonary stenosis
Tetralogy of Fallot
VSD
Overriding aorta

KollegeApply

1228. Absence of Ultra hepatic bile duct leads to which syndrome?

a) Von Meyenburg Complexes

b) Polycystic Liver Disease

c) Caroli Disease

d) Alagille Syndrome

Correct Answer - D
Answer- D. Alagille Syndrome
It is an autosomal recessive condition characterized by absence of bile ducts in portal tract Also called arterio hepatic dysplasia
Characteristic features:

- Genetic disorder with vascular, biliary and other anomalies.
- Absence of intrahepatic bile ducts with clinical severity ranging from severe neonatal cholestasis mimicking biliary atresia to childhood intermittent jaundice.
- Progression to cirrhosis is rare.

KollegeApply

1229. All of the following are premalignant conditions except -

a) Bowen's Disease

b) Senile Keratosis

c) Xeroderma Pigmentosum

d) Pyoderma Gangrenosum

Correct Answer - D

Answer- D. Pyoderma Gangrenosum

Bowen's Disease	Lupus vulgaris
Actinic Keratosis	Long standing chronic ulcer (e.g. marjolin's ulcers)
Xeroderma pigmentosum	Following burn, venous ulcer, old scar etc.
Senile Keratosis	

CollegeApply

1230. Adson's test is positive in -

a) Cervical rib

b) Cervical spondylosis

c) Cervical fracture

d) Cervical dislocation

Correct Answer - A
Ans. is 'a' i.e., Cervical rib

Adson's test is a provocative test for Thoracic Outlet Syndrome accompanied by compression of the Subclavian artery by a cervical rib or tightened anterior and middle scalene muscles.

KollegeApply

1231. Chimeric chemotherapy is being investigated for the treatment of which malignancy ?

a) Leukemia

b) Renal Cell Carcinoma

c) CA Pancreas

d) Glioblastoma Multiforme

Correct Answer - A

Answer- A. Leukemia

- Artificial T cell receptors (also known as chimeric T cell receptors, chimeric immunoreceptors, chimeric antigen receptors (CARs)) are engineered receptors, which graft an arbitrary specificity onto an immune effector cell. Typically, these receptors are used to graft the specificity of a monoclonal antibody onto a T cell.
- Two CAR-T therapies have been granted three total FDA approval for the treatment of patients with hematologic malignancies.
- The most advanced data to date concern CAR T therapies for the treatment of patients with multiple myeloma and chronic lymphocytic leukemia.
- Among the first studies investigating anti-CD19 CAR T therapeutic efficacy was a case report treating a patient with CLL.

KollegeApply

1232. Anterior Mediastinal nodes are included in which level of lymphnodes -

a) I

b) III

c) V

d) VII

Correct Answer - D
Answer- D. VII
Levels of neck lymphnodes

- Level I, submental and submandibular group
- Level II, upper jugular group
- Level III, middle jugular group
- Level IV, lower jugular group
- Level V, posterior trian- gle group
- Level VI, anterior compartment.
- Level VII, anterior and superior mediastinal

CollegeApply

1233. In Celiac artery compression syndrome which structure is the main cause of compression -

a) Median Arcuate Ligament

b) Rectus Sheath

c) Deep Inferior Epigastric artery

d) Lacunar Ligament

Correct Answer - A

Answer- A. Median Arcuate Ligament

Median arcuate ligament syndrome (MALS, also known as celiac artery compression syndrome, celiac axis syndrome, celiac trunk compression syndrome or Dunbar syndrome) is a condition characterized byabdominal pain attributed to compression of the celiac artery and possibly the celiac ganglia by the median arcuate ligament.

The abdominal pain may be related to meals, may be accompanied by weight loss, and may be associated with an abdominal bruit heard by a clinician. It is also called celiac artery compression syndrome.

YouTeeApply

1234. Which Is False about stress urinary incontinence -

a) More common in men

b) It occurs during increased abdominal pressure

c) It is due to weakening of pelvic floor muscles

d) Prostate surgery may be a cause

Correct Answer - A

Answer- A. More common in men

Leaking urine upon sudden increase in abdominal pressure.

It is most common type in women.

Causes are

- Weakening of pelvic floor muscles / urethra / sphincter muscles.
- BPH, CA prostate or prostate surgery.

KollegeApply

1235. Which of the following urethral anomaly is the most common -

a) Hypospadias

b) Pin hole meatus

c) Epispadias

d) Stricture urethra

Correct Answer - A
Ans. is 'a' i.e., Hypospadias

- Hypospadias is a condition in which the *urethral meatus opens on the* underside of penis* or the perineum (i.e. *ventral surface of penis)* proximal to the tip of the glans penis.
- Hypospadias is the *most common* congenital malformation* of the urethra. *(also know that the most common congenital malformatio of the urinary tract is Duplication of renal pelvis*)*
- Occurs in 1:250 male births.

KollegeApply

1236. Which of the following types of shock wiil usually have warm peripheral extremities ?

a) Hypovolemic Shock

b) Neurogenic Shock

c) Cardiogenic Shock

d) Anaphylactic Shock

Correct Answer - B
Answer- B. Neurogenic Shock
Bradycardia
Hypothermia
Loss of sympathetic tone --> arterious & venous vasodilation
Warm and dry skin (the heart rate slows down, as well as warm, dry, and flushed skin due to venous pooling secondary to loss of vascular tone)
Others all shock have cold extremities (anaphylatic, cardiogenic and hypovolemic)

KollegeApply

1237. Antibiotic prophylaxis is best given -

a) 1 day before surgery

b) 2 hours before surgery

c) Before the time of incision

d) Only postoperatively

Correct Answer - C
Answer- C. Before the time of incision
About prophylactic antibiotics points to know are ? By definition prophylaxis is limited to the time prior to and during the operative procedure.
be most effective the prophylactic antibiotic agent should be administered intravenously before the incision is made so that the tissue levels are present at the time the wound is created and exposed to the bacterial contamination.

KnowledgeApply

1238. Which of the following is a feature of crush syndrome -

a) Hypokalemia

b) Hypercalcemia

c) Myoglobinuria

d) Hypophosphatemia

Correct Answer - C
Answer- C. Myoglobinuria
Features of crush syndrome :

- Hyperkalemia
- Hypocalcemia
- Hyperphosphatemia
- Hyperuricemia
- Lactic acidosis
- Myoglobinuria
- Increased BUN & creatinine.

KollegeApply

1239. Crush Syndrome is associated with all of the following features except -

a) Hypercalcemia

b) Hyperkalemia

c) Increased serum creatinine

d) Myoglobinuria

Correct Answer - A

Answer- A. Hypercalcemia

Features of crush syndrome :

- Hyperkalemia
- Hypocalcemia
- Hyperphosphatemia
- Hyperuricemia
- Lactic acidosis
- Myoglobinuria
- Increased BUN & creatinine.

KollegeApply

1240. Which of the following stones are common with infection ?

a) Struvite

b) Xanthine Stones

c) Cysteine stones

d) Calcium Oxalate stones

Correct Answer - A
Answer- A. Struvite
Calcium phosphate can be combined with ammonium and magnesium to form the triple phosphate calculus ie Calcium amnomium magnesium phosphate also k/a struvite stones.
Smooth and dirty white and soltitary.
Seen in alkaline urine esp with proteus infection which split urea to ammonia.

KalpeApply

1241. All the features of membranous urethral injury except

a) blood of meatus

b) Retention of urine

c) Pelvic fracture

d) Perineal butterfly hematoma

Correct Answer - D
Ans. is 'd'
1. Urethral rupture is also of two types:
a. Bulbar urethral injury - MC
b. Membranous urethral injury
2. Extravasation of urine (+ blood) in bulbar urethral injury
a. It is a superficial extravasation.
b. If the Buck's fascia remains intact, extravasation of blood and urine are confined to the penile shaft. However disruption of Buck's fascia allows extravasated contents into a space limited by colle's fascia forms a scrotal and perineal butterfly hematoma which can extend up the abdominal wall.
3. Extravasation of urine in Membranous urethral injury & Extraperitoneal bladder rupture.
a. Extravasation is same in both
b. It is a deep extravasation
c. Urine extrvasates in the layers of the pelvic fascia and the retroperitoneal tissues
d. Urine collects in the perivesical space.
e. The typical finding on cystogram is extravasation of contrast material into the pelvis around the base of the bladder.

CollegeApply

1242. High Flying prostate is a sign of -

a) Extraperitoneal Bladder rupture

b) Intraperitoneal Bladder Rupture

c) Membranous Urethral Injury

d) Bulbar Urethral Injury

Correct Answer - C

Answer- C. Membranous Urethral Injury

- The prostate is attached to pubis by puboprostatic ligament and disruption of the puboprostatic ligament with a complete rupture of the urethra can lead to a ***floating prostate—Vermooten's sign (high fly prostate).***
- Based on ascending urethrogram, posterior urethral injury is classified as (McCallum-Colapinto classification).

1. Type I: Elongation of posterior urethra, but intact
2. Type II: Prostate "plucked off'' membranous urethra with extravasation of urine above sphincter only—***Floating prostate — Vermooten's sign***
3. Type III: Total disruption of the urethra with extravasation of urine both above and below the sphincter.

KollegeApply

1243. BPH involves -

a) Central zone

b) Peripheral zone

c) Transitional zone

d) Prostate capsule

Correct Answer - C
Answer- C. Transitional zone
Carcinoma of prostate arises most commonly in the peripheral zone
Benign prostatic hyperplasia originates in the transition zone
BPH typically affects the submucous group of glands in the transitional zone, forming a nodular enlargement.
Eventually, this overgrowth compresses the PZ glands into a false capsule and causes the appearance of the typical 'lateral'lobes.
Ref- Bailey and Love Volume-1/ Edition 27th

KollegeApply

1244. Prostate cancer that is limited to the capsule and not the urethra would be satged as -

a) Tx

b) T1

c) T2

d) T3

Correct Answer - C

Answer- C. T2

7th AJCC (2010) TNM Staging for CA Prostate	
T: Primary tumor	**N: Regional lymph nodes**
Tis: Carcinoma in situ (**PIN**)	**N0**:No regional LN metastasis
T1a: ≤5% of tissue in resection for benign disease has cancer, normal DRE **T1b**: >5% of tissue in resection for benign disease has cancer, normal DRE **T1c**: Tumor identified by **needle biopsy** (e.g. because of elevated PSA)	**N1**: Metastasis in a regional LNs (**obturator, internal iliac, external iliac, presacral LNs**)
	M: Distant metastases
T2a: Tumor involves **one half of one lobe** but not both lobes **T2b**: Tumor involves **more than one half of one lobe** or less **T2c**: Tumor involves **both lobes**	**M1a**: Distant metastasis in **non-regional** lymph nodes **M1b**: Distant metastasis to **bone** **M1c**: Distant metastasis to **other sites**
T3a: Extracapsular extension on one or both sides **T3b: Seminal vesicle** involvement	
T4: Tumor directly extends into **bladder neck, sphincter, rectum, levator muscles, or into pelvic sidewall**	

CollegeApply

1245. A 65 year old male presents with CA prostate. The tumour is limited to the capsule and it is palpable on PR examination. The patient is diagnosed as stage T1b. The best treatment would be -

a) Radical prostatectomy

b) Chemotherapy

c) Palliative radiotherapy

d) Orchidectomy

Correct Answer - A
Answer- A. Radical prostatectomy
T1b T1c, T2
Radical prostactectomy or radiotherapy
External beam radiotherapy- T1 or low T2 disease
Branchytherapy- low T1 disease

KollegeApply

1246.

KollegeApply

Which of the following Vitamin deficiency is seen in short bowel syndrome with ileal resection ?

a) Vitamin K

b) Vitamin B 12

c) Vitamin B1

d) Folic acid

Correct Answer - B

Answer- B (Vitamin B12)

Short-bowel syndrome is a disorder clinically defined by malabsorption, diarrhea, steatorrhea, fluid and electrolyte disturbances, and malnutrition.

Changes seen in Terminal Ileal Resection

- Malabsorption of bile salts and vitamin B12 (which are normally absorbed in this region)
- Vitamin B12 Malabsorption → Megaloblastic anemia
- Bile salts Malabsorption → Unabsorbed bile salts escape into the colon and stimulate fluid secretion from the colon → watery diarrhea
- Decreased bile salts in the bile → Cholesterol gall stones

CollegeApply

1247. If 90% of jejunum and ilium is removed then all of the following features will be seen excePt -

a) Steatorrhoea

b) Diarrhoea

c) Weight gain

d) Megaloblastic anemia

Correct Answer - C

Answer- C. Weight gain

Changes seen in Terminal ileal resection

Resection of terminal ileum results in malabsorption of bile salts and Vit. B12 which are normally absorbed in this region

Vit BIZ Malabsorption : Megaloblastic anemia

Bile salts malabsorption :- Unabsorbed bile salts escape into colon where they stimulate fluid secretion from the colon, resulting in watery diarrhoea.

Reduction in bile salt pool lead to steatorrhea and malabsorption of fat soluble vitamins (due to malabsorption of fat).

Unabsorbed fatty acids bind with calcium, and thus lead to increased concentration of free oxalates (oxalates bind with calcium normally and therefore escape without intestinal absorption) Free oxalates are absorbed. Increased conc. of body oxalates lead to oxalate kidney stones.

CollegeApply

1248. Perihepatic fibrosis occurring in Fitz Hugh Curtis Syndrome is due to -

a) Pelvic Inflammatory Disease

b) Bile Duct Injry

c) Chronic Alcoholism

d) Viral Hepatitis

Correct Answer - A

Answer- A. Pelvic Inflammatory Disease

It is thought to result from direct intraperitoneal spread of infection towards the perihepatic region from initial pelvic inflammation/infection

Trichomonas vaginalis, Ureaplasma urealyticum and Mycoplasma hominis may also cause FHCS.

KolegeApply

1249. What is the T/t of pt with carcinoid tumor of appendix of size more than 2 cm -

a) Right hemicolectomy

b) Appendicectomy

c) Appendicectomy + abdominal CT scan

d) Appendicectomy + 24 hrs urinary HIAA

Correct Answer - A
Ans is 'a' ie. Right hemicolectiomy

KollegeApply

1250. A 25 year old male is receiving conservative management for an appendicular mass since 3 days now presents with a rising pulse rate, tachycardia and fever. The mode of management must be -

a) Ochsner sherren regimen

b) Continue conservative management

c) Proceed to laparotomy and appendicectomy

d) Intravenous antibiotics

Correct Answer - C

Answer- C. Proceed to laparotomy and appendicectomy

If an appendix mass is present and the condition of the patient is satisfactory, the standard treatment is the conservative Ochsner–Sherren regimen.

10-20% need emergency operation due to spreading infection.

KollegeApply

1251. Under what guidelines is treatment started for a patient presenting with appendicular mass on CT Scan ?

a) Ochsner Sherren Regimen

b) Conservative management and discharge

c) Immediate Laprotomy

d) Kocher's Regimen

Correct Answer - A

Answer- A. Ochsner Sherren Regimen

Ochsner Sherren regimen is the expectant management giving to a patient with an appendix mass. It is expectant because it is expected that the symptoms and signs the patient presented with will improve during the course of the management and the patient may later be scheduled for elective/interval appendicectomy.

CollegeApply

1252. Treatment of choice of mucinous carcinoma of Gall Bladder confined to the lamina propria is -

a) Simple cholecystectomy

b) Extended cholecystectomy

c) Cholecystectomy with wedge resection of liver

d) Chemotherapy only

Correct Answer - A

Answer- A. Simple cholecystectomy

Treatment-

- Stage I and II - simple cholecystectomy
- Stage III – cholecystectomy + adjacent hepatic resection (atleast 2cm depth) + regional lymphadenectomy
- Poor prognosis

KollegeApply

1253. Nigro Regimen is used for -

a) Anal Carcinoma

b) Rectal Carcinoma

c) Sigmoid Colon Carcinoma

d) Duodenal Carcinoma

Correct Answer - A
Answer- A. Anal Carcinoma
Nigro regimen refers to combined chemotherapy and radiotherapy for primary treatment of malignant tumors of the anal canal.

KollegeApply

1254. A 35 year old male came with jaundice, palpable mass in the right hypochondrium not associated with pain. The probable diagnosis is -

a) Carcinoma Ampulla of Vater

b) Acute cholecystitis

c) Chronic Cholecystitis

d) Chronic Pancreatitis

Correct Answer - A

Answer- A. Carcinoma Ampulla of Vater

Courvoisier's law states that in the presence of an enlarged gall bladder which is nontender and accompanied with jaundice the cause is unlikely to be gallstones. This is because gall stones are formed over a longer period of time, and this result in a shrunken, fibrotic gall bladder which does not distend easily.

CollegeApply

1255. A 60 year male presented with jaundice, pale stools, dark urine and mass in the epigastric region. Which of the following diagnosis in unlikely ?

a) Pancreatic cancer

b) Biliary Cancer

c) Periampullary Cancer

d) Chronic Cholecystitis

Correct Answer - D

Answer- D. Chronic Cholecystitis

Chronic cholecystitis is characterized by repeated attacks of pain (biliary colic) that occur when gallstones periodically block the cystic duct.

KollegeApply

1256. All of the following may lead to a gall bladder carcinoma except -

a) Gall Bladder Polyps

b) Typhoid carriers

c) Exposure to carcinogens like nitrosamine

d) Echinococcus Granulosus Infection

Correct Answer - D

Answer- D. Echinococcus Granulosus Infection

Risk factors for gall bladder

1. Gall stones
2. Adenomatous gall bladder polyps (particularly polyps larger than 10 mm)
3. Calcified (porcelain) gallbladder
4. Choledochalcyst
5. Estrogens
6. Anomalouspancreaticobiliaryductjunction
7. Exposure to carcinogens (azotoulene, nitrosamine)
8. Typhoid carriers
9. Sclerosingcholangitis
10. Cholecystoenteric fistula

KollegeApply

1257. All of the following are false for Gall Bladder carcinoma except:
March 2005

a) Carries a good prognosis

b) Gallstones may be a predisposing factor

c) Commonly squamous cell carcinoma

d) Jaundice is rare

Correct Answer - B
Ans. B: Gallstones may be a predisposing factor
Primary carcinoma of the gallbladder is an uncommon, aggressive malignancy that affects women more frequently than men.
Older age groups are most often affected, and coexisting gallstones are present in the vast majority of cases.
The symptoms at presentation are vague and are most often related to adjacent organ invasion. Imaging studies may reveal a mass replacing the normal gallbladder, diffuse or focal thickening of the gallbladder wall, or a polypoid mass within the gallbladder lumen.
Adjacent organ invasion, most commonly involving the liver, is typically present at diagnosis, as is biliary obstruction. Periportal and peripancreatic lymphadenopathy, hematogenous metastases, and peritoneal metastases may also be seen. The vast majority of gallbladder carcinomas are adenocarcinomas.
Because most patients present with advanced disease, the prognosis is poor.
The radiologic differential diagnosis includes the more frequently encountered inflammatory conditions of the gallbladder, xanthogranulomatous cholecystitis, adenomyomatosis, other hepatobiliary malignancies, and metastatic disease.

KnowledgeApply

hepatobiliary malignancies, and metastatic disease.
The prevalence of lymphatic spread is high in gallbladder carcinoma. Lymphatic metastases progress from the gallbladder fossa through the hepatoduodenal ligament to nodal stations near the head of the pancreas.
Three pathways of lymphatic drainage have been suggested: the cholecystoretropancreatic pathway, the cholecystoceliac pathway, and the cholecystomesenteric pathway.
The cystic and pericholedochal lymph nodes are the most commonly involved at surgery and are a critical pathway to involvement of the celiac, superior mesenteric, and para-aortic lymph nodes.

KollegeApply

1258. Which of the following stoma is formed in Hartman's procedure ?

a) End Colostomy

b) End Iliostomy

c) Loop Iliostomy

d) Caecostomy

Correct Answer - A

Answer- A. End Colostomy

Hartman's procedure

- This is a compromise type of resection in which the rectum and/or sigmoid colon are resected and an end colostomy done. Anastomosis and perineal dissection of the distal rectum and perineum are not done.

KottageApply

1259. Most common site of colorectal carcinoma is -

a) Rectum

b) Sigmoid Colon

c) Ascending Colon

d) Descending Colon

Correct Answer - A
Answer- A. Rectum
Rectosigmoid region is the most common site for colorectal carcinoma. Rectum is involved in 38% of cases and sigmoid colon is involved in 21% cases.

KollegeApply

1260. **A patient undergoing a minor surgical procedure is given lignocaine injection.**

Assertion: Local anaesthetics acts by blocking nerve conduction.

Reason: Small fibers and non myelinated fibers are blocked more easily than large myelinated fibers.

a) Both Assertion and Reason are true, and Reason is the correct explanation for Assertion

b) Both Assertion and Reason are true, and Reason is not the correct explanation for Assertion

c) Assertion is true, but Reason is false

d) Assertion is false, but Reason is true

Correct Answer - B

Local anaesthetics blocks nerve conduction by decreasing the entry of sodium ions during upstroke of action potential.
Finally it blocks depolarization to reach threshold potential and conduction block occurs.
Small fibers are more sensitive to local anaesthetics than large fibers and non myelinated fibers are blocked easily than myelinated fibers.

Ref: Essentials of Medical Pharmacology by K D Tripathi, 5th Edition, Pages 321-3

KollegeApply

1261. Which of the following is not true about Boerhaave syndrome?

a) Perforation of the esophagus due to barotrauma

b) Most common site is left posteromedial aspect 3 - 5 cms above the gastroesophageal junction

c) Pain is the early manifestation

d) Most cases follow a bout of heavy eating or drinking

Correct Answer - B

Answer- B. Most common site is left posteromedial aspect 3 - 5 cms above the gastroesophageal junction

- Vomiting is thought to be the most common cause, other causes include weightlifting, defecation, epileptic seizures, abdominal trauma, compressed air injury, and childbirth, all of which can increase the pressure in the esophagus and cause a barogenic esophageal rupture.
- Two common risk factors include alcoholism and excessive indulgence in food.
- Rupture occurs most commonly in the left posterolateral wall of the distal third of the esophagus with extension into the left pleural cavity.
- Symptoms consist of vomiting, lower thoracic pain, and subcutaneous emphysema.
- Typically, the patient will present with pain at the site of perforation, usually in the neck, chest, epigastric region, or upper abdomen.

KollegeApply

1262. Which of the following is true about Mallory Weiss tear -

a) It is a mucosal tear not extending through the muscle layer

b) It is more common in women than men

c) It is common in young individuals

d) It is associated with achalasia cardia

Correct Answer - A

Answer- A. It is a mucosal tear not extending through the muscle layer

A Mallory -Weiss tear (MWT) is forceful or retching vomiting may produce a longitudinal mucosal tear immediately below squamo columnar junction at the cardia or gastroesophageal junction mainly and also in oesophagus.

Seen in males, alcholics and pregnant females.

The mean age is more than 60 and 80% are men.

Hyperemesis gravidarum, which is severe morning sickness associated with vomiting and retching in pregnancy, is also a known cause of Mallory-Weiss tear.

CollegeApply

1263. Gastric carcinoma is associated with all EXCEPT ?

a) Inactivation of p53

b) Over expression of C-erb

c) Over expression of C-met

d) Activation of RAS

Correct Answer - D

Ans. is 'd' Activation of RAS

- In the course of multi-step stomach carcinogenesis, various genetic and epigenetic alterations of oncogenes, tumor-suppressor genes, DNA repair genes, cell cycle regulators and cell adhesion molecules are involved. Genetic alteration in gastric cancer include:
- Intestinal type gastric cancer: K-ras mutation, APC mutation, pS2 methylation, HMLH1 methylation, p I ema methylation, p 73 deletion and C-erb B-2 amplification.
- Diffuse type gastric caner: CDH I gene (E-Cadherin) mutation, K-sam amplification.
- For both type: Telomerase reduction (telomerase shortening), hTERT expression, genetic instability, overexpression of the cyclin E & CDC25B & E2F I genes,p53 mutations, reduced expression, CD44 aberrabont transcripts, and amplification of the C-met Cyclin E genes.

Coming to question:

- All the given four genetic alterations may be associated with stomach cancer.
- However among the given options K-ras is best answer as it is associated with gastric cancer in minimum percentage (amongst given options):

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Source: Textbook of mechanism of carcinogenesis and cancer prevention

K-ras mutation	-4	<10%
p53 mutation		30-60%
C-erb B-2 amplifcation	-->	20%
C-met amplifciation	-->	20%

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1264. A 55 year old woman presented with history of recurrent episodes of right upper abdominal pain for the last one year. She presented to emergency with history of jaundice and fever for 2 days. On examination, the patient appeared toxic and had a blood pressure of 100/60 mmHg. She was started on intravenous antibiotics. Ultrasound of the abdomen showed presence of stones in the common bile duct. What would be the best treatment option for her -

a) ERCP and bile duct stone extraction

b) Laparoscopic cholecystectomy

c) Open surgery and bile duct stone extraction

d) Lithotripsy

Correct Answer - A

Answer- A. ERCP and bile duct stone extraction

Methods of biliary decompression

a. ERCP with sphincterotomy and stone extraction

- It is the procedure of choice,
- Early endoscopy allows not only diagnosis by cholangiography and

direct visualization of the ampulla but also permits biliary decompression by sphincterotomy and stone extraction.

- If the stones cannot be removed, a nasobiliary catheter or stent is inserted to decompress the biliary tract.

b. Percutaneous transhepatic route (PTC)

- PTC is performed if
- The endoscopic procedure has failed or not available.
- If the obstruction is more proximal or perihilar.
- If there is a stricture in a biliary enteric anastomosis.

c. Surgical biliary decompression

KollegeApply

1265. Rigler's sign is suggestive of -

a) Pneumothorax

b) Pneumoperitoneum

c) Peritonitis

d) Hemothorax

Correct Answer - B
Answer- B. Pneumoperitoneum
Both sides of bowel become visible because of free gas on an abdominal x-ray. This is known as Rigler's Sign.

KollegeApply

1266. **What is the most common position of appendix?**

a) Pelvic

b) Paracolic

c) Retrocaecal

d) Retroperitoneal

Correct Answer - C
Retrocecal is the most common position of the appendix.
Positions of appendix:

- Retrocecal: 74%
- Subcecal: 1.5%
- Pelvic: 21%
- Post-ileal: 0.5%
- Pre-ileal/retro-ileal: 1%

KollegeApply

1267. A 70 year pld male complaining of per rectal bleeding was diagnosed of having rectal/anorectal cancer. The distal margin of the tumor was 5 cm from the anal verge the treatment of choice would be -

a) Palliative Radiotherapy

b) Abdominoperineal recection

c) Low anterior resection

d) Local Excision

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Correct Answer - C

Answer- C. Low anterior resection

Surgeries

- Pre-operative neo-adjuvant radiotherapy in resectable rectal cancer reduces the incidence of local recurrence
- Adjuvant chemotherapy improves survival in node-positive cases
- Anterior(low) resection: sphincter saving procedure, mid rectum
- Proximal 2/3rdof rectum(lesions 6cms above the dentate line/2 or more cms above anal canal)
- Well differentiated tumour size tumour
- T1/T2,NO tumours
- Recto sigmoid tumors and upper third rectal tumors :High anterior resection (rectum and mesorectum are taken to a margin 5cm distal to the tumour and colorectal anastomosis is performed)
- Tumours in the middle and lower thirds of rectum: complete removal of rectum and mesorectum (TME-total mesorectal excision)

- Abdomino perineal resection(Mike's procedure)- Lower rectum
- Hartmann's procedure – for elderly and unstable patients who cannot withstand long procedure of APR
- Colonoscopy is always performed either before (for synchronous tumours) or within a few months (for metachronous tumours) of surgical resection for tumour detection

KollegeApply

1268. All of the following are true about Hirschsprung disease except -

a) Absence of Ganglion cells in the involved segment

b) Swenson, Duhamel and Soave are surgical procedures for this condition

c) Mainly presents in infancy

d) The non peristaltic affected segment is dialted

Correct Answer - D

Answer- D. The non peristaltic affected segment is dialted

In Hirchprung's disease the absence of ganglion cells gives rise to a contracted non peristaltic segment with a dilated hypertrophied segment of normal colon above it.

Almost all cases present in infancy and childhood. Approximately half are diagnosed in the neonatal period and most of the remainder are diagnosed in early childhood.

In the newborn period, most common symptoms are abdominal distention and failure to passmeconium.

Older patients may experience chronic or intermittent constipation.

Occasionally, infants may present with a dramatic complication of Hirschprung's disease called enterocolitis.

Surgery is always required. The basic principle is removal of most or all of the aganglionic segment and anastomosing the ganglionic bowel to the rectum

CollegeApply

1269. Commonest cause of intussusception is -

a) Submucous lipoma

b) Meckel's diverticulum

c) Hypertrophy of submucous peyer's patches

d) Polyp

Correct Answer - C
Ans. is 'c' i.e., Hypertrophy of submucosa peyer's patches

KollegeApply

1270. All of the following are clinical features suggestive of trachea-esophagal fistula except -

a) Choking and Coughing

b) Regurgitation

c) Cyanosis

d) Fever

Correct Answer - D
Answer- D. Fever
Repeated episodes of coughing, choking and cyanosis occur on feeding with TOF.

KollegeApply

1271. Most important presenting feature of periampullary carcinoma is -

a) Jaundice

b) Pain

c) Weight Loss

d) Palpable Mass

Correct Answer - A

Answer- A

- Hallmark of presentation of periampullary carcinoma is obstructive Jaundice.
- Jaundice secondary to obstruction of the distal bile duct is the most common symptom that draws attention to ampullary and pancreatic head tumors.
- It is characteristically painless jaundice but may be associated with nausea and epigastric discomfort.

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1272. Best marker to assess prognosis after Surgery for colon carcinoma: *March 2005*

a) CA 19-9

b) CA-125

c) Alpha fetoprotein

d) CEA

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Correct Answer - D
Ans. D: CEA
CEA is a family of related glycoproteins initially found in embryonic tissue and colon malignancies.
The half-life of CEA is approximately 2 weeks. Plasma levels of CEA can be determined readily by radioimmunoassay. However, its usefulness in colon carcinogenesis screening is limited because of its high level in the plasma of a patient's malignancies originating from other sites such as breast, pancreas, stomach and lung. Furthermore, CEA plasma levels may also be increased in smokers or patients with chronic diseases, such as inflammatory bowel disease, bronchitis and alcoholic liver disease.
The clinical usefulness of CEA for screening purposes is further limited by the fact that its increase in level typically occurs only when the tumor penetrates through the serosa. Thus, early lesions may not be detected by serum CEA level changes. CEA is typically elevated with metastatic liver disease, but rarely with peritoneal involvement. Thus, while the specificity for CEA to identify occult CRCs is high, the sensitivity is low in most studies for screening. Accordingly, CEA is not a useful test for the screening of CRC. Regardless of the clinicopathologic stage, a preoperative elevation

Regardless of the clinicopathologic stage, a preoperative elevation of the plasma CEA level predicts eventual tumour recurrence. High level of CA 19-9 is seen in the plasma of a patient's malignancies originating from colon, breast and pancreas

KollegeApply

1273. Acute pancreatitis causes all of the following except:
March 2005, March 2013 (g)

a) Hypercalcemia

b) Increased amylase level

c) Subcutaneous fat necrosis

d) Hyperlipidemia

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Correct Answer - A

Ans. A: Hypercalcemia

Complications of acute pancreatitis:

- Intra-abdominal:

Pancreatic "collections":

- Phlegmon
- Pseudocyst
- Abscess
- Necrosis

Intestinal:

- Paralytic ileus
- Gastrointestinal haemorrhage - from stress ulceration, gastric varices due to splenic vein obstruction, or rupture of pseudoaneurysm
- Necrotising obstruction or fistulisation of colon

* Hepatic - obstructive jaundice due to oedematous narrowing of common bile duct

* Renal - hydronephrosis and hydroureter of right kidney due to peripancreatic inflammation in perirenal space

* Spleen - rupture or haematoma, from spread of peripancreatic

inflammation

Systemic complications range from minor pyrexia to rapidly fatal, multiple organ-system failure. They include:

* Circulatory shock - kinin activation, haemorrhage
* Disseminated intravascular coagulation
* Respiratory insufficiency:

- Mild e.g. hypoxaemia, atelectasis, pleural effusion
- Severe e.g. adult respiratory distress syndrome

* Acute renal failure
* Metabolic:

- Hypocalcaemia
- Hyperglycaemia / diabetes mellitus
- Hypertriglyceridaemia

* Pancreatic encephalopathy - confusions, delusions, coma
* Retinal arteriolar obstruction causing sudden blindness

Purtscher's retinopathy

* Metastatic fat necrosis A serum level three to four times above normal serum amylase level, is indicative of acute pancreatitis, but a normal level does not exclude the disease.

KollegeApply

1274. Heller's myotomy is done for:
September 2007, 2009, 2010

a) Esophageal carcinoma

b) Pyloric hypertrophy

c) Achalasia cardia

d) Inguinal hernia

Correct Answer - C
Ans. C: Achalasia cardia
Achalasia is associated with loss of ganglion cells in the esophageal myenteric plexus.
These important inhibitory neurons induce LES relaxation and coordinate proximal-to-distal peristaltic contraction of the esophagus
Achalasia is an esophageal motor disorder characterized by increased lower esophageal sphincter (LES) pressure, diminished-to-absent peristalsis in the distal portion of the esophagus composed of smooth muscle, and lack of a coordinated LES relaxation in response to swallowing.
Barium radiology may show 'bird's beak' appearance.
Esophageal (Heller) myotomy is a surgical procedure that is performed with minimally invasive techniques. The laparoscopic approach appears to be most appropriate.

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1275. All of the following are surgical options in management of esophageal carcinoma except -

a) Ivor Lewis Approach

b) Mckeown's Approach

c) Transhiatal removal

d) Sistrunk operation

Correct Answer - D

Answer- D. Sistrunk operation

Ivor lewis operation is subtotal esophagectomy done for Ca esophagus in lower third of esophagus

In transhiatal esophagectomy (THE) Esophagus is removed through the diaphragmatic hiatus by making incisions in the abdomen and the neck.

McKeowns Surgery- 3 Incision Approach

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1276. Bilateral parotid enlargement occurs in all, Except:

a) Sjogren's syndrome

b) SLE

c) HIV

d) Chronic pancreatitis

Correct Answer - B

Answer is B (SLE):

Bilateral parotid enlargement is not a feature **of SLE.**

Causes of Bilateral parotid enlargement

Viral infections	**Metabolic causes**	**Endocrinal**	**Miscellaneous**
• *Mumps* • *Influenza* • *Epstein barr virus* • *Coxackie virus A* • *CMV* • *HIV*	• *Diabetes* • *mellitus* • *Hyper* • *lipoproteinemia* *Chronic pancreatitis*[e] *Cirrhosis*	• Acromegaly • Gonadal hypofunction	• Sarcoidosis • Amyloidosis • Sjogren syndrome

KollegeApply

1277. Chronic hemolytic anaemia is associated with which of the following -

a) Brown Pigment stone of the gall bladder

b) Black Pigment stone of the gall bladder

c) Uric acid Renal Calculus

d) Intestinal Obstruction

Correct Answer - B
Answer- B. Black Pigment stone of the gall bladder
Hemolysis causes black pigment stone of gall bladder.
Chronic hemolytic states (eg. hereditary spherocytosis, sickle cell disease).

KollegeApply

1278. All of the following are features of Zollinger Ellison syndrome except

a) Intractable peptic ulcers

b) Severe diarrhoea

c) Beta cell tumors of the pancreas

d) Very high acid output.

Correct Answer - C

Ans. is 'c' i.e., Beta cell tumours of pancrease

- Gastrinoma or Zollinger Ellison syndrome is a non 13 cell neuroendocrine tumour of the pancreas It secretes gastrin
- Pathophysiology of Gastrinoma

Gastrinoma —> Increase secretion of gastrin —> marked gastric acid hypersecretion peptic ulcer

Pancreatic Neuroendocrine Tumors

Tumour	Biologically active peptide secreted	Tumour location	Malignant percentage	Main symptoms and signs
Gastrinoma (non 13 cell tumour)	Gastrin	*Duodenum* (70%) Pancreas (25%) other sites (5%)	60-90	•Pain (79-100%) 'Diarrhoea (30-73%) • GERD (30-35%) • Peptic ulcer

Insulinoma (f3 cell tumour)	Insulin	*Pancreas* > 99% (Insulinomas are distributed *equally on head body and tail of pancrease)*	< 10	• Symptoms of hypoglycemia • Symptoms releive on administration of glucose
VIPOMA (Verner-Morrison syndrome, pancreatic cholera, WDHA)	Vasoactive intestinal peptide	Pancreas 90%	40-70	• Watery diarrhoea (90-100%) • Hypokalemia (80-100%) • Hypochlorhydria • Dehydration (83%) • Flushing (20%)
Glucagonoma	Glucagon	*Pancreas* 100% (usually occursusuall singly in pancreatic tail)	50-80%	• *Dermatitis* (migratory necrolytic erythema) 67-90% • *Glucose intolerance* (40-90%) • Weight loss (66 to 96%) • Anemia (33-85%) • Diarrhoea (15-29%) • Thromboembolism

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1279. All of the following is true about heart transplantation except -

a) Immmunosupression is started preoperatively

b) It is only orthotopic and not heterotopic

c) A Beating heart cadaver/donor is needed

d) High Pulmonary arterial resistance in a contra indication

Correct Answer - B

Answer- B. It is only orthotopic and not heterotopic

Types of transplant :

- Heterotopic
- Orthotopic
- A typical heart transplantation begins when a suitable donor heart is identified. The heart comes from a recently deceased or brain dead donor, also called a beating heart cadaver.

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1280. Lateral aberrant thyroid refers to -

a) Congenital thyroid abnormality

b) Metastatic focus in lymph nodes

c) Struma ovarii

d) Lingual thyroid

Correct Answer - B
Ans is "B" i.e. Metastatic focus in lymph nodes
Lateral aberrant thyroid refers to a **metastatic focus in lymph nodes**.
Lateral aberrant thyroid is a **misnomer** and always refers to the presence of metastatic thyroid carcinoma (papillary) in cervical lymph nodes. It does not indicate the presence of ectopic thyroid tissue as the name suggests.

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1281. A child presented with blunt abdominal trauma, the first investigation to be done is -

a) USG

b) CT Scan

c) Complete Hemogram

d) Abdominal Xray

Correct Answer - A

Answer- A. USG

U/S is the investigation of choice in both stable as well as unstable patients.

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1282. Vacuum assisted closure is contraindicated in which of the following conditions -

a) Chronic osteomyelitis

b) Large amount of necrotic tissue with eschar

c) Abdominal wound

d) Surgical wound dehiscence

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Correct Answer - B

Answer- B. Large amount of necrotic tissue with eschar

Negative-pressure wound therapy (NPWT), also known as a vacuum dressing or V.A.C. dressing ("vacuum assisted closure"), is a therapeutic technique using a suction dressing to remove excess exudation and promote healing in acute or chronic wounds and second- and third-degree burns.

Contraindications for NPWT use

1. Malignancy in the wound
2. Untreated Osteomyelitis
3. Non enteric and unexplored fistulas
4. Necrotic tissue with eschar present
5. Exposed blood vessels, anastomotic sites, organs and nerves in the periwound area (must avoid direct foam contact with these structures)

1283. True regarding cystic hygroma is -

a) Non transilluminant

b) Lined by columnar epithelium epithelium

c) Develops from jugular lymphatic sequestration

d) All

Correct Answer - C
Ans. is c i.e., Develops from jugular lymphatic sequestration
Cystic hygroma

- Cystic hygroma is a swelling usually occuring in the lower third of the neck
- It is most commonly seen in posterior triangle of the neck, but may also occur in axilla, groin & mediastinum
- It results due to sequestration of a portion of the jugular lymph sac from the lymphatic system.
- It usually manifests in the neonate or in early infancy (occasionally present at birth)
- The swelling is soft and partially compressible and invariably increases in size when the child coughs or cries.
- The characteristic that distinguishes it from all other neck swellings is that it is brilliantly translucent.
- The cysts are filled with clear lymph and are lined by endothelium.
- Mostly these are multiple cysts but occasionally they can be unilocular.
- It may show spontaneous regression.

Treatment [Ref.: Sabiston 18/e p2053; Schwartz 9/e p1415]
There are two methods of treatment: Surgical excision & Sclerotherapy
Sabiston writes- "Complete surgical excision is the preferred

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treatment; however, this may be impossible because of the hygroma infiltrating within and around important neurovascular structures. Because hygromas are not neoplastic tumors, radical resection with removal of major blood vessels and nerves is not indicated. Injection of sclerosing agents such as bleomycin or the derivative of Streptococcus pvogenes OK-432 have also been reported to be effective in the management of cystic hygromas. Intracystic injection of sclerosants appears to be most effective for macrocystic hygromas, as opposed to the microcystic variety."
"The modern management of most cystic hygromas includes the combination of surgical excision and image-guided sclerotherapy."- Schwartz

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1284. Most common site for Cystic Hygroma is -

a) Lower third of neck

b) Overlying the parotid gland

c) Along the Zygomatic Prominence

d) Post auricular

Correct Answer - A

Answer- A. Lower third of the neck

- Most cystic hygromas involve the lymphatic jugular sacs and present in the posterior neck region.
- The other common sites are the axillary, mediastinum, inguinal, and retroperitoneal regions, and approximately 50% of them present at birth.
- Cystic hygromas usually present as soft cystic masses that distort the surrounding anatomy, including the airway, which can result in acute airway obstruction.

KottegeApply

1285. The size beyond which the risk of rupture of an abdominal aneurysm significantly increases is greater than -

a) 5.5 cm

b) 6 cm

c) 6.5 cm

d) 7 cm

Correct Answer - A
Answer- A. 5.5 cm
High risk AAA
Endovascular aneurysmal repair (EVAR)
AAA repair- ≥5.5 cm/ >5cm females
Symptomatic aneurysm

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1286. Chvostek sign could be seen after -

a) Gastrojejunostomy

b) Total thyroidectomy

c) Subtotal Thyroidectomy

d) Hellers Cardiomyotomy

Correct Answer - B

Answer- B. Total thyroidectomy

- Chvostek's sign refers to the contraction of the ipsilateral facial muscles on percussion of the facial nerve below the zygoma.
- It is due to hypocalcemia and one common cause of hypocalcemia is a complication during thyroidectomies.
- The parathyroid gland produces a parathyroid hormone (PTH), and resection can lead to a decrease in PTH levels.
- PTH regulates calcium levels in the body; hence, a reduction in its serum level will lead to hypocalcemia.
- So, among the most common postoperative complications following thyroid surgery is hypocalcemia.

KollegeApply

1287. Reactionary Hemorrhage occurs due to -

a) Dislodgement of clot

b) Infection

c) Damage to a blood vessel

d) Pressure necrosis

Correct Answer - A
Answer- A. Dislodgement of clot
Dislodgement of clot
Ligature slip
Noramlisation of BP and vasodilation

KollegeApply

1288. Transplanted kidney is relocated to which region in the recepient's body ?

a) Retroperitoneal rgion

b) Lumbar region

c) Epigastrium

d) Beside the dysfunctional Kidney

Correct Answer - A
Answer- A. Retroperitoneal rgion
The most common location for placing a kidney transplant is in retroperitoneal iliac fossai.
In most cases Kidney is placed retroperitoneally and the iliac arteries and veins are used for perfusion and ureter is transplanted directly into bladder.

KottegeApply

1289. Claudication due to popliteofemoral incompetence is primary seen in

a) Thigh

b) Calf

c) Buttocks

d) Feet

Correct Answer - B
Answer- B. Calf
Aorta and Common Iliac- Buttocks
Femoral Artery- Thigh
Superficial femoral artery- Calf and popliteal artery
Posterior tibial Artery- Feet

KollegeApply

1290. Which of the following is correct management of abdominal compartment syndrome

a) Antihypertensives

b) Urgent Opening of the surgical wound and application of the Bogota bag

c) Urgent Fasciotomy

d) Wait and monitor for 24 hours

Correct Answer - B

Answer- B. Urgent Opening of the surgical wound and application of the Bogota bag

Abdominal compartment syndrome is a surgical emergency and treatment includes rapid decompression of the elevated intraabdominal pressure by opening the abdominal wound and performing a temporary closure of the abdominal wall with mesh or a plastic bag. Permanent closure is done 5 to 7 days later when the condition resolves.

CollegeApply

1291. All of the following is true about congenital hypertrophic pyloric stenosis except

a) RamStedt Pyloromyotomy is the treatment of choice

b) Non Bilious vomiting is seen

c) Metabolic acidosis occurs

d) More common in males

Correct Answer - C

Answer- C. Metabolic acidosis occurs

Characterstically the first born male child is affected.

The conditon is most commonly seen at 4 weeks after birth ranging from the 3rd week to on rare occasion

Non-bilious vomiting, becoming increasingly projectile, occurs over several days to weeks

Infants develop a metabolic alkalosis with severe depletion of potassium and chloride ions.

Treatment- Surgery : Fredet-Ramstedt pyloromyotomy. (In it the pyloric mass is split without cutting the mucosa)

CollegeApply

1292. Food can commonly get obstructed in the esophagus at all of the following locations except

a) Crossing of left bronchus

b) Crossing of arch of aorta

c) Diagphragmatic aperture

d) Crossing of the hemiazygous vein

Correct Answer - D
Answer- D. Crossing of the hemiazygous vein
Pharyngoesophagal junction -6 inches 9

KolleseApply

1293. A full thickness wound that is not sutured heals by

a) Primary Healing

b) Secondary Healing

c) Delayed primary Healing

d) Reepithelization

Correct Answer - B
Answer- B. Secondary Healing
Secondary Healing

- A third type of healing is known as secondary healing or healing by secondary intention. In this type of healing, a full-thickness wound is allowed to close and heal. Secondary healing results in an inflammatory response that is more intense than with primary wound healing. In addition, a larger quantity of granulomatous tissue is fabricated because of the need for wound closure. Secondary healing results in pronounced contraction of wounds.

CollegeApply

1294. An Incisional wound heals by

a) Primary Healing

b) Secondary Healing

c) Delayed primary Healing

d) Reepithelization

Correct Answer - A
Answer- A. Primary Healing
Primary Healing

- Primary wound healing or healing by first intention occurs within hours of repairing a full-thickness surgical incision. This surgical insult results in the mortality of a minimal number of cellular constituents.

KolleegeApply

1295. A cystic mass at the base of umbilical cord in a neonate could be

a) Allantoic Cyst

b) Meckel's Diverticulum

c) Ventral mesogastrium

d) Cystic Hygroma

Correct Answer - A

Answer- A. Allantoic Cyst

Allantoic cysts are a type of true cyst of the umbilical cord.

The allantois forms from the part of the fetal yolk sac that eventually becomes the primitive hindgut (the cloaca). The cloaca divides into the hindgut posteriorly and the urogenital sinus anteriorly.

KotleeApply

1296. True about MALToma is

a) They are secondary gastric lymphomas

b) H. Pylori infection is a risk factor

c) Commonly seen in gastric cardia

d) They are a type of T cell lymphoma

Correct Answer - B

Answer- B. H. Pylori infection is a risk factor

Stomach is the most common extranodal site of lymphoma.

It is of two types - Primary & Secondary

Most of the primary lymphomas (about 60%) arise in MALT (mucosa associated lymphoid tissue). MALT is usually associated with chronic H. pylori infection. So low-grade MALT lymphomas are thought to arise because of chronic H. pylori infection. These low grade lymphomas may later on degenerate to high grade lymphomas.

mucosa associated lymphoid tissue. It is usually primary GI lymphoma (4% of gastric lymphoma); of non-Hodgkin's B cell type.

KnowledgeApply

1297. False about Gastric lymphoma is:

a) Stomach is the most common site

b) Asosciate with H. pylori infection

c) Total gastrectomy with adjuvant chemotherapy is the treatment of choice

d) 5 yr survival rate after treatment is 60%.

Correct Answer - C

Total gastrectomy with adjuvant chemotherapy is the treatment of choice *[Ref: Sabiston 18/e p1269 (17/c p1312); Harrison 17/e, p 573; Schwartz 9/e p935 (8/e, p981)]*

- Stomach is the most common extranodal site of lymphoma.
- It is of two types - *Primary & Secondary*
- Primary gastric lymphoma - *is lymphoma of the stomach which exhibits no evidence of liver, spleen, mediastinal lymph nodes or bone marrow involvement at the time of diagnosis (regional lymph node involvement may be present)*
- Primary gastric lymphoma is mainly (>95%) *Non-Hodgkin's lymphoma of B cell origin.*
- Most of the primary lymphomas (about 60%) arise in MALT *(mucosa associated lymphoid tissue).* MALT is usually associated with *chronic H. pylori infection.* So low-grade MALT lymphomas are thought to arise because of chronic H. pylori infection. These low grade lymphomas may later on degenerate to *high grade lymphomas*
- Immunodeficiency and H. pylori infection are risk factors for B cell lymphoma.
- Most common site of involvement (like that of adenocarcinoma) is *gastric antrum.*

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- Secondary gastric lymphoma
- Stomach is the *most common extranodal site of systemic lymphoma.*
- *Almost all of them are Non-Hodgkins types*
- Treatment
- The role of gastric resection is controversial. Recent studies have shown similar disease free 5 year survival rates in patients treated with surgery+chemotherapy+radiotherapy and patients treated with chemotherapy+ radiation therapy alone. (Most patients with high grade gastric lymphomas are now treated with chemoradiation alone, without surgical resection. For disease limited to the stomach and regional nodes, radical subtotal gastrectomy may be performed, especially for bulky tumors with bleeding and/or obstruction.)
- Most common chemotherapeutic regimen is – CHOP plus *rituximab [CHOP stands for cyclophosphamide, doxorubicin,vincristine,& prednisone]*
- about option d i.e. (5 *yr survival rate after treatment is 60%.) Harrison* 17/e writes- *"Subtotal gastrectomy, usually followed by combination chemotherapy, has led to 5-year survival rates of 40-60% in patients with localized high-grade lymphomas."*

KollegeApply

1298. **Which of the following gas is most commonly used in laproscopy?**

a) CO2

b) N2O

c) O2

d) Helium

Correct Answer - A
CO_2 is used in laproscopy because it is common to the human body and can be absorbed by tissue and removed by the respiratory system.
It is also non-flammable, which is important because electrosurgical devices are commonly used in laparoscopic procedures.

KollegeApply

1299. Strawberry gallbladder is seen in ?

a) Gangrene of gallbladder

b) Porcelain gall bladder

c) Adenomatosis

d) Cholesterosis

Correct Answer - D
Ans. is' i.e. Cholesterosis
Cholecystosis is the chronic inflammatory condition of the gallbladder with cholesterol deposits.
Types
I. Aggregations of cholesterol crystals in the mucosa or submucosa —cholesterosis (Strawberry gallbladder).

- Lipoid contents are present in large foamy cells that have phagocytosed cholesterol. Here cystic duct is normal.
- The disease occurs only in gallbladder. It is a premalignant condition.

II. Cholesterol laden polypoid projections in the mucosa — cholesterol polyposis (Gallbladder polyp).
III. Granulomatous thickening and hyperplasia of the gallbladder — cholecystitis glandularis proliferans.
IV. Diverticula formation in the wall of the gallbladder— diverticulosis of gallbladder.
V. Gallbladder wall fistula.

KollegeApply

1300. All of the following are causes of Urothelial Carcinomas Except -

a) Smoking

b) Industrial solvents

c) Exposure to thorotrast

d) Alcohol consumption

Correct Answer - D
Answer- D. Alcohol consumption
Industrial dyes or solvents
Excessive analgesic intake,
Balkan nephropathy, and
Those exposed to Thorotrast, (a contrast agent previously used for retrograde pyelography

KollegeApply

1301. In a patient with renal cell carcinoma with a thrombus in IVC renal vein, which is the best investigation for diagnosis?

a) CT scan

b) Angiography

c) Colour doppler imaging

d) IVP

Correct Answer - A
Ans. CT scan

- Investigation of choice in RCC-CT scan.

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1302. Which of the following precancerous conditions if treated would not lead to cancer

a) Cervical intraepithelial Neoplasia

b) Ductal carcinoma in situ of breast

c) Lobular Carcinoma in situ of breast

d) Vaginal intraepithelial Neoplasia

Correct Answer - A

Answer- A. Cervical intraepithelial Neoplasia

- The cancers, which have well known precancerous condition, can be diagnosed and treated at pre-cancerous stage to prevent the development of cancer : -

1. Cervix → GIN
2. Colon → Polyp

KollegeApply

1303. Commonest site of peptic ulcer is :

a) 1st part of Duodenum

b) IInd part of duodenum

c) Distal 1/3 of stomach

d) Pylorus of the stomach

Correct Answer - A

Answer *is* A (1st part of Duodenum)

First part of duodenum is the most common site for peptic ulceration.

Sites in order of decreasing frequency :

1. Duod*enum, 1st portion* Q
2. *Stomach, usually antrum* Q
3. *At the gastro-esophageal junction, in the setting of gastroesophageal reflux* Q
4. *Within the margins of a gastrojejunostomy* Q
5. *In the* duodenum, stomoch or jejunum of patients with Zollinger-Ellison Syndrome Q
6. Within or adjacent to a Meckels diverticulum that contains ectopic gastric mucosa Q

Peptic ulcers are usually solitary lesions less than 4 cm in diameter

KollegeApply

1304. **Which of the following is the agent of choice for cryosurgery?**

a) Nitrous oxide

b) CO_2 snow

c) Liquid nitrogen spray

d) Freons

Correct Answer - C

This has a temperature of -196 c(spray/probe) & the only cryogen advocated for malignant skin lesions.

Ref: Textbook of dermatosurgery & cosmetology, satish S savant, E-2,P-117.

KollegeApply

1305. In case of polytrauma with multiple injuries to the chest, neck and abdomen, highest priority is given to

a) Stabilization of cervical spine

b) Staring of koids

c) Vasopressors

d) Assesing disability

Correct Answer - A

Answer- A. Stabilization of cervical spine

1. Primary survey - it should be done first when any polytrauma patient presents in the following order :

- 1.1 Airway maintenance with cervical spine protection
- 1.2 Breathing and ventilation
- 1.3 Circulation with hemorrhage control
- 1.4 Disability/Neurologic assessment
- 1.5 Exposure and environmental control

2. Secondary survey - complete history and examination.

CollegeApply

1306. Thyroid nodule in a 65 year old male who is clinically euthyroid is most likely to be

a) Follicular adenoma

b) Follicular Carcinoma

c) Thyroid Cyst

d) Multinodular goiter

Correct Answer - A

Answer- A. Follicular adenoma

Most common solitary thyroid nodule is benign colloid nodule.

2"d most common cause of solitary thyroid nodule is follicular adenoma.

KollegeApply

1307. In Subtotal Thyroidectomy, What is true

a) Removal of one lobe and isthmus

b) Removal of both lobes leaving behind 6-8 grams of tissue

c) Removal of entire thyroid with cervical lymphnodes

d) Removal of 1 lobe with isthmus and the second lobe partially

Correct Answer - B

Answer- B. Removal of both lobes leaving behind 6-8 grams of tissue

Subtotal thyroidectomy—Removal of majority of both lobes leaving behind 4-5 grams (equivalent to the size of a normal thyroid gland) of thyroid tissue on one or both sides—this used to be the most common operation for multinodular goitre.

KollegeApply

1308. Which of the following statements about Branchial cysts is true:

a) 50-70% are seen in lungs

b) Most common site is mediastinum

c) They are premalignant lesions

d) Infection is uncommon in Pulmonary bronchogenic cysts

Correct Answer - B

Answer is B (Most common site *is* mediastinum):

Most common site of bronchial/bronchogenic cysts is mediastinum. Only about 15% of bronchogenic cysts occur in the lungs (pulmonary bronchial cysts). Pulmonary bronchogenic cysts often become infected. Bronchogenic cysts are benign lesion and do not have malignant potential (not premalignant).

Bronchial Cyst/Bronchogenic cysts: Review

- Bronchial cysts represent islands of bronchial tissue left behind during the branching of the airways during early fetal development.
- They arise due to abnormal budding of the tracheobronchial tree and foregut and are lined by bronchial epithelium.
- *The most common site of bronchial cysts is mediastinum.*
- *The other site of bronchial cyst is within the pulmonary parenchyma (lung) (Less common site - 15%)*

Mediastinal bronchial cyst	**Pulmonary parenchymal cyst (lungs)**
• Most common site for bronchial cysts • Most common site is middle mediastinum • Commonly arise when	• Less common site (- 15%) • Most common site is the lower lobes • Commonly arise when bronchial tissue is separated from airways

bronchial tissue is separated from airways early in gestation • Communication with tracheobronchial tree is rare	late in gestation • Communication with tracheobronchial tree is more common than with mediastinal cysts. • These cysts often become infected.

- Most bronchogenic cysts are asymptomatic and discovered as incidental radiographic findings in a young adult.
- When symptoms do occur they result most commonly from infection. *Pulmonary parenchymal cysts often become infected – Rudolph*
- *Bronchogenic cysts are not considered premalignant lesions. However according to Rudolph's textbook there is a small risk of malignant change and the best approach is removal and histological examination.*

KollegeApply

1309. A 65 year old female presents with a swelling in the neck diagnosed as a solitary thyroid nodule. The patient is investigated and a scan shows increased uptake of iodine. Serum T3 and T4 are elevated . Most probabe diagnosis is

a) Benign Colloid Nodule

b) Toxic Adenoma

c) Follicular adenoma

d) Toxic Multinodular goitre

Correct Answer - B

Answer- B. Toxic Adenoma

Elavated thyroid hormone levels with a hyperfunctioning nodule is suggestive of a toxic adenoma.

A cold nodule is more likely to be malignant then a hot nodule.

KollegeApply

1310. Most common cause of goiter in India is

a) Diffuse Endemic Goitre

b) Papillary Carcinoma

c) Toxic Multinodular Goitre

d) Hashimoto's Thyroiditis

Correct Answer - A
Answer- A. Diffuse Endemic Goitre
The lack of the iodine leads to decreased synthesis of thyroid hormones and a compensatory increase in TSH, which in turn leads to follicular cell hypertrophy and hyperplasia and goitrous enlargement - Diffuse hyperplastic goiter.
Mostly patients are euthyroid.

KollegeApply

1311. Which of the following is an indication for thoracotomy in case of hemothorax ?

a) Persistant drainage of 250 ml/hr

b) Total output of 1000m1 of blood

c) Falling blood pressure

d) Shift of mediastimum to the opposite side

Correct Answer - A
Answer- A. Persistant drainage of 250 ml/hr
It is classified according to the amount of blood.
Minimal hemothorax 350 ml
Moderate hemothorax 350-1500 ml
Massive hemothorax 1500 ml or more
Total hemorrhagic output exceeds 1500 ml of blood

YoUseApply

1312. A 40 year old male with chest trauma presents with breathlessness, decreased respiratory sounds on the right side, hyperresonance on percussion and distended neck veins. The possible diagnosis is

a) Tension Pneumothorax

b) Cardiac Tamonade

c) Flail Chest

d) Myocardial Infarction

CollegeApply

Correct Answer - A

Answer- A. Tension Pneumothorax

- Tension pneumothorax occurs when air becomes trapped in the pleural space under pressure.
- It develops when a 'one-way valve' air leak occurs either from the lung or through the chest wall.

causes are

- Penetrating chest trauma,
- Blunt chest trauma,
- Iatrogenic lung punctures (e.g. due to subclavian central venepuncture) and
- Mechanical positive-pressure ventilation

Clinical

- Clinical signs and symptoms include dyspnea, tachypnea, hypotension, diaphoresis, and distended neck veins.

1313. A 40 year old male presented with a penetrating trauma to chest. He is dyspnoeic with distended neck veins with hypotension and mediastinum is shifted to opposite side. There is a sucking wound over the chest. The most appropriate management would be

a) Insertion of a large bore needle in the 2" ICS in the mid clavicular line

b) Fluid Resuscitation

c) Starting Inotropic support

d) Endotracheal Intubation

KollegeApply

Correct Answer - A

Answer- A. Insertion of a large bore needle in the 2" ICS in the mid clavicular line

- This is a case of tension pneumothorax.
- Treatment consists of immediate decompression, initially by rapid insertion of a large-bore needle into the second intercostal space in the midcalvicular line of the affected hemithorax, and then followed by insertion of a chest tube through the fifth intercostal space in the anterior axillary line.

1314. Which of the following stages of lip carcinoma do not have nodal involvement ?

a) T2N1

b) T3NO

c) T1N1

d) T2N2

Correct Answer - B

Answer- B. T3NO

TNM Staging

Tx	no available information on primary tumour
T0	no evidence of primary tumour
TIS	only carcinoma *in-situ* on *primary sites*
T1	<2 cm
T2	2 to 4 cm
T3	>4 cm
T4	>4 cm, involvement of natrum, pterygoid muscles, base of tongue or skin

Mx	Not assessed
M0	No evidence
M1	Distant metastasis present

Nx	Cannot be assessed
N0	No clinical positive nodes
N1	Single, ipsilateral, <3 cm
N2a	Single, ipsilateral, 3-6 cm
N2b	Multiple, ipsilateral, <6 cm
N3a	Single/multiple, ilpsilateral node(s), one more than 6 cm
N3b	bilateral
N3c	contralateral

KollegeApply

1315. All of the following may lead to pneumatocele formation except

a) Staphylococcal pneumonia

b) Positive pressure ventilation

c) Hydrocarbon inhalation

d) ARDS

Correct Answer - D

Answer-D

- Pneumatocele formation occurs as a sequela to acute pneumonia, commonly caused by Staphylococcus aureus. However, pneumatocele formation also occurs with other agents, including Streptococcus pneumoniae, Haemophilus influenzae, Escherichia coli, group A streptococci, Serratia marcescens, Klebsiella pneumonia, adenovirus, and tuberculosis.
- Noninfectious etiologies include hydrocarbon ingestion, trauma, and positive pressure ventilation.
- In premature infants with respiratory distress syndrome, pneumatoceles result mostly from ventilator-induced lung injury.

CollegeApply

1316. A 54 year old woman is diagnosed as having carcinoma of the renal pelvis of size less than 4 cm without any metastasis. The best treatment option is

a) Partial nephrectomy

b) Radical Nephrectomy

c) Chemotherapy and immunaotherapy

d) Palliative Radiotherapy

Correct Answer - A

Answer- A. Partial nephrectomy

Partial nephrectomy is now being used as primary surgical therapy for patients with tumour less than 4 cm in size, earlier Radical nephrectomy was the t/t of choice for tumor of any size.

KollegeApply

1317. Ainhum is seen in ?

a) Base of great toe

b) Base of fingers tips

c) Base of toe

d) Ankle

Correct Answer - C

Ans. is 'c' i.e., Base of Toe

- Ainhum : is a condition usually affecting Negro males (but some females) who have run barefoot in child hood.

Clinical Features : A fissure appears at interphalangeal joint of toe - *usually the fifth.*

This fissure becomes a fibrous band, encircles the digit and causes necrosis.

KollegeApply

1318. The investigation of choice for dysphagia is

a) Endoscopy

b) Manometric Study

c) Ct Scan

d) Barium Swallow

Correct Answer - A
Answer- A. Endoscopy
The investigation of choice in is endoscopy.
Barium swallow is the first investigation.

KolleseApply

1319. Most common precipitant of Raynaud's phenomenon is

a) Exposure to cold

b) Exposure to heat

c) Psychosocial triggers

d) Exertion

Correct Answer - A
Answer- A. Exposure to cold
Is ds of young women (F:M ratio is 5:1)
Commonly the upper limbs are affected specially the fingers (the thumb is generally escaped)
Exposure to cold is main trigger

KollegeApply

1320. All of the following are principles of negative pressure wound therapy except

a) Stabilization of wound environment

b) Clearance of infection

c) Macrodeformation of the wound

d) Decreased edema

Correct Answer - B

Answer- B. Clearance of infection

Four primary effects of NPWT on wound healing:

- Macro-deformation - drawing the wound edges together leading to contraction.
- Stabilisation of the wound environment-ensuring it is protected from outside microorganisms in a warm and moist environment.
- Reduced oedema - with removal of soft tissue exudates.
- Micro-deformation- leading to cellular proliferation on the wound surface.

CollegeApply

1321. Which is the main contraindication for a liver biopsy?

a) Thrombocytopenia

b) Hemangioma

c) Ascites

d) All

Correct Answer - D
Answer- D
Contraindications for liver biopsy include the following:

- Increased prothrombin time (PT), international normalized ratio (INR) greater than 1.6
- Thrombocytopenia, platelet count lower than 60,000/µL
- Ascites (transjugular route preferred) [10]
- Difficult body habitus (transjugular route preferred)
- Suspected hemangioma
- Suspected echinococcal infection
- Uncooperative patient

CollegeApply

1322. Aneurysmal dilation of the small bowel is seen in

a) Small bowel Lymphoma

b) Gall Stone Ileus

c) Duodenal Atresia

d) Sjogrens Syndrome

Correct Answer - A
Answer- A. Small bowel Lymphoma
Aneurysmal dilatation: 30%, it occurs due to replacement of muscularis by tumour or infiltration of myenteric nerve plexus
Despite the extensive involvement, small bowel obstruction is uncommon because of lack of desmoplastic reaction, and perforation is rare

KottageApply

1323. Spontaneous esophageal rupture is most common in

a) Below the diagphragmatic aperture

b) Pharyngoesophagal junction

c) Above the diagphragmatic aperture

d) At the crossing of the arch of aorta

Correct Answer - C
Answer C. Above the diagphragmatic aperture
Instrumental perforation is common in the pharynx or distal esophagus.
Spontaneous rupture may occur just above the diaphragm in the posterolateral wall of the esophagus.

KollegeApply

1324. What is the treatment of choice in desmoid tumors ?

a) Irradiation

b) Wide excision

c) Local excision

d) Local excision following radiation

Correct Answer - B
Ans. is 'b' i.e., Wide excision

KollegeApply

1325. True about Dentigerous cyst:

a) Arises in relation to unerupted teeth

b) It most commonly encroaches maxillary antrum

c) Mandibular third molar is common site

d) Common in mandible

e) All

Correct Answer - A:C:D

Answer- A,Arises in relation to unerupted teeth C,Mandibular third molar is common site D,Common in mandible

- Common in lower jaw (mandible) in women 30-40 years.
- It occurs in relation to unerupted, permanent, molar tooth, most commonly the upper or lower third molar.

KollegeApply

1326. A patient presents with difficulty with swallowing liquids but not solids. The best investigation to make a diagnosis is

a) Endoscopy

b) Endoscopic ultrasound

c) Manometry

d) PET CT

Correct Answer - C
Answer- C. Manometry
H/O of dysphagia with more to liquids than solids suggests achalasia cardia. In all other obstructive causes of esophagus, dysphagia for solids is seen first
Manometry is used for diagnosis.

KollegeApply

1327. Which of the following is true about menetrier's disease

a) It is premalignant condition

b) There is increased gastric acid secretion

c) Atrophied mucosal folds are seen

d) Affects the stomach and small intestines

Correct Answer - A

Answer- A. It is premalignant condition

Ménétrier disease is a rare, acquired, premalignant disease of the stomach characterized by massive gastric folds, excessive mucous production with resultant protein loss, and little or no acid production. The disorder is associated with excessive secretion of transforming growth factor alpha (TGF-α).

KollegeApply

1328. All are resected in whipples operation except ?

a) Duodenum

b) Head of pancreas

c) Neck of pancreas

d) Common bile duct

Correct Answer - C
Ans is 'c'

- *Whipples operation* (Pancreaticoduodenectomy)
- is the most commonly performed operation for carcinoma of head of pancreas.
- It includes resection of:
  - *distal stomach*
  - *duodenum*
  - *gall bladder*
  - *proximal jejunum*
  - *CBD*
  - *regional lymphatics*
  - *head of pancreas*
- Restoration of gastrointestinal continuity requires - *pancreaticojejunostomy choledochojejunostomy &*
  - *gastrojejunostomy*

KolleegeApply

1329. CA Breast may locally spread to all of the following muscles except

a) Pectoralis Major

b) Pectoralis Minor

c) Latissimus Dorsi

d) Serratus Anterior

Correct Answer - C

Answer- C. Latissimus Dorsi

latissimus Dorsi is used for breast reconstruction and may rarely be involved in CA Breast local Spread'

- Muscles involved in breast cancer

..

?. Pectoral muscles : Pectoralis major, Pectoralis minor.

Muscles of chest wall : Intercostal muscles, serratus anterior

KollegeApply

1330. Which is the most common type of male breast cancer?

a) Infiltrating Ductal Carcinoma

b) Lobular Carcinoma

c) Mucinous Carcinoma

d) Colloid Carcinoma

Correct Answer - A

Answer- A. Infiltrating Ductal Carcinoma

- It tends to present as a lump and is most commonly an infiltrating ductal carcinoma.
- More than 90% of cases are infiltrating duct carcinoma, about 10% are ductal carcinoma in situ (DCIS).
- The known predisposing causes include gynecomastia and excess endogenous or exogenous estrogen.

KnowledgeApply

1331. In Patey's mastectomy the step not done is

a) Nipple and areola removed

b) Surrounding normal tissue of tumor is removed.

c) Pectoralis major removed

d) Pectoralis minor removed

Correct Answer - C

Ans. is 'c' i.e. (Pectoralis major removed)

Lets see the nomenclature of various surgeries on breast

- Simple or Total mastectomy
  * *it removes all breast tissue, the nipple-areola complex, and skin.*
- Extended simple mastectomy
  * *Simple mastectomy + removal of level I axillary lymph nodes.*
- Modified radical mastectomy
  it removes all breast tissue, the nipple-areola complex, skin and the level I and level II axillary lymph nodes.
- Halstead's Radical mastectomy
  removes all breast tissue and skin, the nipple areola complex, the pectoralis major and minor muscles and the level I, II and III axillary lymph nodes.
- Modified Radical Mastectomy
- Two forms of modified radical mastectomy are in use
- Auchincloss *(pronounced as 'aushincloss')* procedure
  * *Here both the pectoralis major and minor muscles are preserved with removal of level I and II axillary lymph nodes*

  Patey's Procedure
  here the pectoralis minor muscle is removed to allow complete dissection of level III axillary lymph nodes

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- Scanlon's modification of Patey's procedure
  * *here the pectoralis minor muscle is divided instead of removing. Division of pectoralis minor muscle allows complete removal of level III lymph nodes*
- Halstead Radical Mastectomy
- In this operation following structures are removed.
  i) the whole breast
  ii) the portion of skin overlying the tumor, which includes the nipple-areola complex.
  iii) the subcutaneous fat and the deep fascia vertically from the lower border of the *clavicle* upto the upper quarter of the sheath of the *rectus abdominis* and horizontally from the *strenum* to the anterior border of *lattissimus dorsi*
  iv) pectoralis major muscle
  v) pectoralis minor muscle and clavipectoral fascia
  vi) upper part of the aponeurosis of the external oblique and anterior parts of a few digitations of the serratus anterior muscle
  vii) all fatty and loose areolar tissue along with level I, II & III axillary lymph nodes
- Structures saved are :
  i) the axillary vein and the cephalic vein
  ii) the long thoracic nerve of Bell (Nerve to serratus anterior). The nerve to latissimus dorsi may be sacrified if required.
- Also know
- Extended Radical Mastectomy - *Radical mastectomy + removal of internal mammary lymph nodes*
  Super Radical Mastectomy - *Radical mastectomy + removal of internal mammary, mediastinal and supraclavicular lymph nodes.*

KollegeApply

1332. 45 year old female underwent modified radical mastectomy with axillary clearance for CA breast. After surgery she could not lift her arm above head. Which nerve is likely to be injured ?

a) Intercostobrachial nerve

b) Long thorasic nerve of Bell

c) Nerve to latissimus Dorsi

d) Lateral Pectoral nerve

Correct Answer - B

Answer- B. Long thorasic nerve of Bell

Overhead abduction is caused by :-

1. Serratus anterior : supplied by long thoracic nerve.
2. Trapezius : supplied by spinal accessory nerve.

CollegeApply

1333. A 22 year old woman comes with a non progressive mass in a left breast since 6 months. There are no associated symptoms. Examination shows a mobile mass not attached to the overlying skin or underlying tissue. The possible diagnosis is

a) Fibroadenoma

b) Cystasarcoma Phylloides

c) Scirrhous Carcinoma

d) Fibroadenosis

KollegeApply

Correct Answer - A

Answer- A. Fibroadenoma

Clinically, they present as firm masses that are easily movable. (MOUSE IN THE BREAST) They slide easily under the examining fingers and may be lobulated or smooth.

Mammography is of little help in discriminating between cysts and fibroadenomas; however, ultrasonography can readily distinguish between them because each has specific characteristics.

FNA biopsy can also be used to confirm the imaging findings

1334. Most common location of breast cancer is

a) Lower inner quadrant

b) Nipple

c) Upper inner quadrant

d) Upper outer quadrant

Correct Answer - D
Answer- D. Upper outer quadrant
Breast cancer is found most frequently in the upper outer quadrant. Least frequently in lower inner quadrant.

KolleegeApply

1335. A 55 years old male with a knoen history of gall stones presents with chief complints of severe abdominal pain and elevated levels of serum lipase with periumbilical ecchymosis. All of the following are prognostic criteria to predict severity of the condition except

a) Age

b) Serum LDH

c) Base deficit

d) Serum GGT

KollegeApply

Correct Answer - D

Answer- D. Serum GGT

Ranson Criteria for Severity of Acute Pancreatitis

At Admission
- Age > 55 years
- White cell count > 16.0 × 10^9/L
- Blood glucose > 11 mmol/L
- Serum lactate dehydrogenase (LDH) > 350 IU/L
- Aspartate transaminase (SGOT) > 250 U/L

During Initial 48 Hours
- Hematocrit decrease > 10 percentage points
- Blood urea nitrogen (BUN) increase > 1.8 mmol/L as urea
- PaO_2 < 60 mm Hg
- Base deficit > 4 mEq/L
- Serum calcium < 2.0 mmol/L
- Fluid sequestration > 6 L

1336. All are true about carcinoma palate, except -

a) Slow growing

b) Bilateral lymphatic spread

c) Adenocarcinoma

d) Presents with pain

Correct Answer - D
Ans. is 'd' i.e., Presents with pain

KollegeApply

1337. A 45 year old lawyer presents with pain in the abdomen more so in the epigastric region that worsens with eating spicy food and is relieved by bending forward. Complications of the above mentioned condition could be all except

a) Perforation

b) Bleeding

c) Gastric Outlet Obstruction

d) Splenic Vein Thrombosis

KollegeApply

Correct Answer - D

Ans. - D. Splenic Vein Thrombosis

- Bleeding, perforation and gastric outlet obstruction are the complications of peptic ulcer.
- Perforation: This allows stomach contents to escape into the peritoneum, causing peritonitis. It is more common in duodenal than in gastric ulcers.
- Gastric outlet obstruction: The most common cause is an ulcer near the pylorus, but occasional cases are due to antral cancer or adult hypertrophic pyloric stenosis.
- Bleeding

1338. Which of the following is a tumour marker for bladder cancer ?

a) AFP

b) CEA

c) Bladder surface protein

d) Nuclear Matrix protein 22

Correct Answer - D
Answer- D. Nuclear Matrix protein 22
Tumour markers in CA Bladder

- Nuclear matrix protein 22
- BTA
- TRAK

KollegeApply

1339. RPLND and Chemotherapy may be used in management of

a) Non seminomatous Germ cell tumours of testis

b) Non germ cell tumours

c) Seminomatous Germ cell tumours

d) Lymphoma testis

Correct Answer - A
Answer- A. Non seminomatous Germ cell tumours of testis
RPLND retroperitoneal lymph node dissection
Extra gonadal Germ cell tumors Infrequently GCTs arise from an extra gonadal site. They have poor prognosis. They are treated by chemotherapy.

KolleegeApply

1340. All of the following testicular tumours are germ cell tumours EXCEPT: *March 2013 (b)*

a) Seminoma

b) Teratoma

c) Choriocarcinoma

d) Sertoli cell tumour

CollegeApply

Correct Answer - D

Ans. D i.e. Sertoli cell tumour

Testicular carcinoma

- Bilateral in 10% of cases,
- Abdominal cryptorchid testes are at higher risk as compared to inguinal cryptorchid testes
- Testicular feminization syndrome increases the risk of testicular germ cell tumour
- MC Ca of testes in young: Seminoma
- MC Ca in elderly: Lymphoma
- MC Ca in infants: Yolk sac tumour

Seminoma

- Radiosensitive,
- Corresponds to dysgerminoma of ovary &
- Treatment of choice is: Surgery

Germ Cell Tumors

- Precursor lesion
  - Intratubular germ cell neoplasm, unclassified
  - Intratubular germ cell neoplasm, specific type
- Tumors of 1 histologic type

- Seminoma
  - Variant: Seminoma with syncytiotrophoblastic cells
  - Partially regressed tumor showing seminoma with scar
- Spermatocytic seminomaEmbryonal carcinoma
  - Variant: Spermatocytic seminoma with a sarcomatous component
-
- Yolk sac tumor
- ChoriocarcinomaPlacental site trophoblastic tumor
  - Variant: "Monophasic" type
-
- Trophoblastic tumor, unclassified
- Teratoma
  - With a secondary somatic type malignant component
  - Monodermal variants
  - Carcinoid
  - Primitive neuroectodermal tumor
  - Others

KollegeApply

1341. The Grayhack shunt is established between:

a) Corpora cavernosa and dorsal vein

b) Corpora cavernosa and saphenous vein

c) Corpora cavernosa and glans

d) Corpora cavernosa and corpora spongiosa

CollegeApply

Correct Answer - B

Ans is 'b' i.e. Corpora cavernosa and saphenous vein

The Grayhack shunt is a surgical shunt between corpora cavernosa and the saphenous vein done for the treatment of ischemic priapism.

Priapism is an uncommon condition of prolonged erection. It is usually painful for the patient, and no sexual excitement or desire is present.

Priapism may be classified into high- and low-flow types (Nonischemic and ischemic).

Nonischemic (High flow) priapism:

- Nonischemic priapism, also termed arterial or high-flow priapism, features elevated vascular flow through the corpora cavernosa.
- It usually occurs secondary to perineal trauma, which injures the central penile arteries and results in loss of penile blood-flow regulation.
- Aspiration of penile blood for blood-gas determination demonstrates high oxygen and normal carbondioxide levels.
- Arteriography is useful to demonstrate aneurysms that will respond to embolization.
- Erectile function is usually preserved.

Ischemic (low-flow) priapism:

- Ischemic priapism, also termed veno-occlusive or low-flow priapism,

features little or absent intracorporal blood flow. It represents a true compartment syndrome involving the penis, needing emergency management.

- It is typically painful.
- The corpora cavernosa is tense with congested blood and tender to palpation. The glans penis and corpus spongiosum are soft and uninvolved in the process.
- The current theories regarding the mechanism of priapism remain in debate, but most authorities believe the major abnormality to be physiologic obstruction of the venous drainage. This obstruction causes buildup of highly viscous, poorly oxygenated blood (low 02, high CO2) within the corpora cavernosa.
- If the process continues for several days, interstitial edema and fibrosis of the corpora cavernosa will develop, causing impotence.

Treatment

- Ischernic priapism is a urologic emergency.

- First-line treatment consists of aspiration of blood and irrigation of the corpora cavernosa (via a needle put in the corpora cavernosa) along with intracavernous injection of an a-adrenergic sympathomimetic agent (phenylephrine) .(Sympathomimetic agents can be expected to exert contractile effects on the cavernous tissue and thus facilitate detumescence.)

- Surgical shunting is needed when the intracavernous treatment fails.

A surgical shunt has the objective of facilitating blood drainage from the corpora cavernosa, bypassing the venoocclusive mechanism of these structures. A variety of shunt procedures may be performed. A distal cavernoglanular (corporoglanular) shunt is the first choice.

Kollegeapply

1342. Which of the following is false about undescended testis ?

a) More common on the right side

b) Hormonal therapy is effective

c) Increased risk of malignancy

d) Secondary sexual characteristics are normal

Correct Answer - B

Answer- B. Hormonal therapy is effective

- In undescended testis - the testes is arrested in some part of its path to the scrotum.
- In Ectopic testis - the testis is abnormally placed outside its path.
- Retractile testis - in infancy 80% of inapparent testis are retractile testis and require no t/t.
- Approx 70-77% of cryptorchid testes will spontaneously descend, usually by 3 months of age.
- More common in preterm, small for gestational age, LBW & twin neonates.
- More common on Rt. Side
- Secondary sexual characterstics are normal

CollegeApply

1343. A 45 year old male is diagnosed with carcinoma penis. The surgeon must look out for which lymphnodes

a) Para aortic

b) External iliac

c) Internal Iliac

d) Inguinal

Correct Answer - D

Answer- D. Inguinal

More than 50% of patients present with enlarged inguinal lymph nodes (but half of these are reactive enlargement d/t sepsis).

The presence and the extent of metastasis to the inguinal region is the most important prognostic factor for survival in patients with Ca Penis.

KollegeApply

1344. A 45 year old male presenting with penile cancer extending upto the glans penis is treated with

a) Partial Penectomy with 2 cm margin

b) Circumcision

c) Partial penectomy with Inguinal nodes exploration

d) Partial penectomy with 4 cm margin

Correct Answer - A

Answer- A. Partial Penectomy with 2 cm margin

The goal of t/t in invasive penile carcinomas is complete excision with adequate margins:

a) For lesion involving the prepuce

- Simple circumcision is effective.

b) For lesion of glans or distal shaft

- Partial penectomy with a 2 cm margin (less aggressive surgical resections such as Mohs micrographic surgery and local excisions directed at penile preservation can be done).

c) For lesion involving the proximal shaft or when partial penectomy results in a penile stump of insufficient length for sexual function or directing the urinary stream

- Total penectomy with perineal urethrostomy

CollegeApply

1345. A young male presents with a testicular mass on the right side. The AFP is elevated while the HCG is normal. The most appropriate next step is

a) Biopsy

b) USG

c) Orchidectomy

d) Wait and Watch

Correct Answer - B

Answer- B

A painless testicular mass is pathognomic for a testicular malignancy. USG of the testis is indicated whenever a testicular malignancy is considered and for persistent or painful testicular swelling.

KollegeApply

1346. A 65 year old male presenting with acure pancreatitis is now having refractory hypoxia. The X RAY of chest would show

a) Bilateral infiltrates

b) Pneumatocoeles

c) Ground glass appearances

d) Hilar lymphadenopathy

Correct Answer - A
Answer- A. Bilateral infiltrates
Systemic complications of pancreatitis
Hypovolemic shock
DIC
ARDS
Diabetes

KollegeApply

1347. All of the following are true about Nissen Fundoplication except

a) It is done for GERD

b) Reinforcment is done only in the anterior half

c) Upper part of stomach is plicated around the lower esophagus

d) It is done for paraesophagal hiatus hernia

Correct Answer - B

Answer- B. Reinforcment is done only in the anterior half

In a fundoplication, the gastric fundus (upper part) of the stomach is wrapped, or plicated, around the lower end of the esophagus and stitched in place, reinforcing the closing function of the lower esophageal sphincter. The esophageal hiatus is also narrowed down by sutures to prevent or treat concurrent hiatal hernia, in which the fundus slides up through the enlargedesophageal hiatus of the diaphragm.

In a Nissen fundoplication, also called a complete fundoplication, the fundus is wrapped all the way 360 degrees around the esophagus.

KalboeApply

1348. Congenital hydrocele is best t/t by -

a) Eversion of sac

b) Excision of sac

c) Lords procedure

d) herniotomy

Correct Answer - D
Ans. is 'd' ie. Herniotomy

- *Bailey writes ?*
"Congenital hydrocele are a special form of indirect inguinal hernia and are treated by herniotomy."
- *Congenital hydrocele*
In this conditon the processus vaginalis remain patent so there is direct communication of the tunica vaginalis with the peritoneal cavity. The communicating orifice at the deep inguinal ring is too small for the development of hernia.
- It is present since birth*.
In contradication to assumption. congenital hydrocele is not easily reducible* due to narrowness of the deep inguinal ring but when the child lies supine, it disappears.

KollegeApply

1349. False regarding hypernephroma is -

a) Radiosensitive

b) Arise from cortex usually from pre existing adenoma

c) May present with rapidly developing varicocele

d) Usually adenocarcinoma

Correct Answer - A
Ans. is 'a' i.e., Radiosensitive
RCC or hypernephroma is one of the most *radioresistant* and *chemoresistant* tumors.
In men rapidly developing varicocele is rare but impressive sign for RCC occuring most often on the left side. It occurs because left gonadal vein is obstructed where it joins the left renal vein.
As already stated RCC *originates in the cortex* and tends to grow out into perinephric tissue causing characteristic bulge or mass effect.
About adenomas
Adenomas are the *most common benign renal parenchymal lesions.*
- Despite the classification of adenoma as a benign tumor, *no clinical, histologic or immunohistochemical criteria can differentiate renal adenoma from renal carcinoma.*

- Smith's Urology writes about adenomas *?*
- "Previously, all renal tumors less than 3 cm were considered adenomas. However, even such small tumors can metastasize and are now classified as renal cell carcinoma. Adenomas of any size should be treated as a fortuitous finding representative of an early renal cancer, and the patient should be evaluated and treated appropriately."

KollegeApply

1350. The Bipolar cautery is preferred over monopolar cautery in the following surgeries except

a) Hand Surgery

b) Surgery around Penis

c) Surgery of the Hip

d) Surgery around the face

Correct Answer - C

Answer- C. Surgery of the Hip

Bipolar cautery preferred in :

- Hand surgery
- Surgery around appendages like penis
- Surgery around the face

KollegeApply

1351. The posterior urethra is best visualized by ?

a) Static cystogram

b) Retrograde urethrogram

c) Voiding cystogram

d) CT cystogram

KollegeApply

Correct Answer - C
Ans. is 'c' i.e., Voiding Cystogram
Voiding cystourethrography is the best method to visualize posterior urethra.
Remember,
Urethra can be imaged radiographically in two ways.

- Anterograde techniques —> *Best for visualization of posterior urethra.* (This is done along with voiding cystourethrography or with voiding following
excretory urography)
- Retrograde technique —> *Best for examining the anterior (penile) urethra* (Contrast is injected through tip of urethra).

1352. Early stage of non small cell lung cancer can be treated by

a) Surgical resection

b) Surgical resection with adjuvant chemotherapy

c) Radiotherapy

d) Immunotherapy

Correct Answer - C
Answer- C. Radiotherapy
Cystoscopy is endoscopy of the urinary bladder via the urethra. It is carried out with a cystoscope.

KollegeApply

1353. All of the following about Gastrointestinal carcinoid tumors are true, Except:

a) Small intestine and appendix account for almost 60% of all gastrointestinal carcinoid

b) 5 year survival for carcinoid tumors is >60%

c) Rectum is spared

d) Appendicial carcinoids are more common in females than males

CollegeApply

Correct Answer - C
Ans is 'c' i.e. Rectum is spared
Rectum is not spared, but is infact a common site for carinoid tumor.
About other options:
5 year survival for carcinoid tumors is >60%
Sabiston writes-" Carcinoid tumors have the best prognosis of all small bowel tumors, whether the disease is localized or metastatic. Resection of a carcinoid tumor localized to its primary site approaches a 100% survival rate. Five-year survival rates are about 65% among patients with regional disease and 25% to 35% among those with distant metastasis."
Appendicial carcinoids are more common in females than males
"Appendicial carcinoids are more common in females. Two to three cases of appendecial carcinoids are female."- Sleisenger and Fordtran's Gastrointestinal and Liver Disease 8/e p609
Small intestine and appendix account for almost 60% of all gastrointestinal carcinoid
Data from various books vary but as far as the question goes this

can be taken to be true as option 'c' is definitely wrong. In GIT small intestine and the appendix are the most common sites. Infact small intestine is the 2nd most common site in body after bronchus.
[Note that several textbooks including Schwartz and Sabiston, mention Appendix as the most common site of GI carcinoids, which is not true according SEER data (given in Harrison)]

KollegeApply

1354. Commonest infantile testicular tumour is *?*

a) Seminoma

b) Teratoma

c) Yolk sac tumor

d) Dysgerminoma

Correct Answer - C
Ans. is 'c' i.e., Yolk sac tumor
o Most common tumor of testis Seminoma.
o Most common tumor of testis in childhood ---> yolk sac tumor (endodermal sinus tumor or infantile embryonal carcinoma).

KolleeApply

1355. All of the following are true about the bare area of the liver except

a) Infection can spread from the abdominal to thoracic cavity at this area

b) It is not a site of portocaval anastomosis

c) Formed by the reflections of coronary ligaments

d) It is triangular in shape

Correct Answer - B

Answer- B. It is not a site of portocaval anastomosis

The coronary ligaments represent reflections of the visceral peritoneum covering the liver onto the diaphragm. As such, between the two layers of the coronary ligament lies the bare area of the liver, and is attached to the diaphragm byareolar tissue.

The bare area of the liver is still covered by Glisson's capsule, the fibrous capsule that sheathes the entire liver.

Bare area is a site of portocaval anastomoses

CollegeApply

1356. Which is the investigation of choice for staging of a lower limb sarcoma ?

a) MRI

b) CT Scan

c) PET Scan

d) PET CT

Correct Answer - A
Answer- A. MRI
MRI : Investigation of choice for soft tissue sarcomas in extremities.
CT SCAN : Investigation of choice for retroperitoneal sarcomas.

KolleegeApply

1357. Which of the following is an absorbable suture

a) Polyglactin

b) Silk

c) Polyester

d) Ethilon

Correct Answer - A
Answer- A. Polyglactin
Absorbable sutures-
1. Catgut
2. Polyglactin
3. Polyglyconate
4. Polyglycolic acid
5. Polydioxanone
6. Poliglecaprone

KollegeApply

1358. Polydiaxonone suture is normally absorbed in

a) 2 weeks

b) 4 weeks

c) 6 weeks

d) 6 months

Correct Answer - D
Answer- D. 6 months
Retains 70% of its original tensile strength at 2 weeks, 50% at 4 weeks, and 25% at 6 weeks.
Prolonged dermal support for at least 6 months has been associated with decreased scar spreading

KottegeApply

1359. Most tissue reaction is seen with

a) Plain Catgut

b) Polydiaxonone

c) Silk

d) Chromic catgut

Correct Answer - C
Answer- C. Silk
Reaction to catgut depends on the stage of absorption and is mainly histocytic in type. Nonabsorbable sutures are encapsulated by a rim of connective tissue, while near the suture histocytes, giant cells and lymphocytes are found. This is most marked with silk and cotton, less so with Dacron, and least with nylon and wire.

KollegeApply

1360. Trauma and Injury Severity Score (TRISS) includes:

a) GCS + BP + RR

b) RTS + ISS + Age

c) RTS + ISS + GCS

d) RTS + GCS + Age

Correct Answer - B
Ans *is* `b' i.e. RTS + ISS + Age
TRISS (Trauma and Injury Severity Score) :

- Injury Severity Score
- Revised Trauma Score
- Age
- Mechanism of Injury (blunt/penetrating)

KollegeApply

1361. Which of the following is most malignant tumor?

a) Glioblastoma Multiforme

b) Meningioma

c) Osteochondroma

d) Giant cell tumor

Correct Answer - A
Answer- A. Glioblastoma Multiforme
Primary Brain Tumours
1. Gliomas (43%).
a. Astrocytomas are the commonest type. They are usually malignant.
Grade I – Cystic
Grade II – Diffuse
Grade III –Anaplastic
Grade IV – Glioblastoma multiforme (MC)
2. Meningiomas (18%)
3. Schwannoma (8%)
4. Pituitary tumors (12%)
5. Craniopharyngiomas (5%)
6. Blood vessel tumors (2%)
Other tumors

- They are pineal region tumors, pituitary adenomas, craniopharyngiomas, choroid plexus tumors, etc.

KollegeApply

1362. All of the following are medical uses of erythropoietin except -

a) Treatment of anaemia associated with renal disease

b) Chemotherapy induced anemia

c) Anaemia Associated with Crohn's Disease

d) Megaloblastic Anaemis

Correct Answer - D

Answer- D. Megaloblastic Anaemis

Uses of erythropoetin

- Anaemia of renal failure.
- Anaemia associated with chemotherapy for diseases like mylodysplasia.
- Anaemia associated with inflammatory bowel disease.

KollegeApply

1363. Epulis arises from -

a) Enamel

b) Root of teeth

c) Gingiva

d) Pulp

Correct Answer - C
Answer is 'c' i.e. Gingiva
Epulis literally means *'upon the gum'.* Thus it is a swelling situated on the gum.
It can originate from the mucous membrane, the periosteum or the bone giving rise to different varieties of Epulis.

KollegeApply

1364.

KollegeApply

Traumatic optic neuropathy due to closed head trauma commonly affects which part of optic nerve -

a) Optic canal

b) Intra ocular part

c) Intracranial part

d) Optic tract

Correct Answer - A

Answer- A. Optic canal

Indirect optic nerve injury

- Studies have shown that forces applied to the frontal bone and malar eminences are transferred and concentrated in the area near the optic canal. The tight adherence of the optic nerve's dural sheath to the periosteum within the optic canal is also thought to contribute to this segment of the nerve being extremely susceptible to the deformative stresses of the skull bones. Such injury leads to ischemic injury to the retinal ganglion cells within the optic canal.

CollegeApply

1365. IQ in mild mental retardation is

a) 50-70

b) 35-49

c) 20-34

d) < 20

Correct Answer - A
Ans. is 'a' i.e., 50-70

KollegeApply

1366. What is the IQ of a borderline deficiency?

a) 70 - 80

b) 50 - 69

c) 20 - 49

d) 0 - 20

Correct Answer - A

Answer- A. 70 - 80

IQ Range	IQ Classification
70 and Below	Extremely Low
71 -79	Borderline
80 -89	Low Average
90 -110	Average
111 -120	Bright
121 -130	Very Bright
131 and Over	Extremely Bright

KollegeApply

1367. According to Wechsler intelligence scale scoring, average IQ of a normal child is:

a) 50

b) 75

c) 90

d) 111

Correct Answer - C
Ans. c. 90

KollegeApply

1368. Which is false about development milestones at 6 months of age?

a) Watching self in mirror

b) Sitting in tripod position

c) Pincer grasp

d) Monosyllable sounds

Correct Answer - A

Answer- A. Watching self in mirror

Milestones at 6 months of age

- In prone position lifts his head and greater part of his chest while supporting weight on extended arms.
- Produces monosyllable sounds like da, ma.
- Enjoys watching his own image in the mirror.
- Binocular vision develops (between 3-6 months).
- Purposeful movements in space (6-8 months).
- Sits in tripod position.

CollegeApply

1369. At what age child begins to use past and present tense

a) 1 Years

b) 2 Years

c) 18 Months

d) 30 Months

Correct Answer - D
Answer- D. 30 Months
Begin to identify objects from a group by their function and parts (ie. "which one has wheels", "which one can we eat")
Begin to use verbs with "ing" endings (i.e. "eating");
Early concepts such as "big, little" are identified;
Child will use "no, not" and answer "where" questions

KollegeApply

1370. Milestones at 1 year of age are all except

a) Playing a simple ball game

b) Using 2 words that are meaningful

c) Spontaneous scribbling

d) Walking upstairs 1 step at a time

Correct Answer - D
Answer- D. Walking upstairs 1 step at a time
Tries to remove his coat and attempts to wear his socks or shoes without success.
Does mimicry.
Plays a simple ball game
Can use 2 words with meaning
Tries to build a Tower of 2 cubes
Tries to scribble spontaneously (between 12-24 months).

CollegeApply

1371. Stranger anxiety develops at

a) 3 months

b) 4 months

c) 7 months

d) 11 months

Correct Answer - C
Answer- C. 7 months
Milestones at month

- Holds the objects with crude grasp from palm (palmar grasp)
- Pivots
- Shows strangers anxiety
- Resists if a toy is pulled from his hand.
- Babbles

KollegeApply

1372. What is the average weight gain of the neonate per day

a) 5-10 g

b) 25-30 g

c) 50-60g

d) 100-150g

Correct Answer - B

Answer- B. 25-30 g

They gain weight at a rate of approximately 25 to 30 gm per day for the first 3 months of life. Thereafter they gain about 400 gm of weight every month for the remaining part of first year.

[Ref Ghai 7th/e p. 6]

KolleboApply

1373. Newborn loses how much weight in first week?

a) 5 -10%

b) 1-2%

c) 10-20%

d) None

Correct Answer - A
Answer- A. 5 -10%
The average birth weight of neonates is about 3 Kg.
During first few days after birth, the newborn loses extracellular fluid equivalent to about 10% of the body weight.

KolleeApply

1374. A newborn baby has a head circumference of 35 ems. at birth, His optimal head circumference will be 43 ems at -

a) 4 months of age

b) 6 months of age

c) 8 months of age

d) 12 months of age

Correct Answer - B
Ans. is 'b' i.e., 6 months of age
o At 6 month of age head circumference is between 40.0-43.5cm.

KollegeApply

1375. "Potter's syndrome" is associated with -

a) Renal anomalies

b) Severe oligohydramnio's

c) Flattened nose

d) All the above

Correct Answer - D
Ans. is 'd' i.e., All of the above
Potter syndrome
Potter syndrome is characterized by -
i) *Bilateral renal agenesis*
ii) *Pulmonary hypoplasia*
iii) *Potter facies* --> widely separated eyes with epicanthic folds, low set ears, *broad compressed flat nose,* receding chin.
* This condition is incompatible with life, death occurs shortly after birth from pulmonary hypoplasia.
* Maternal USG demonstrates -
i) Oligohydramnios ii) Nonvisulization of bladder iii) Absent kidney

KollegeApply

1376. What is the cardiothoracic ratio in children is -

a) 30-35%

b) 40-45%

c) 50-55%

d) 60-65%

Correct Answer - C
Answer- C. 50-55%
" The cardiac silhouette occupies 50-55% of the chest width. Cardiomegaly is present when the cardiothoracic (CT) ratio is more than 55%."

KollegeApply

1377. The fetal circulation changes to normal circulation at birth with

a) Closure of patent ductus arteriosus

b) Closure of ductus venosus

c) Increased activity of right Ventricle

d) Opening of fossa Ovalis

Correct Answer - A

Answer- A. Closure of patent ductus arteriosus

The increase in the concentration of oxygen in the blood leads to a decrease in prostaglandins, causing closure of the ductus arteriosus. These closures prevent blood from bypassing pulmonary circulation, and therefore allow the neonate's blood to become oxygenated in the newly operational lungs.

KollegeApply

1378. Most common cause of pneumonia in early onset sepsis a neonate is

a) Pnemococcus

b) S. Pyogens

c) E Coli

d) S. Aureus

Correct Answer - C
Answer- C. E Coli
Early onset sepsis

- It is caused by organisms prevalent in the genital tract or in the labor room and maternity operation theatre.
- In the west it is mostly caused by group B streptococcus and E.coli.
- In our country it is mostly due to gram negative organisms-E.coli, ldebsiella and enterobactor sp.

CollegeApply

1379. Neonatal resuscitation - which of the following drugs is used ?

a) Dopamine

b) Sodium Bicarbonate

c) Noradrenaline

d) Dobutamine

Correct Answer - B

Answer- B. Sodium Bicarbonate

Important drugs used for neonatal resuscitation are

- Epinephrine (adrenaline),
- Normal saline or ringer lactate,
- Naloxone and
- Soda bicarbonate.

KollegeApply

1380. When does crying stop in cyanotic spells ?

a) Forced Expiration

b) Forced inspiration

c) Mid inspiration

d) Crying is continuous

Correct Answer - A

Answer- A. Forced Expiration

Cyanotic form (cyanotic spells)

- This is more common and is provoked in response to frustration and anger precipitated by upsetting or scolding infant/child.
- Cyanotic spells are due to central sympathetic overactivity.
- Clinical features include generalized cyanosis, apnea, forced expiration(crying stops) , opisthotonus, shrill cry and bradycardia. Seizures may occur due to cerebral hypoxia, but antiepileptics are not required.
- The only treatment is support and reassurance to parents

CollegeApply

1381. Treatment of choice for symptomatic neonatal hypoglycemia is

a) Dextrose normal saline

b) 5% dextrose

c) 10% dextrose

d) 25% dextrose

Correct Answer - C

Answer- C. 10% dextrose

Symptomatic or asymptomatic with blood glucose < 20 mg/dl

- Bolus 10% dextrose 2 ml/kg is given IV. Followed by continuous infusion of 6 mg/kg/minute. If normoglycemia is not achieved within 24 hours, glucocorticoids (prednisone or hydrocortisone) should be administered. For intractable hypoglycemia, glucagon, epinephrine or diazoxide can be given.
- In hypoglycemic seizures, dose of 10% dextrose is 4 ml/kg

CollegeApply

1382. ALL of the following are causes of neonatal bradycardia except

a) Hypoxia

b) Hypothermia

c) Head injury

d) BCG Vaccine

Correct Answer - D
Answer- D. BCG Vaccine
Neonatal bradycardia is defined as a decrease in heart by 30 bpm from baseline. Regarding neonatal resuscitation, bradycardia is concerning when the heart rate is less than 100 bpm.

KolleegeApply

1383. Which of the following is not a cause of neonatal anaemia?

a) Subgaleal Hemorrhage

b) Abruptio placentae

c) Diamond Blackfan syndeome

d) Wilson's Disease

Correct Answer - D
Answer- D. Wilson's Disease
Internal hemorrhage such as intracranial hemorrhage, subgaleal hemorrhage, cephalohematoma, adrenal hemorrhage, subcapsular hematoma of liver or ruptured viscus
Obstetrical causes: placental abruption, placenta previa, trauma to placenta or umbilical cord during delivery and rupture of anomalous placental vessels
Twin-twin transfusion
RBC destruction
RBC production

KolleeApply

1384. 3 month old child with indrawing chest with respitratory rate 52/min classified as

a) SIRS

b) Respiratory distress

c) Tachypnoea

d) ARDS

Correct Answer - B
Answer- B. Respiratory distress
Tachypnea (fast breathing) : Fast breathing is defined as :-
1. Less than 2 months of age -› 60 breaths per minute
2. Child aged 2 months upto 12 months - 50 breaths per minute
3. Child aged 12 months upto 5 years -> 40breathsperminute

KollegeApply

1385. 45 day old infant presents with seizures. Examination reveals he is icteric, having bulging fontanelles and opisthotonic posture. Treatment is all except

a) Phototherapy

b) Exchange Transfusion

c) Phenobarbitone

d) Chlorpromazine

Correct Answer - D
Answer- D. Chlorpromazine
Chlorpromazine is not used in hyperbilirubinemia.
Treatment of hyperbilirubinemia includes
1. Pharmacological tharapy: Barbiturates (phenobarbitone), metallloporphyrins (Tin/Sn and Zinc/Zn)
2. Phototherapy
3. Exchange tronsfusion

CollegeApply

1386. Chronic lung disease in a infancy is defined as

a) Need for supplemental oxygen at 36 weeks after conception

b) Tachypnoea > 50 breaths/ min within 1 week of birth

c) Presence of bilateral infiltrates on chest Xray for 2 weeks

d) Reticulogranular pattern on chest Xray for 6 weeks

Correct Answer - A

Answer- A. Need for supplemental oxygen at 36 weeks after conception

Chronic lung disease of infancy was formerly called bronchopulmonary dysplasia.

Bronchopulmonary dysplasia is usually defined as a need for supplemental oxygen at 36 weeks after conception.

Bronchopulmonary dysplasia is usually defined as a need for supplemental oxygen at 36 weeks after conception. BPD is usually defined as a need for supplemental oxygen at 36 wk after conception.

BPD is a result of lung injury in infants requiring mechanical ventilation and supplemental oxygen.

CollegeApply

1387. Most common antigen involved in erythroblastosis fetalis is

a) C antigen in Rh group

b) D antigen in Rh group

c) E antigen in Rh group

d) Duffy antigen

Correct Answer - B
Answer- B. D antigen in Rh group
RBC antigens are capable of eliciting an antibody response, significant disease is associated primarily D antigen of Rh group and with ABO incompatibility

KolleseApply

1388. Eryhtematous blotchy rash is seen on the abdomen, trunk and face of a 3 day old child along with yellowish papules. However the child feels well. What is the management ?

a) Steroid and antibiotic lotion

b) No treatment

c) Steroid cream

d) Urgent intravenous antibiotics

Correct Answer - B

Answer- B. No treatment

Erythema toxicum neonatorum is a benign self-limited eruption occurring primarily in healthy newborns in the early neonatal period. It is characterized by Erythematous papules on trunk & face. They appear on 2nd & 3rd day and disappear spontaneously.

CollegeApply

1389. Further investigation is essential in a newborn with which condition?

a) Erythema toxicum

b) Vaginal bleed

c) Subconjunctival hemorrhage

d) Lens opacity

Correct Answer - D
Answer- D. Lens opacity
The problems are
1. Milia
2. Erythema toxicum
3. Stork bites
4. Peeling of skin
5. Subconjuctival hemorrhages
6. Breast engorgment
7. Epstein pearl
8. Pre-deciduous (natal teeth)
9. Vaginalbleeding
10. Vaginalmucoiddischarge
11. Hymenaltags
12. Physiologicalphymosis
13. Mongolian spots

KollegeApply

1390. A newborn presents with subconjunctival hemorrhage. The treatment is

a) No treatment

b) Antibiotic eye drops

c) Aspitation

d) Antibiotic and steroid drops

Correct Answer - A
Answer- A. No treatment
Subconjunctival hemorrhage in newborn is a normal phenomenom which disappears spontaneously.

CollegeApply

1391. What is the shape of caecum in the newborn ?

a) Ovoid

b) Trapezoid

c) Globular

d) Conical

Correct Answer - D
Answer- D. Conical
The shape of the caecum in an infant is conical with the appendix borne at the base of the cone.

KollegeApply

1392. Most common complication of Meckel's Diverticulum lit children

a) Abdominal pain

b) Peptic ulcers

c) Intestinal obstruction

d) Painless Rectal bleeding

Correct Answer - D
Answer- D. Painless Rectal bleeding
Most comnmon presentation of Meckel's Diverticulum in children is painless rectal Bleeding.
[Ref Alemayehu H, Hall M, Desai AA, St Peter SD, Snyder CL. Demographic disparities of children presenting with symptomatic Meckel's diverticulum in children's hospitals. Pediatric Surgery International. 2014 Jun 30. 6:649-653]

KollegeApply

1393. Which of the following is a X linked metabolic disorder?

a) Fabry's disease

b) Sandoff s disease

c) Pompe disease

d) Gaucher disease

Correct Answer - A
Answer- A. Fabry's disease
All lysosomal disorders are `autosomal recessive' except for Hunter's syndrome and Fabry's disease, which are X-linked recessive. Thus Hunter's syndrome and Fabry's disease affect only male.

KolleegeApply

1394. Testes are not palpable in

a) SRY deletion

b) DAX 1 deletion

c) WNT- 4 gene mutation

d) RSPO-1 gene mutation

Correct Answer - A
Answer- A. SRY deletion
SRY gene is involved in development of male gonds (testes) from primitive (bipotential gonads).
DAX-1, WNT-4 and RSPO1 genes are involved in development of female gonads (ovary).

KollegeApply

1395. Child with 10 episodes of diarrhea in last 24 hours with sunken dry eyes, very slow skin pinch, and absent tears. Management is

a) ORS solution

b) breast feeding

c) Start 10% dextrose

d) Start Ringer's lactate

KollegeApply

Correct Answer - D

Answer- D. Start Ringer's lactate

This is a case of severe dehydration.

Severe Dehydration

- Start IV fluids immediately
- Best IV fluid solution is Ringer lactate
- Normal saline can be used
- Dextrose is not effective

100 ml/kg is to be given as shown below:

AGE	FIRST	THEN
<12 months	30 nil/kg in I hours	70 ml/kg 5 hours
12 months to 5 yrs.	30 minutes	21/2 hrs

1396. 1 year old child with multiple episodes of diarrhea presents with sunken dry eyes, depressed fontanelles, very slow skin pinch. The amount of fluid to be given in the first 6 hours is

a) 600 ml

b) 900 ml

c) 1200 ml

d) 1500 ml

Correct Answer - B
Answer- B. 900 ml
The approximate weight of a 1 year old child is 9kg (ie thrice the birth weight)
The description of dehydration given above is consistent with severe dehydration. T

KollegeApply

1397. What is the first line treatment of a 4 year old child presenting with intussusception ?

a) Conservative management with wait and watch policy

b) Immediate attempt to reduction using barium edema

c) Surgical correction

d) Exploratory laparotomy with resection of the affected segment

Correct Answer - B

Answer- B. Immediate attempt to reduction using barium edema

Correction of intussusception by barium enema is the initial management of choice. If it fails, surgical correction is done.

KollegeApply

1398. Hutchison's Triad is seen in

a) Congenital Syphilis

b) Tertiary syphilis

c) Secondary Syphilis

d) Primary syphilis

Correct Answer - A
Answer- A. Congenital Syphilis
Hutchinson's triad is a common pattern of presentation of Congenital syphilis.
It consists of three phenomena :
1. Interstitial keratitis,
2. Hutchinson incisor,
3. Eighth nerve deafness

KollegeApply

1399. Hydrocephalus is best detected antenately by :

a) X-ray abdomen

b) Amniocentesis

c) Clinical examination

d) Ultrasonography

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Correct Answer - D

Ans. is d i.e. Ultrasonography

Hydrocephalus is a condition in which there is an abnormal increase in cerebrospinal fluid within the ventricular and subarachnoid spaces of brain.

"The prenatal diagnosis of hydrocephalus is usually made by demonstration of a dilated ventricular system in an ultrasound examination."

- Earliest and most accurate sonographic sign of hydrocephalus – Enlarged lateral ventricles.°
- The lateral ventricle is measured at the level of atrium.
- Normal transverse diameter of atrium is 7 mm ± 1 mm. (It remains constant during the second and third trimester)
- When diameter of atrium is >10 mm it is called as *Ventriculomegaly / Hydrocephalus.*

Other signs of hydrocephalus on USG :

- Dangling choroid plexuses.
- Thinning out of cerebral cortex.

Extra Edge :

- Friends, the terms ventriculomegaly and hydrocephalus are often used interchangeably but have slightly different meanings.

* *Ventriculomegaly :* The condition in which lateral ventricles of the

brain are filled with excessive fluid and enlarge.
* *Hydrocephalus :* There is ventriculomegaly along with an increase in the head circumference.

- Normal fetal head circumference at term ranges between 32 and 38 cms.
  With hydrocephalus, the circumference exceeds 50 cms.
- Ventriculomegaly can also be caused by° :
  * Spina bifida°
  * Chromosomal abnormalities°
  * Congenital infections like cytomegalovirus. toxoplasmosis, syphilis and influenza.°
- *Dandy walker syndrome* includes Hydrocephalus + Posterior fossa cyst°+ Defect in cerebellar vermis.

KollegeApply

1400. Triad of normal pressure hydrocephalus includes all except -

a) Dementia

b) Gait disturbance

c) Urinary incontinence

d) Browache

Correct Answer - D

Answer- D. Browache

Triad of normal pressure hydrocephalus/Adam's triad/Hakim's triad

- Dementia
- Gait disturbance
- Urinary incontinece (wet, wacky and wobbly)

KollegeApply

1401. Medulloblatoma arises exclusively from the cells of

a) Immature embryonal cells

b) Ependymal cells

c) Neurons

d) Spindle shaped cells

Correct Answer - A
Answer- A. Immature embryonal cells
Medulloblastoma is the most common PNET (primitive neuroectodermal tumor) located in posterior cranial fossa.
[Ref Hinz, Chris; Hesser, Deneen. Focusing On Brain Tumors: Medulloblastoma. American Brain Tumor Association]

KollegeApply

1402. Hypoxic Ischemic encephalopathy true is *?*

a) Lower limbs affected more than upper limbs

b) Prox. Muscles > distal muscles

c) Seizure

d) Trunk involved

Correct Answer - C
Ans. is 'c' i.e., Seizure
Clinical features of hvpoxic ischemic encephalopath'
o Encephalopathy progress over time *?*
1) Birth to 12 hours —> Decreased level of conciousness, poor tone, decreased spontaneous movement, periodic breathing or apnea, *seizures.*
2) 12-24 hours -4 *More seizuers,* Apneic spells, jitteriness, weakness.
3) After 24 hours —> Hypotonia, conciousness, poor feeding, brainstem signs (oculomotor) and pupillary disturbances.

KollegeApply

1403. Which of the following is not true about encephalocoele?

a) It is a neural tube defect

b) Common in the frontal region

c) Can be associated with hydrocephalus

d) It is protrusion of neural tissue through a defect

Correct Answer - A

Answer- A. It is a neural tube defect

Perinatal asphyxia, more appropriately known as hypoxic-ischemic encephalopathy (HIE), is characterized by clinical and laboratory evidence of acute or subacute brain injury due to asphyxia. The primary causes of this condition are systemic hypoxemia and/or reduced cerebral blood flow (CBF)

KollegeApply

1404. True about cephalhematoma is -

a) It is hemorrhage between the skull and periosteum

b) It is hemorrhage within the subcutaneous tissue around the skull

c) It is type of subdural hemorrhage

d) It is extraperiosteal bleeding in the skull

Correct Answer - A
Amswer- A. It is hemorrhage between the skull and periosteum
Cephalhematoma is subperiosteal bleeding, i.e. between skull bone and periosteum.

KollegeApply

1405. A 8 year old child presents with a mass in the lumbar region with abdominal pain with excruciating bone pain. Possible diagnosis is -

a) Neuroblastoma

b) Wilm's Tumour

c) Lymphoma

d) Angiomyolipoma

Correct Answer - A
Amswer- A. Neuroblastoma
This is a case of neuroblastoma that has metastatized
Metastasis is present in 60-70% at the time of diagnosis.
Commonest site of metastasis is skeletal system and neuroblastoma is the most common childhood malignancy metastasizes to bone.

CollegeApply

1406. A 6 year old child presents with an abdominal mass, fever, bone pain and IVC thrombosis , the diagnosis could be -

a) Wilm's tumour

b) Neuroblastoma

c) Langerhans cell Histiocytosis

d) Gastric lymphoma

Correct Answer - B
Amswer- B. Neuroblastoma
Renal vein invasion is more characteristic of neuroblastoma (it is rare in wilms tumor).

KollegeApply

1407. Kwashiorkor- Triad includes all except -

a) Psychomotor changes

b) Hypoglycemia

c) Edema

d) Growth retardation

Correct Answer - B
Answer- B. Hypoglycemia
Classical triad of kwashiorkor is markedly retarded growth, psychomotor (mental) changes and edema.

KollegeApply

1408. What is the maintainance fluid requirement in a 6 kg child ?

a) 240 ml/day

b) 600 ml/day

c) 300 ml/day

d) 1200 ml/day

Correct Answer - B

Answer- B. 600 ml/day

Fluid Requirements in: Infants and Children

HOLLIDAY - SEGAR METHOD

First 10 kgl	100ml/kg (4ml/kg/hr)	Na+3
10-20kg	1000ml + 50ml/kg for each Kg>10kg (40ml/hr+2ml/kg/hr(wt-10kg)	K+2
>20kg	1500ml + 20ml/kg for each Kg>20kg (60ml/hr + 1ml/kg/hr(wt-20 kg)	Cl-2

KollegeApply

1409. Most common site for opening of TAPVC is -

a) Supracardiac

b) Cardiac

c) Infracardiac

d) Multiple

Correct Answer - A
Answer- A. Supracardiac
Type I (Supra Cardiac) TAPVC Most common 45%
Type II (Cardiac level) TAPVC - 25%
Type III (Infra Cardiac) TAPVC - 25%
Type IV (Multiple level) TAPVC 4 5%

KollegeApply

1410. **Which one of the following statements is false about Xanthogranulomatous pyelonephritis in children?**

a) Often affects those younger than 8 years of age

b) It affects the kidney focally more frequently than diffusely

c) Clinical presentation in children is same as in adults

d) Boys are affected more frequently

Correct Answer - D
It is most frequently affected in females compared to males. It is an unusual form of chronic pyelonephritis characterized by granulomatous abscess formation, severe kidney destruction, and a clinical picture that may resemble renal cell carcinoma and other inflammatory renal parenchymal diseases.

Xanthogranulomatous pyelonephritis is a form of chronic pyelonephritis characterised by destruction of renal parenchyma and the presence of granulomas, abscesses and collection of lipid laden foamy macrophages (foam cells).

Xanthogranulomatous pvelonephritis in children

* Age of presentation ranges from infancy to 16 years.

* *Focal firm being more common in children* Appear healthy.

* Those who affected diffusely, present with *non-specific symptoms* of chronic infection.

i) Weight loss ii) Fever iii) Lethargy iv) Failure to thrive

KollegeApply

* *Proteus* is the most common causative organism.

Ref: By James Pattison, David Goldsmith, Barrie Hartley, Fernando C. Fervenza and Joseph P. Grande (2004), Chapter 6, “Renal Infections and Structural Abnormalities”, In the book, “A Colour Handbook of Renal Medicine”, UK, Page 100.

KollegeApply

1411. Autosomal recessive Polycystic kidneys - all are true except -

a) Seen in adults

b) Defective gene is PKHD1

c) Both kidneys show innumerable cysts

d) USG shows salt and pepper appearance

Correct Answer - A

Amswer- A. Seen in adults

Childhood polycystic kidney disease has autosomal recessive inheritance, therefore it is also known as autosomal recessive polycystic kidney disease.

Defective gene is the PKHD1 (Polycystic Kidney and Hepatic Disease1) which codes for a protein fibrocystin

Both kidneys are markedly enlarged and show innumerable cysts radiating from medulla the cortex.

MRI of kidney shows radially arranged fusiform dilated collecting ducts.

Prenatal USG shows a salt and pepper appearance of kidney.

CollegeApply

1412. Investigation of choice for CONFIRMING Henoch Schonlein purpura is -

a) Serum IgA levels

b) CRP levels

c) Renal Biopsy

d) DTPA

Correct Answer - C
Amswer= C. Renal Biopsy
Biopsy of the kidney may be performed both to establish the diagnosis or to assess the severity of already suspected kidney disease.

KollegeApply

1413. Abdominal pain in Henoch Schonlein purpura is due to -

a) Mucosal erosions and swelling of the GI mucosa

b) Gastrointestinal hemorrhage

c) Volvulus

d) Associated pancreatic inflammation

Correct Answer - A

Answer- A. Mucosal erosions and swelling of the GI mucosa

The second most frequent symptom of Henoch-SchOnlein purpura is abdominal pain, which occurs in up to 65 percent of cases. The most common complaint is colicky abdominal pain, which may be severe and associated with vomiting.

Endoscopic evaluation often shows mucosal erosions and swelling.

KolegeApply

1414. **Which of the following is not a feature of Juvenile Idiopathic Arthritis?**

a) Rheumatoid nodules

b) Spikes of high fever

c) Uveitis

d) Raynaud's phenomenon

Correct Answer - D

Raynaud's Phenomenon is not mentioned in association with Juvenile Idiopathic Arthritis (JIA).

Ref: Current Diagnosis and Treatment in Rheumatology, 2nd Edition, Pages 196-197; Nelson’s Textbook of Pediatrics, 18th Edition, Page 1003; Primer on The Rheumatic Diseases By John H. Klippel, Page 145

KollegeApply

1415. Which of the following is correct about shock in child?

a) Tachycardia is a very sensitive indicator of depletion of intravascular volume

b) Mottling of extremities is seen in early shock

c) Confusion, stupor and coma are early signs

d) Respiratory rate is more sensitive than heart rate as an indicator of early shock

Correct Answer - A

Answer- A. Tachycardia is a very sensitive indicator of depletion of intravascular volume

Hypovolemic shock in children may have following stages : -

i) Early compensated

- Immediately after hypovolemia, body tries to maintain the BP to maintain adequate perfusion to vital organs through a compensatory mechanisms.
- An increase in heart rate (Tachycardia) is the earliest and most sensitive indicator for intravascular volume reduction

ii) Late uncompensated

- If shock state continues or the compensatory mechanisms are not enough to maintain the metabolic needs of the tissue, the shock, goes into uncompensated phase.

CollegeApply

1416. Inotropic support for severely dehydrated child with dopamine is done at what rate -

a) 0.1-0-5 microgram/kg/min

b) 1-5 microgram/kg/min

c) 1-5 mg/kg/min

d) 10-15 mg/kg/min

Correct Answer - B

Answer- B. 1-5 microgram/kg/min

In high doses, it acts on alpha-adrenergic receptors to increase systemic vascular resistance and raise blood pressure.

1-5 mcg/kg/min IV, increased to 5-20 mcg/kg/min; not to exceed 50 mcg/kg/min.

KollegeApply

1417. Test done to diagnose syphilis in newborn if mother is syphilitic -

a) Syphilis Capita M test

b) Detection of IgG

c) ZN staining

d) Fluoroescent antigen test

Correct Answer - A
Answer- A. Syphilis Capita M test
The tests to detect IgM are -
1. FTA-ABS (19S IgM FTA-ABS).
2. Syphilis Capita M test.

KollegeApply

1418. Eyelid papules and hoarse cry in a child is suggestive of -

a) Congenital syphilis

b) Croup

c) Lipoid proteinosis

d) Acrodermatitis enterohepatica

Correct Answer - C

Answer- C. Lipoid proteinosis

Lipoid proteinosis also known as hyalinosis cutis et mucosa or Urbach-Weithe disease is a rare autosomal recessive disorder. characterized clinically by a myriad signs and symptoms that include hoarseness of the voice, beaded eyelid papules (Moniliform blepharosis), yellowish-white mucocutaneous infiltrates, and atrophic pock-like scars.

KollegeApply

1419. In acute diarrhea following is used to decrease duration and severity -

a) Zn

b) Mg

c) Fe

d) Ca

Correct Answer - A
Answer- A. Zn
Recent studies suggest that administration of zinc along with new low osmolarity oral rehydration solutions / salts (ORS), can reduce the duration and severity of diarrheal episodes for up to three months.
[Ref Sachdev HP, Mittal NK, Yadav HS. Oral zinc supplementation in persistent diarrhea in infants. Ann Trop Paediatr. 1990;10:63-9.]

KolleeApply

1420. Japanese encephalitis vaccine in routine schedule is given in how many doses -

a) Two doses 1 month apart with a booster after 1-2 years if needed

b) Single dose vaccine

c) Three doses 1 month apart followed by a booster if needed

d) Three doses with the second dose 1 month and 3' dose 6 months after the first dose

Correct Answer - A

Answer- A. Two doses 1 month apart with a booster after 1-2 years if needed

A Vero cell-derived, inactivated and alum-adjuvanted JE vaccine based on the SA 14-14-2 strain is used. The primary two doses are administered 4 weeks apart. A booster dose is recommended 1-2 years after the primary immunization

KollegeApply

1421. Consanguinous marriages increase risk of diseases -

a) Autosomal dominant disease

b) Autosomal recessive disease

c) X linked dominant diseases

d) Environmental diseases

Correct Answer - B
Answer- B. Autosomal recessive disease
Increases risk of - autosomal recessive disease
No change in risk of - autosomal dominant, X linked recessive (if neither parent affected)
Not Proven - complex late onset diseases like diabetes, schizophrenia, cardiovascular diseases

Kollegeapply

1422. Floor of nasal cavity in children is made of -

a) Palatine bone and vomer

b) Sphenoid and ethmoid

c) Nasal bone and maxilla

d) Palatine bone and maxilla

Correct Answer - D
Answer- D. Palatine bone and maxilla
"The floor of the nasal cavities, which also form the roof of the mouth, is made up by the bones of the hard palate: the horizontal plate of the palatine bone posteriorly and the palatine process of the maxilla anteriorly."
[Ref Moore, Keith L; Dailey, Arthur F. (1999). Clinically Oriented Anatomy. Lippincott Williams er Wilkins.]

CollegeApply

1423. Most common site for bone marrow aspiration in neonates is -

a) Anterior superior iliac crest

b) Posterior superior iliac crest

c) Sternum

d) Anteromedial tibia

Correct Answer - D
Answer- D. Anteromedial tibia
Preferred site for bone marrow aspiration in children - Posterior superior iliac crest.
In children < 18 month of age → Anteromedial tibia is preferred.

KollegeApply

1424. Reduced osmolarity ORS does not contain which of the following ion -

a) Sodium

b) Potassium

c) Lactate

d) Citrate

Correct Answer - C

Answer- C. Lactate

Table 1: Composition of standard and reduced osmolarity ORS solutions

ORS →	**Standard**	**Reduced Osmolarity**
Contents↓	mEq/L	mEq/L
Glucose	111	75
Sodium	90	75
Choride	80	65
Potassium	20	20
Citrate	10	10
Osmoarity	311	245

30 mmol/l of bicarbonate instead of 10 mmol/l of citrate

KollegeApply

1425. Which is found in DiGeorge's syndrome -

a) Tetany

b) Eczema

c) Total absence of T cells

d) Absent B and T cells

Correct Answer - A
Ans. is 'a' i.e., Tetany
Digeorge syndrome

- Digeorge syndrome is an example of a T cell deficiency that results from failure of development of the third and fourth pharyngeal pouches.

* Clinical features?
* Enhanced susceptibility to viral, fungal *(mucocutaneous candidiasis)* and bacterial infections.
* Facial abnormalities : Hypertelorism, abnormal ears, short philtrum and micrognathia.

Hypocalcemic tetany due to failure of parathyroid development.
Congenital heart diseases eg fallot's tetralogy.

* Absence of a normal thymus.
* Serum immunoglobulin concentration are frequently normal, but antibody responses, particularly of IgG and IgA isotypes, are usually impaired.
* *T cell levels are reduced (not total absence).*
* *B cell levels are normal.*

CollegeApply

1426. Therepeutic phlebotomy is not done in which of the following conditions ?

a) CML

b) Polycythemia vera

c) Hemochromatosis

d) Porphyria cutanea tarda

Correct Answer - A

Answer- A. CML

Indications for therepeutic phlebotomy-

- Polycythemia vera
- Hemochromatosis
- Secondary polycythemia
- Porphyria cutanea tarda

[Ref Current applications of therapeutic phlebotomy Tarek Bou Assi and Elizabeth Baz. Blood Transfus. 2014 Jan; 12(Suppl 1): s75-s83]

CollegeApply

1427. Which of the following is present in a XY child but not in a XX child ?

a) Epoophoron

b) Paroophoron

c) Cowper's glands

d) Gartner's duct

Correct Answer - C
Answer- C. Cowper's glands
Bulbourethral gland (Cowper's gland) are found in males (XY) and are homologous to Bartholin's gland in females (XX).
[Ref : "Differentiation of the urogenital sinus in males". Embryology]

KolleeApply

1428. Treatment of choice for Kawasaki Disease is:

a) IV Immunoglobulins

b) Steroids

c) Dapsone

d) Methotrexate

Correct Answer - A
Answer is A (IV Immunoglobulins):
The treatment of choice in Kawasaki disease is intravenous immunglobulins

KollegeApply

1429. Puff of smoke appearance on cerebral angiography is seen in:

a) ACA aneurysm

b) Cavernous sinus thrombosis

c) Moyamoya disease

d) Vein of Galen malformation

Correct Answer - C

Ans. c. Moyamoya disease

- **Moyamoya disease** is an idiopathic, non inflammatory, non atherosclerotic progressive vasculo-occlusive disease involving the circle of Willis, typically the supraclinoid internal carotid arteries.
- **Small abnormal net-like vessels proliferate giving the characteristic "puff of smoke" appearance on direct angiography.** CTA and MRA is not always able to demonstrate this appearance on account of lower flow and spatial resolution.

CollegeApply

1430. Osteoclasts have all of the following except -

a) Bone resorption

b) Receptor for parathormone

c) Ruffledborder

d) RANK ligand

Correct Answer - B

Answer- B. Receptor for parathormone

Osteoclasts are found in sites in which bone is being remodeled

These cells are the principal mediator of bone resorption

The characteristic feature is the area of infolded plasma membrane known as ruffled border which is surrounded by an organelle free clear zone through which osteoclast attaches to bone & which is the site of bone resorption.

RANK binds to RANK Ligand which stimulates bone resorption.

Parathormone are present on osteoblasts (not on osteoclasts).

Collegeapply

1431. PTH acts directly on which cells ?

a) Osteoclasts

b) Osteocytes

c) Osteoblasts

d) Macrophages

Correct Answer - C
Answer- C. Osteoblasts
Parathormone activates osteoblasts which then secrete mediators of osteoclastogenesis that stimulate osteoclasts for bone resorption.

KollegeApply

1432. Most vascular zone of the bone is -

a) Metaphysis

b) Diaphysis

c) Epiphysis

d) Medullary Cavity

Correct Answer - A
Answer- A. Metaphysis
Metaphysis is the most vascular zone of the bone especially in children as it has long hairpin loop arranged arterioles and venules running through it.

KollegeApply

1433. Snapping knee syndrome is due to involvement of -

a) Pes Anserinus

b) Quadrieps Tendon

c) Gastrocnemius origin

d) lateral collateral ligament

Correct Answer - A

Answer- A. Pes Anserinus

Snapping knee syndrome is characterized by painful clicks/ catching sensations experienced during every movement of flexion and extension. It is experienced usually at the posteromedial corner of the knee and ususally is due to involvement of semitendinosus and gracilis tendons.

KollegeApply

1434. Tennis elbow is characterized by ?

a) Tenderness over the medial epicondyle

b) Tendinits of common extensor origin

c) Tendinitis of common flexor origin

d) Painful flexion and extension

Correct Answer - B
Ans. is 'b' i.e., Tendinits of common extensor origin
Tennis elbow is extraarticular affection characterized by *pain and acute tenderness at the origin of the extensor muscles of the forearm from the lateral epicondyle.*
It is believed to be caused by strain of the forearm extensor muscles, particularly the *extensor carpi radialisbrevis, at* the point of their origin from lateral epicondyle.

KollegeApply

1435. Flexor Digitorum Profundus tendon avulsion injury leads to -

a) Jersey Finger

b) Mallet Finger

c) Gamekeepers Thumb

d) Boutonierre Deformity

Correct Answer - A
Answer- A. Jersey Finger
Jersey Finger - Flexor digitorum profundus Injury
Mallet Finger -Avulsion injury of extensor digitorum tendon
Gamekeepers Thumb - chronic injury to ulnar collateral ligament of thumb
Bennets Fracture- Intra articular fracture at the base of 1st metacarpal

KalleeApply

1436. K nail can be used for all of the following fractures excePt -

a) Isthmic femur shaft fractures

b) Intertrochanteric fractures

c) Low subtrochanteric fractures

d) Distal femur shaft fractures

Correct Answer - B

Answer- B. Intertrochanteric fractures

K nail is a clover leaf shaped nail that relies on the principle of three point fixation

K nail can never be used for intertrochanteric fractures as it cannot provide stability in this fracture.

KollegeApply

1437. Extensor Carpi Radialis Longus is -

a) Extensor and ulnar deviator ofthe wrist

b) Extensor and radial Deviator of the wrist

c) Injured in Posterior interosseus nerve injury

d) Weak extensor of the wrist

Correct Answer - B
Answer- B. Extensor and radial Deviator of the wrist
Extensor carpi Radialis Longus is a primary extensor and radial deviator of the wrist.
Loss of function causes wrist drop.

KollegeApply

1438. Thomas test is used for testing?

a) Hip flexion

b) Knee flexion

c) Hip abduction

d) Hip rotation

Correct Answer - A
A
Hip flexion REF: Lange Instant Access: Orthopedics and Sports Medicine, by Anil Patel, page 106
Thomas Test: With the patient lying supine, maximally flex both hips. Allow the femur on the ipsilateral side to fall into as much extension as possible, while holding the other hip up. The angle between the femur and examining table is the residual flexion and represents the flexion contracture.

KollegeApply

1439. A child presented to an orthopaedic clinic with a limp. The surgeon suspected him to have a fixed fledon deformity of the hip. Which test should the surgeon perform to confirm his finding?

a) Thomas test

b) Trendelenburgs test

c) Nelatons test

d) Telescoping test

Correct Answer - A
Answer- A. Thomas test
Thomas test is done for flexion deformity of hip.

KollegeApply

1440. Trigger Finger Involves Which joint ?

a) Proximal Interphalngeal joint

b) Distal Interphalngeal foint

c) Metacarpophalangeal joint

d) Carpometacarpal joint

Correct Answer - C
Answer- C. Metacarpophalangeal joint
The mouth of the fibrous digital sheath is at the level of metacarpo-phalangeal joint.

KollegeApply

1441. Effect of hypoparathyroidisrn on bones include -

a) Brown tumours

b) Subperiosteal Resorption of Bone

c) Multiple Cysts in Bone

d) NoneoftheAbove

Correct Answer - D
Answer- D. NoneoftheAbove
Features of Hypoparathyroidism

- Premature closure of epiphyses
- Generalized increase in bone density (Osteosclerosis)
- Calvarial thickening
- Sacroiliac sclerosis
- Bandlike density in metaphysic
- Thickened lamina dura + widened diploe
- Deformed hip (thickening & Sclerosis of femoral head & acetabulum)
- Intracranial calcification
- Calcification of spinal & Other ligaments
- Subcutaneous calcification
- Ectopic bone formation
- Ossification of muscle insertions

KollegeApply

1442. Bone transport can be used in the management of -

a) Gap non union

b) Deformity Correction

c) Communited shaft femur fracture

d) Avscular Necrosis of Femoral Head

Correct Answer - A
Answer- A. Gap non union
Bone transport technique is primarily used in the management of gap non unions.
An osteotomy is made in the normal bone and a segamnt of bone is transported to the non union site

KollegeApply

1443. Aeroplane splint is used in ?

a) Radial nerve injury

b) Ulnar nerve injury

c) Brachial plexus injury

d) Scoliosis

Correct Answer - C

Ans. is 'c' i.e., Brachial plexus injury

Name	**Use**
Cramer-wire splint	Emergency immobilisation
Thomas splint	Fracture femur-anywhere
Bohler-Braun splint	Fracture femur-anywhere
Aluminium splint	Immobilization of fingers
Dennis Brown splint	CIEV
Cock-up splint	Radial nerve palsy
Knuckle-bender splint	Ulnar nerve palsy
Toe-raising splint	Foot drop
Volkmann's splint	Volkmann's ischaemic contracture (VIC)
Four-post collar	Neck immbilisation
Aeroplane splint	*Brachial plexus injury*
SOMI brace	Cervical spine injury
ASHE (Anterior spinal hyperextension)	Dorso-lumbar spinal injury brace
Taylor's brace	Dorso-lumbar immobilisation
Milwaukee brace	Scoliosis
Boston bracet	Scoliosis
Lumbar corset	Backache

KnowledgeApply

1444. All of the following are true regarding application of POP Cast except -

a) Putting the Plaster roll in warm water hastens setting time

b) It is anhydrous Calcium phosphate

c) It can applied in presence of extreme swelling

d) Gangrene is known complication of a tight plaster cast

Correct Answer - B
Answer B. It is anhydrous Calcium phosphate
POP is chemically hemihydrous calcium sulphate.
Warm water hastens while cold water slows the setting time.
Plaster cast should be avoided when there is extreme swelling.
Common complications of plaster casts include compartment syndrome, gangrene and plaster sores.

KalaamApply

1445. In uncemented arthroplasty of the hip , the stem remains attached to the bone by -

a) Bone Ingrowth/ ongrowth over the surface of the stem

b) Mechanical bonding between the stem and bone

c) Press fitting of the stem in the tight canal

d) Adhesion between the stem and bone due to ashesive properties ofthe stem

Correct Answer - A

Answer- A. Bone Ingrowth/ ongrowth over the surface of the stem

Bone in growth-

- Over porous surface.
- Optimal pore size should be 100 to 400 microns.
- Fiber mesh or beads are present over the stem surface.
- Stem created by sintering or diffusion bonding processes.

KollegeApply

1446. During perfoming a total hip replacement, the surgeon found destruction of the articular cartilage and rnultiple wedge shaped subchondral depressions. What is this called ?

a) Osteolysis

b) Osteomyelitis

c) Osteonecrosis

d) Osteogenesis

Correct Answer - C
Answer- C. Osteonecrosis
Presence of dense wedge shaped opacities in the anterolateral quadrant of the femoral head this is called sectoral involvement.
Presence of multiple cystic and sclerotic areas
Acetabular involvement leads to development of severe arthritis

CollegeApply

1447. Sudden dorsiflexion of foot may lead to which of the following injuries -

a) Anterior talofibular ligament injury

b) Tendo Achilles avulsion injury

c) Rupture of deltoid ligament

d) Tarsal tunnel syndrome

Correct Answer - B

Answer- B. Tendo Achilles avulsion injury

A rupture of the Achilles tendon occurs when the tendon is stretched outside beyond its capacity.

The most common site of rupture is the "watershed" less vascular area of tendon, which is 4 cm proximal to its insertion on calcaneum.

KottegeApply

1448. Salter Harris classification is used for -

a) Supracondylar humerus fractures in children

b) Estimation of growth of the physes

c) Physeal injuries

d) Severity of degloving injuries to the limb

Correct Answer - C
Answer- C. Physeal injuries

KollegeApply

1449. Milwaukee Brace is used in -

a) Congenital Kyphosis

b) Scheurmanns Disease

c) Adolescentldiopathic Scoliosis

d) Spondylolisthesis

Correct Answer - A
Answer- A. Congenital Kyphosis
The Milwaukee brace is a plastic body jacket used in the treatment of adolescents with idiopathic scoliosis and Scheuermann's disease. The Milwaukee brace, also refferred to as a Cervico-Thoraco-Lumbo-Sacral-Orthosis brace, is similar to braces for the lower back, but also includes a neck ring held in place by vertical bars attached to the body of the brace.

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1450. Vertebra Plana is seen in all except -

a) Histioctosis X

b) Leukemia

c) Excessive use of systemic steroids

d) Scheurmanns Disease

Correct Answer - D
Answer- D. Scheurmanns Disease
Causes of Vertebra Plana
1. Histocytosis - X (Eosinophilic granuloma)
2. Leukemia
3. TB
4. Metastasis, Multiple myeloma, Ewing's sarcoma, lymphoma
5. Osteochondritis of vertebral body (Calve's disease)
6. Hemangioma
7. Trauma
8. Steroids

KollegeApply

1451. What is luxatio erecta ?

a) Anterior Dislocation of the shoulder joint

b) Inferior Dislocation of the shoulder joint

c) Anterior Dislocation of the HIP joint

d) Posterior Dislocation of Hip joint

Correct Answer - B

Answer- B. Inferior Dislocation of the shoulder joint

The head of the humerus is below the glenoid cavity and the humeral shaft is pointing overhead.

It is due to hyperabduction injury.

It is rare and also called luxatio erecta because the humeral head is subluxated (dislocated inferiorly) and humerus shaft points upwards (erected).

KollegeApply

1452. Which of the following casts/splints is used for fracture shaft humerus ?

a) Hanging casts

b) Knuckle bender splint

c) Aeroplane Splint

d) Above elbow cast

Correct Answer - A
Answer- A. Hanging casts
Hanging cast- Fracture of the humerus
Turn-buckle cast- Scoliosis

KollegeApply

1453. Lift off test is done to assess the function of:

a) Supraspinatus

b) Infraspinatus

c) Teres Minor

d) Subscapularis

Correct Answer - D
D i.e. Subscapularis
- Failure to perform maximum internal rotation (as tested in belly press and lift off test) or inability to maintain position of maximal internal rotation (internal rotation lag sign) indicate tear of subscapularis tendon.
Lift off test is done to assess the strength of subscapularis muscle and detect an isolated rupture of subscapularis tendon in a rotator cuff tear.

KolleegeApply

1454. All are true about menisci of knee joint except

a) Lateral meniscus covers more articular surface of tibia-

b) Lateral meniscus is more mobile

c) Lateral meniscus is more prone to injury

d) Lateral meniscus is semicircular

Correct Answer - C
Ans. is 'c' i.e., Lateral meniscus is more prone to injury

KollegeApply

1455. Three point bony relationship of the elbow is disturbed in -

a) Supracondylar Fracture of the humerus

b) Fracture lateral condyle of the humerus

c) Monteggia Fracture dislocation

d) Fracture of Proximal Radius

Correct Answer - B

Answer- B. Fracture lateral condyle of the humerus

Three prominent bony points around elbow are medial epicondyle, lateral epicondyle and tip of the olecranon.

In elbow injuries, following is seen in three bony relationship :

1. Maintained
2. Disturbed

KolleegeApply

1456. Hamilton Ruler test sign is positive in which of the above mentioned conditions ?

a) Anterior dislocation of shoulder

b) Acrornioclavivular joint dislocation

c) Posterior dislocation of shoulder

d) luxatio erecta

Correct Answer - A

Answer- A. Anterior dislocation of shoulder

Hamilton ruler test : Because of flattening of shoulder, it is possible to place a ruler on the lateral side of arm and it touches acromian & lateral condyle of humerus simultaneously (in normal it would not due to shoulder contour).

KollegeApply

1457. Cubitus Valgus Deformity is commonly seen in which of the following conditions -

a) Malunited Lateral Condylar fracture of Humerus

b) Malunited Supracondylar Fracture of Humerus

c) Posterior dislocation ofelbow

d) Fracture medial condyle of humerus

Correct Answer - A

Answer- A. Malunited Lateral Condylar fracture of Humerus

Fractures commonly showing cubitus valgus deformity due to malunion :

- Fracture lateral condyle humerus
- Monteggia Fracture Dislocation

KollegeApply

1458. True regarding Monteggia fracture is:
March 2007, March 2013 (a, b, d, f)

a) Upper ulnar fracture & dislocated radial head

b) Upper radial fracture & dislocated ulna

c) Lower radial fracture & dislocated ulna

d) Lower ulnar fracture & dislocated radius

Correct Answer - A
Ans. A: Upper ulnar fracture & dislocated radial head
Monteggia fracture-dislocations are classified by the Bado system

- Bado type I injuries are characterized by a proximal ulnar fracture with anterior dislocation of the radial head. This is due to a forceful pronation injury of the forearm and is the most common type.
- Bado type II injuries are "reversed" Monteggia fracture-dislocation injuries.
- Here, there is posterior angulation of the ulnar fracture site and posterior dislocation of the radial head. Bado type III and IV are rare injuries.

KollegeApply

1459. Dinner fork deformity is seen in?

a) Colle's fracture

b) March fracture

c) Lateral condyle fracture

d) Supracondylar fracture

Correct Answer - A

Ans. is 'a' i.e., Colle's fracture

<u>Complications of colle's fracture</u>

- Complications in colle's fracture are high (50-60%). Following complications may occur

1) *Stiffness of fingers and joints*

- *Stiffness of finger, wrist and shoulder is the most common avoidable complication of colle's fracture.*
- This occurs due to lack of exercise. Therefore, patient should be encouraged for active exercise of finger and shoulder.

2) *Malunion*

- It is the *second most common complication*
- It results in *dinner fork deformity*

3) Sudek's osteodystrophy (reflex sympathetic dystrophy)

4) Carpal tunnel syndrome:

- Median nerve may get compressed in carpal tunnel

5) Carpal instability

6) Rupture of the extensor pollicis longus tendon

7) Frozen shoulder syndrome

- This is a troublesome complication which develops due to unnecessory voluntary shoulder immobilization by the patient on the affected side for fear of fracture displacement.

8)TFCC injury

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9) Non-union is very rare

KollegeApply

1460. AVN following transcervical neck femur fractures occurs due to damage to which of the following blood vessels ?

a) Lateral retinacular branch of lateral circumflex femoral artery

b) Lateral retinacular branch of medial circumflex femoral artery

c) Medial retinacular branch of lateral circumflex femoral artery

d) Obdurator artery

Correct Answer - A

Answer- A. Lateral retinacular branch of lateral circumflex femoral artery

Lateral circumflex femoral artery It supplies through anterior retinacular artery.

KollegeApply

1461. Brodie-Trendelenburg test is positive in:

a) Deep vein thrombosis

b) Sapheno-femoral incompetence

c) Thromboangiitis obliterans

d) Below-knee perforators incompetence

Correct Answer - B

Ans. B: Sapheno-femoral Incompetence

- A test to assess the competence of the saphenofemoral junction.
- The Brodie-Trendelenburg test is used to detect venous incompetence and to differentiate between perforator and GSV incompetence.
- The Brodie-Trendelenburg test is highly sensitive for the identification of superficial and perforator reflux.
- SFJ (saphenofemoral junction) incompetence is diagnosed if the distal veins fill rapidly upon release of the tourniquet.
- Some textbooks refer to the Trendelenburg test and the tourniquet test interchangeably.

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1462. Lockingoftheknee involves -

a) External rotation of femur with the foot offthe ground

b) Internal rotation of the tibia with the foot on the ground

c) Contraction of popliteus

d) Internal rotation of femur with foot on the ground

Correct Answer - D
Answer- D. Internal rotation of femur with foot on the ground
Physiological locking occurs in extension when the femur is internally (medially) rotated on a fixed tibia. Locking is a mechanism that allows the knee to remain in the position of full extension as in standing without much muscular efforts and is caused by quadriceps femoris.

KollegeApply

1463. Foot drop occurs due to the involvement of:
September 2006, *March* 2013 *(b, f g, h)*

a) Sciatic nerve

b) Direct injury to the dorsiflexors

c) Common peroneal nerve palsy

d) All of the above

Correct Answer - D
Ans. D: All of the above
Foot drop may follow direct injury to the dorsiflexors.
A few cases of rupture of the tibialis anterior tendon leading to foot drop and suspicion of peroneal nerve palsy have occurred. This subcutaneous tendon rupture usually occurs after a minor trauma with the foot in plantar flexion.

- Compartment syndromes also may lead to foot drop.
March gangrene, a form of anterior compartment syndrome, is thought to be due to edema and small hemorrhages in the muscles of the anterior compartment occurring after strenuous activity in individuals not accustomed to it. Deep posterior compartment syndrome also may result in foot drop as a late sequela due to resultant contracture formation.
- Neurologic causes of foot drop include mononeuropathies of the deep peroneal, common peroneal, or sciatic nerves. Lumbosacral plexopathy, lumbar radiculopathy, motor neuron disease, or parasagittal cortical or subcortical cerebral lesions also can manifest as foot drop. These lesions can be differentiated through clinical and electrodiagnostic examinations.

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- A common behavioral cause of foot drop is habitual crossing of the legs. These cases typically resolve with discontinuation of the habit.
- Foot drop also may be seen as a combination of neurologic, muscular, and anatomic dysfunction. Charcot foot is one example.

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1464. Fracture neck of femur in 80 year old male sustained 1 weekback The treatment of choice is -

a) Hemiarthroplasty

b) ExcisionarthroPlastY

c) Closed reduction and fixation with three cancellous screws

d) Longitudinal skin traction for 6 weeks

Correct Answer - A
Answer- A. Hemiarthroplasty
Closed reduction & screw fixation
If 2 attempts of closed reduction fail, hemiarthroplasty is done

KollegeApply

1465. Which of the following fractures of the neck of femur are associated with maximal compromise in blood supply ?

a) Intertrochantericfractures

b) Basicervical fracture

c) Trans cervical fracture

d) Sub Capital fractures

Correct Answer - D

Answer- D. Sub Capital fractures

The non-union and AVN will be most common in subcapital fracture and least in basicervical fracture.

KollegeApply

1466. AVN is seen in which type of # of femur:

a) Intertrochantric #

b) Subcapital #

c) Trans cervical #

d) B AND C

Correct Answer - D
B. i.e. Subcapital > C. i.e. Transcervical

- Fracture of the neck of femur
- Fracture of the Scaphoid (Proximal pole> Waist)
- Fracture neck of talus
- Posterior dislocation of the hip

KollegeApply

1467. Tinels sign is seen in -

a) Avascular necrosisof scaPhoid

b) Kienbock s Disease

c) lst carpometacarpal joint arthritis

d) Carpal tunnel syndrome

Correct Answer - D
Answer- D. Carpal tunnel syndrome
Median nerve percussion test (Tinel's sign) : - The median nerve is gently tapped at the wrist. The test is positive if there is tingling sensation

KollegeApply

1468. Which of the following is used as a substitute for wrist extensors in radial nerve PalsY?

a) Pronator Teres

b) Palmaris Longus

c) Flexor Digitorum SuPerficialis

d) Flexor Digitorum Profundus

Correct Answer - A

Answer- A. Pronator Teres

Pronator teres is a common muscle used as a substitute for wrist extensors in case of wrist drop occurring as a result of radial nerve palsy. Pronator teres is a pronator of the forearm supplied by Median nerve.

KollegeApply

1469. Most common cause of ca4ral tunnel syndrome is ?

a) Pregnancy

b) Idiopathic

c) Alcoholism

d) Occupational-Excessive use of vibratory instruments

Correct Answer - B
Answer- B. Idiopathic
Most common type of carpal tunnel syndrome is idiopathic → no known cause.

KollegeApply

1470. A 45 year old carpenter with a blunt trauma to his arm sustained a fracture followingwhich he developedwrist drop, loss of extension at fingers and loss of sensations on the lateral aspect of the wrist joint. Which of the following is true ?

a) Patient has an injury to the median nerve

b) He should have also lost extention of the forearm

c) Patient has injured the radial nerve in the spird groove

d) There is combined involvement of the radial nerve and median nerve

Correct Answer - C

Answer- C. Patient has injured the radial nerve in the spird groove

Radial nerve injury may be high or low.

1) High radial nerve palsy

- Injury is before the spiral groove
- All muscles supplied by radial nerve are paralysed

2) If lesion is high

- Wrist drop, thumb drop and finger drop.
- Inability to extend elbow, wrist, thumb & fingers (MP joint)
- Patient can extend interphalangeal joints due to action of lumbricals and interossei.
- Sensory loss over posterior surface of arm & forearm and lower lateral half of forearm.

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1471. Wrist drop is due to injury to ?

a) Radial nerve

b) Ulnar nerve

c) Median nerve

d) Posterior interosseous nerve

Correct Answer - A

Ans. (A) Radial nerve

Clinical features of radial nerve palsy

- Clinical features depend upon the site of lesion.

1) If lesion is high

- Wrist drop, thumb drop and finger drop.
- Inability to extend elbow, wrist, thumb & fingers (MP joint)
- Patient can extend interphalangeal joints due to action of lumbricals and interossei.
- Sensory loss over posterior surface of arm & forearm and lower lateral half of forearm.

2) If lesion is low

a) Type I

- Wrist drop, thumb drop and finger drop.
- Elbow extension is preserved.
- Sensory loss over the dorsum of first web space.

b) Type II

- Thumb drop and finger drop
- Elbow and wrist extension is preserved
- Sensory loss over the dorsum of first web space.

KollegeApply

1472. In which of the following deformities is the distal interphalangeal joint extended ?

a) Boutonniere deformity

b) Swan neck deformity

c) Z deforrnity

d) Claw Hand

Correct Answer - A
Answer- A. Boutonniere deformity
Boutonniere deformity : Flexion contracture of PIP joint and extension of DIP joint.

KollegeApply

1473. Club foot clinically present as what deformity ?

a) Calcaneovalgus

b) Equinovarus

c) Equino Cavovarus

d) Calcaneovarus

Correct Answer - C

Answer- C. Equino Cavovarus

CTEV is the commonest and most important congenital deformity of the foot.

The deformity consists of following elements :

1. Equinus, i.e. Plantar flexion at ankle joint (tibiotalar joint)
2. Inversion of foot at subtalar joint (talocalcaneal joint)
3. Forefoot adduction, at mid-tarsal joints, especially at talo-navicular joint.
4. Sometimes forefoot cavus, i.e. excessive arching of the foot at mid-tarsal joints

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1474. 4 year old child presented to the clinic with a history of fall on outstretched hand. Radiographs revealed a broken anterior cortex with an intact posterior cortex Of the radius with an exaggerated bowing of the radius. The fracture sustained is known as -

a) Torus Fracture

b) Greenstick fracture

c) Galleazi Fracture

d) Monteggia Frtacture Dislocation

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Correct Answer - B

Answer- B. Greenstick fracture

Greenstick Fracture: Incomplete fracture of the bone with plastic deformation on the concave side of the bone. The fracture needs to be completed to obtain reduction.

1475. Greenstick/ Nightstick fractures are seen in -

a) Children

b) Elderly

c) Youngadults

d) Common in all age groups

Correct Answer - A
Answer- A. Children

KollegeApply

1476. Waddling gait due to:
March 2009

a) Bilateral congenital dysplasia of hip

b) Coxa valga

c) CTEV

d) Bilateral coxa valgum

Correct Answer - A

Ans. A: Bilateral congenital dysplasia of hip

A waddling gait is the style of walking that is seen in a patient with proximal myopathy. It is characterised by:

- A broad-based gait with a duck-like waddle to the swing phase
- The pelvis drops to the side of the leg being raised
- Forward curvature of the lumbar spine
- Marked body swing
- This gait may be seen in patients with bilateral congenital hip dislocation and pregnancy.

KalpaApply

1477. **Blount's disease is associated with all of the following, EXCEPT:**

a) Genu varum

b) Genu Recurvatum

c) Internal Tibial Torsion

d) External Tibial Torsion

Correct Answer - D

Blount’s disease is characterized by varus and internal tibial torsion and genu recurvatum, with varus of the proximal tibia being the primary deformity. It is not associated with external tibial torsion.

Ref: Operative techniques in pediatric orthopedics, by John M.Flynn, Sam W.Wiesel, Page 205, 206.

KollegeApply

1478. Who devised correction of CTEV by serial castinga -

a) Ignasio Ponseti

b) Gerhardt Kuntscher

c) Gavril Ilizarov

d) Hugh Owen Thomas

Correct Answer - A
Answer- A. Ignasio Ponseti
Ignasio Ponseti propounded the technique of serial weekly casts.

KollegeApply

1479. Osteosclerosis is a feature of which of the followinga -

a) Rickets

b) Hyperparathyroidism

c) Pagets Disease

d) Osteogenesis Imperfecta

Correct Answer - C
Answer- C. Pagets Disease
Paget's disease is characterized by increased bone turnover and enlargement and thickening of the bone, but the internal architecture is abnormal and the bone is usually brittle.
Primary defect is in osteoclasts with increased osteoclastic activity. This results secondarily increase in osteoblastic activity (normal osteoclasts and osteoblasts act in a co-ordinated manner).

KollegeApply

1480. All of the following are true regarding Pagets Disease except -

a) Pelvis is the most common site

b) Cranial nerve involvement may be seen

c) High output cardiac failure is one of the complications

d) It may progress to a secondary chondrosarcoma

Correct Answer - D
Answer- D. It may progress to a secondary chondrosarcoma
Pagets disease may progress to a secondary osteosarcoma not chondrosarcoma

KollegeApply

1481. **Which of the following is/are true about perthes disease?**

1. Avascular necrosis of femoral head
2. Onset before 10 years of age
3. Osteotomy is used for treatment
4. Limb shortening

a) 1,2 true & 3,4 false

b) 2,3 True & 1,4 false

c) 1,2,3 true & 4 false

d) All are true

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Correct Answer - D

It is also known as the pars plana and Pseudo Coxalgia. It is an osteochondritis of the femoral head. The femoral head becomes partly or wholly avascular and deformed.
Etiology is not definetly known. It is supposed to be due to reccurent episoedes of ischemia of the femoral head in the suceptible age group, probably perecipitaed by episodes of synovitis.
Pathology: the disease progresses in three ill defined stages:

- Stage of synovitis
- Stage of trabecular necrosis
- Stage of healing

Clinical features:
Commonly seen in the age group of 5 to 10 years. Child present with pain in the hip which often radiates to the knee or may also present with limp or hip stiffness. On examination, the finding are minimal. sometimes the only finding being limitation of abduction and internal rotation and shortening.

X- ray shows collapse and sclerosis of the epiphysis of the femoral head. hip joint space is increased. Bone scan may show a decreased uptake by the head of the femur.
Treatment: The primary aim is to prevent the head from ill shaping while the bone is in the softening phase. The head is required to be kept inside the acetabulum while the revascularization takes place (i.e. containment). This may be achieved by corrective methods (plaster, splint etc.) or by operation (containment osteotomy).

Ref: Maheshwari 3/e, Page 269-70.

KollegeApply

1482. Microorganism which causes pyogenic osteomyelitis is ?

a) Streptococcus

b) Staph aureus

c) Corynebacterium

d) Neisseria gonorrhoeae

Correct Answer - B

Staphylococcus aureus *causes 80–90% of cases of acute pyogenic osteomyelitis.* S aureus has a receptor for collagen, which contributes to its pathogenicity. Other organisms that cause osteomyelitis include:

- Escherichia coli and Pseudomonas in intravenous drug users and patients with urinary tract infections.
- *Haemophilus influenzae* and Group B *Streptococcus* in neonates.
- *Salmonella* in patients with sickle cell disease.

Ref: Wyatt C., Kemp W.L., Moos P.J., Burns D.K., Brown T.G. (2008). Chapter 19. Pathology of the Bones and Joints. In C. Wyatt, W.L. Kemp, P.J. Moos, D.K. Burns, T.G. Brown (Eds), *Pathology: The Big Picture.*

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1483. Commonest site of occurrence of chondrosarcoma is -

a) Pelvis

b) Ribs

c) Femur

d) Proximal tibia

Correct Answer - A
Answer- A. Pelvis
A chondrosarcoma is a malignant tumor derived from cartilage cells and it tends to maintain its cartilaginous character throughout its evolution
Most commonly involved bones are pelvis (most common), femur (2nd most common), humerus, ribs and shoulder girdles.
It may be at metaphysis or diaphysis.

CollegeApply

1484. Onion peel appearanace on Xray is seen in which of the following conditions ?

a) Ewings Sarcoma

b) Osteosarcoma

c) Giant cell tumour

d) Eosinophilic granuloma

Correct Answer - A

Answer- A. Ewings Sarcoma

Onion Peel Appearance	Ewings Sarcoma
Codmans Triangle	Osteosarcoma
Sun Burst Appearance	Osteosarcoma
Soap Bubble appearance	GCT

KollegeApply

1485.

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Which part of the spine is most commonly affected in Rheumatoid arthritis:

a) Cervical

b) Lumbar

c) Thoracic

d) Sacral

Correct Answer - A
Answer *is* **A (Cervical):**
Rheumatoid arthritis commonly involves the joints of hands, wrist, elbow, knees, ankle, and feet in a symmetrical manner.
Axial skeleton involvement is usually limited to Upper Cervical Spine.

KolleegeApply

1486. Hammer toe deformity is seen in -

a) Rheumatoid arthritis

b) Fracture distal phalanx ofgreat toe

c) Bunion

d) Osteochondritis

Correct Answer - A
Answer- A. Rheumatoid arthritis
Foot Hallux valgus, Hammer toe, etc.

KollegeApply

1487. Nerve damaged due to lunate dislocation (in carpal tunnel):

a) Median & ulnar

b) Median

c) Ulnar

d) Radial

Correct Answer - B

B. i.e. Median nerve

- Common causes of median nerve palsy in carpal tunnel are carpal tunnel syndrome (most common) and Innate dislocation.

KolleegeApply

1488. Malodorous vaginal discharge is due to

a) Bacterial vaginosis

b) Chlamydia trachomatis

c) Trichomonas vaginalis

d) Neisseria gonorrhea

Correct Answer - A

Answer- A. Bacterial vaginosis

Bacterial vaginosis is an alteration of the normal vaginal flora with consequent overgrowth of pathogenic bacteria.

There is fall in the absolute number of hydrogen peroxide - producing lactobacilli, leading to a rise in pH and increase in the absolute number of G. vaginalis, anaerobic gram - negative rods, Mobiluncus spp. and Mycoplasma hominis.

KollegeApply

1489. Quickening in multiparae is felt at what weeks of gestation?

a) 14 weeks

b) 16 weeks

c) 18 weeks

d) 20 weeks

Correct Answer - B
Answer- B. 16 weeks
Quickening is feeling of life. It denotes perception of active fetal movements by the women. It is usually felt about the 18th week, about 2 weeks earlier in multiparae. Its appearance is an useful guide to calculate the expected date of delivery with reasonable accuracy.

KollegeApply

1490. True about placental site trophoblastic disease is

a) Highly Malignant behavior

b) Hysterectomy followed by chemoradiation is the treatment of choice

c) Secretes human placental lactogen

d) Contains syncytiotrophoblasts mainly

Correct Answer - C

Answer- C. Secretes human placental lactogen

Placental Site Trophoblastic Tumour

- Arises from the placental bed trophoblasts and invades the myometrium.
- Follows a full - term normal delivery.
- Tumor contains mainly cytotrophoblasts with few or no syncytiotrophoblasts.
- Most of these tumors run a benign course, malignancy is rare.

[Ref Shaw's Gynae le/e p. 313; Dutta's Obs 8thie p. 231]

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1491. Crowning is

a) Biparietal diameter at the inlet of pelvis

b) Biparietal diameter at the ischial spine

c) Biparietal diameter at the vulval outlet

d) Biparietal diameter just outside the vulval outlet Answer-

Correct Answer - C
Answer- C. Biparietal diameter at the vulval outlet
Crowning : After internal rotation of the head, further descent occurs until the suboccipu t lies underneath the pubic arch. At this stage, the maximum diameter of the head (biparietal diameter) stretches the vulval outlet without any recession of the head even after the contraction is over - called "crowning of the head".

Kollegeapply

1492. Prolonged second stage of labour may occur due to

a) Uterine inertia

b) Epidural analgesia

c) Cephalopelvic disproportion

d) All of the above

Correct Answer - D

Answer- D. All of the above

Prolongation of second stage of labour can occur due to any of the following reasons :

1) Fault in the power

- Uterine inertia
- Inability to bear down
- Epidural analgesia
- Constriction ring

2) Fault in the passage

- Cephalopelvic disproportion, android pelvis, contracted pelvis
- Undue resistance of the pelvic floor or perineum due to spasm or old scarring
- Soft tissue pelvic tumor.

3) Fault in the passenger

- Malposition (occipito - posterior)
- Malpresentation
- Big baby
- Congenital malformation of the baby

KollegeApply

1493. **Progesterone of choice in emergency contraception is?**

a) Norethisterone

b) Medroxyprogesterone

c) Oxytocin

d) Levonorgestrel

Correct Answer - D

Unprotected intercourse without regard to the time of the month carries an 8% incidence of pregnancy, an incidence that can be reduced to 2% by the use of emergency contraceptives within 72 hours of unprotected intercourse.
0.75 mg levonorgestrel are now approved for postcoital contraception and are available over the counter for women aged >17 years. Levonorgestrel is more effective and is associated with fewer side effects than the combination estrogen-progestin regimens.
Basically the methods used interfere with the physiological events before implantation, for e.g. inhibition or delaying of ovulation or interference with postovulatory events necessary for implantation & longevity of the blastocyst.

Ref: Hall J.E. (2012). Chapter 347. The Female Reproductive System, Infertility, and Contraception. In D.L. Longo, A.S. Fauci, D.L. Kasper, S.L. Hauser, J.L. Jameson, J. Loscalzo (Eds), Harrison's Principles of Internal Medicine, 18e.

1494. Lovset manoeuvre is used in delivery of :

a) Head

b) Breech

c) Foot

d) Arms

Correct Answer - D
Arms
Lovset's maneuver

- Principle : Because of the curved birth canal, when the anterior shoulder remains above the symphysis pubis, the posterior shoulder will be below the sacral promontory. If the fetal trunk is rotated keeping the back anterior and maintaining a downward traction, the posterior shoulder will appear below the symphysis pubis.

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1495. Common misdiagnosis of partial mole is

a) Threatened abortion

b) Choriocarcinoma

c) Complete mole

d) Ectopic pregnancy

Correct Answer - A

Answer- A. Threatened abortion

The clinical picture of partial mole is confused with threatened abortion or missed abortion due to pain and bleeding alongwith a fetus (usually dead) in utero.

KollegeApply

1496. When fetus is at station +2 & fetal skull reaches pelvic floor, which of the following is true

a) Forceps can be applied

b) Best time to give episiotomy

c) Called as crowning

d) May lead to deep transverse arrest

Correct Answer - A

Answer- A. Forceps can be applied

When the fetal skull has reached the level of pelvic floor and station of head is at + 2 or more, outlet forceps can be applied.

However, crowning is defined as stretching of the vulva' outlet by the maximum diameter of the fetal head (biparietal diameter) without any recession. Thus the station is + 5.

Best time to give episiotomy is at the time of crowning of head.

[Ref Dutta's Obstetrics 81h/e p. 651]

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1497. Most common breech position is

a) Complete breech

b) Frank breech

c) Footling breech

d) Knee presentation

Correct Answer - B
Answer- B. Frank breech
Frank breech (Breech with extended legs) is the most common breech presentation.
Breech with extended legs (Frank breech) : Thighs are flexed at hip and legs are extended at knee. It is commonly seen in primigravidae (70%).
It is the most common type of breech.

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1498. Which is not a risk factor for gestational hypertension

a) Obesity

b) Smoking

c) Primigravida

d) Factor V Leiden mutation

Correct Answer - B
Answer- B. Smoking
Primigravida : Young or elderly (first time exposure to villi)
Family history (hypertension, pre - eclampsia)
Placental ischemia
Obesity
Thrombophilia (antiphospholipid syndrome), protein C and S deficiency, factor V Leiden mutation)
Molar pregnancy (early onset pre - eclampsia)

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1499. Method not used for shoulder dystocia

a) McRobert's maneuver

b) Hegar's maneuver

c) Zanavelli maneuver

d) Wood's maneuver

Correct Answer - B
Answer- B. Hegar's maneuver
McRobert's, Zanavelli and Wood's maneuvers' are maneuvers in the management of shoulder dystocia.

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1500. Occipitoanterior position

a) Anterior fontanalle is posterior

b) Sagittal suture is along the Transverse plane of the maternal pelvis

c) Coronal suture is along the antero - posterior plane of the maternal pelvis

d) All of the above

Correct Answer - A

Answer- A. Anterior fontanalle is posterior

In direct occipito anterior position, the sagittal suture of the fetus will be along the antero - posterior plane of the maternal pelvis and the coronal suture along the transverse diameter.

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1501. In Medical termination of pregnancy, according to FDA, Misoprostol is given after how many hours of Mifepristone?

a) 24 hours

b) 48 hours

c) 72 hours

d) 96 hours

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Correct Answer - B

Ans. is 'b' i.e., 48 hours

FDA approved protocol - (Original protocol)

- 600 mg of mifepristone (i.e., 3 tablets) given orally on day 1 followed 2 days (48 hours) later by oral misoprostol 400 tig (2 tablets) on day 3.
- The treatment should be started no more than 48 days from the start of the last menstrual period.

But according to the recent protocol

- 200 mg of mifepristone (it is as effective as 600 mg of mifepristone) is given orally on Day 1 followed 2 days (48 hours) later by vaginal misoprostol 800 pg.
- This regime provides highest efficacy within 63 days of amenorrhea.

1502. The best method for inducing mid trimester abortion is :

a) Injection of Hypertonic Saline

b) Ethacrydine

c) Prostaglandins

d) D and C

Correct Answer - C
Prostaglandins
Mid trimester termination of pregnancy
A) Medical methods
i) Prostaglandins : misoprostol (PGE 1) with or without Mife pristone, gemeprost (PGE1), dinoprostone (PGE2), carboprost (PGE2)
ii) Oxytocin

KottegeApply

1503. Twin pregnancy of the same age and sex rules out ?

a) Superfetation

b) Maternal twins

c) Superfecundation

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Superfetation

Superfetation

- It is the simultaneous occurrence of more than one stage of developing offspring in the same animal.
- In mammals, it manifests as the formation of an embryo from a different estrous cycle while another embryo or fetus is already present in the uterus.

KollegeApply

1504. Propulsive stage in labour in multipara

a) 10 minutes

b) 20 minutes

c) 40 minutes

d) 1 hour

Correct Answer - B

Answer- B. 20 minutes

Second stage of labour has two phases :

1. Propulsive phase: from full dilatation of cervix until head touches pelvic floor.
2. Expulsive phase : Since the time there is irresistible maternal desire to bear down until the body is delivered.

- Mean duration of second stage is 50 minutes for nullipara and 20 minutes in multipara.

KollegeApply

1505. During pregnancy increased size of pituitary is caused by increased size of cells which secrete ?

a) Growth hormone

b) Prolactin

c) ACTH

d) TSH

Correct Answer - B

Answer- B. Prolactin

Prolactin levels rise gradually throughout pregnancy, preparing the breast for lactation.

This lactotroph hyperplasia has important implications for the patient with a prolactinoma who desires pregnancy.

KollegeApply

1506. Therapeutic use of folic acid is

a) Previous pregnancy with child having neural tube defect

b) Megaloblastic anaemia

c) Hemoglobinopathies

d) All of the above

Correct Answer - B

Answer- B. Megaloblastic anaemia

Folic acid is given in all the given conditions. But answer hear is option b.

This questions is tricky :-

- Examiner is asking about therapeutic uses of folic acid (not preventive)
- In megaloblastic anemia, folic is given for treatment —> therapeutic uses
- In pregnancy it is given for prevention of neural tube defect —> prophylactic use (preventive use)

KollegeApply

1507. **What would be the type of presentation when the engaging diameter is mentovertical?**

a) Face

b) Brow

c) Vertex

d) Breech

Correct Answer - B

In **brow presentation, the engaging diameter is mentovertical (14cm)**. Brow is the rarest variety of cephalic presentation where the presenting part is the brow and the attitude of the of the head is short of that degree of extension necessary to produce face presentation.

In **face presentation,** the presenting part is face, attitude of the fetus shows complete flexion of the limbs with extension of the spine. The commonest position is left mento anterior. **The engaging diameter of the head is submento bregmatic 9.5cm in fully extended head or submento vertical 11.5cm in partially extended head.**

Ref: Textbook of Obstetrics By D.C Dutta, 6th edn, page 392-3

Kottage Apply

1508. Cardiac output in pregnancy increases from which week of gestation

a) 5 weeks

b) 15 weeks

c) 25 weeks

d) 35 weeks

Correct Answer - A
Answer- A. 5 weeks
Cardiac output starts to increase from the 5th week of gestation, reaches its peak 40 - 50% at 30 - 34 weeks.

KolleegeApply

1509. Stroke volume increases in pregnancy by

a) 20%

b) 25%

c) 40%

d) 45%

Correct Answer - B

Answer- B. 25%

Hemodynamic changes during pregnancy

	Non - pregnant	**Pregnancy near term**	**Change**
Cardiac output (lit/m1)	4.5	6.26	+40%
Stroke volume (ml)	65	75	+27%
Heart rate (per minute)	70	85	+ 17%
Blood pressure	Unaffected or mid pregnancy drop of diastolic pressure by 5 - 10 mmHg		
Venous pressure	8 - 10 cm (femoral)	**20 cm**	+100%
Colloid oncotic pressure (mmHg)	20	18	- 14%
Systemic vascular resistance			- 21%
Pulmonary vascular rests			- 34%

KollegeApply

1510. Oxygen consumption increases in pregnancy by

a) 10%

b) 20%

c) 30%

d) 40%

Correct Answer - B
Answer- B. 20%
Oxygen consumption increases approximately 20% during pregnancy, and it is approximately 10% higher in multifetal gestation.
During labour, oxygen consumption increases 40 - 60%.

KollegeApply

1511. Which of the following about abdominal pregnancy is true?

a) Primary abdominal pregnancy is more common

b) If placenta is densely adhered, it should be separated alongwith the organ it overlies

c) Around 50% of the fetus reach full term and survive

d) If placenta is left behind, infection can occur

Correct Answer - D

Answer- D. If placenta is left behind, infection can occur

Abdominal Pregnancy

A) Primary Abdominal Pregnancy

- Criteria to diagnose primary abdominal pregnancy by Studiford :

1. Both the tubes and ovaries are normal without evidence of recent injury
2. Absence of uteroplacental fistula
3. Presence of a pregnancy related exclusively to the peritoneal surface and young enough to eliminate the possibility of secondary implantation following primary nidation in the tube

B) Secondary

- Almost always secondary, the primary sites being tube, ovary or even the uterus - the conceptus escapes out through the rent in the uterine scar.

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1512. 45 yrs female with G5P4A0L4 with LMP 25.8.15, gestational age will be how many weeks on date 11.5.15?

a) 32 weeks

b) 35 weeks

c) 36 weeks

d) 40 weeks

Correct Answer - C
Answer- C. 36 weeks
if the patient's LMP is 25.8.15 then EDD would be 3.6.16.
On 11.5.15, patient would be 23 days left would for EDD, that is 3 weeks and 2 days. Subtracting this from 40 weeks, the patients gestational age would be 36 weeks and 5 days.

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1513.

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Incidence of scar rupture in a subsequent pregnancy in case of Lower Segment Cesarean Section (LSCS) is:

a) 2%

b) 4%

c) 5%

d) 8%

Correct Answer - A
2%

- The risk of lower segment scar - rupture is low (0·2-1·5%) and even if it does occur, maternal death is much less and the perinatal mortality is about 1 in 8.

KollegeApply

1514. Which of the following is not a probable sign of pregnancy

a) Jacquemier's sign

b) Dalrymple sign

c) Hegar's sign

d) Palmer's sign

Correct Answer - B

Answer- B. Dalrymple sign

Probable signs of pregnancy :

- Jacquemier's sign/Chadwick's sign
- Osiander's sign
- Goodell's sign
- Piskacek's sign
- Hegar's sign
- Palmer's sign
- Braxtor-hicks contraction
- External ballotment
- Abdominal enlargement
- Outlining the fetus

KollegeApply

1515. Which of the following ovarian tumor is most prone to undergo torsion during pregnancy :

a) Serous cystadenoma

b) Mucinous cystadenoma

c) Dermoid cyst

d) Theca lutein cyst

Correct Answer - C

Ans. is c i.e. Dermoid cyst

***"A** benign cystic teratoma is the most common neoplasm to undergo torsion, **and** it to the M/C benign tumor diagnosed during pregnancy."*

A benign cystic teratoma is synonymous to dermoid cyst.

Remember :

- Most common ovarian tumour in pregnancy is serous cystadenoma but mostly remains undiagnosed.
- Incidence of dermoid cyst is increased two fold during pregnancy and it is the most common neoplasm diagnosed during pregnancy.
- Hingorani sign seen : - In ovarian tumor during pregnancy. Trendelenburg's position can elicit the groove between two separate swelling. Used to distinguish between ovarian tumour and fibroid.

KollegeApply

1516. What is the preferred treatment of complete prolapse in a female with completed family?

a) Sling surgery

b) Vaginal hysterectomy

c) Le Forte's repair

d) Pessary

Correct Answer - B
Answer- B. Vaginal hysterectomy
Vaginal hysterectomy is commonly performed for major degree uterine prolapse in a female with completed family.

KollegeApply

1517. In MRKH syndrome, which among the following is absent?

a) Vagina

b) Breast development

c) Pubic hair development

d) Testes

Correct Answer - D

Answer- D. Testes

MRKH syndrome is also known as MURCS syndrome (Mullerian agenesis, Renal aplasia and cervicothoracic somite dysplasia). MRKH (Mayer Rokitansky Kuster Hauser) syndrome has a karyotype of 46, XX. So the gonads present are ovaries in contrast to Androgen Insensitivity Syndrome where testes are present.

The MRKH syndrome is characterized by congenital aplasia of the uterus and the upper part (2/3) of the vagina in women showing normal development of secondary sexual characteristics and a normal 46, XX karyotype.

CollegeApply

1518. If the symphysiofundal height is 40 cm and the station of the head is at -1, weight of the fetus is approximately

a) 3 kg

b) 3.3 kg

c) 4 kg

d) 4.3 kg

Correct Answer - D

Answer- D. 4.3 kg

Johnson's Formula for estimation of fetal weight :

- Height of the uterus above the symphysis pubis in centimeters minus 12, if the vertex is at or above the level of ischial spines or minus 11, if the vertex is below the level of ischial spines - multiplied by 155 gives the weight in grams.
- Solution : (40 - 12) x 155 = 4340 gms

CollegeApply

1519. Which of the following is true regarding precocious puberty :

a) Sexual maturity is attained early

b) Mental function is increased

c) No reproductive function

d) Body proportions are enlarged

Correct Answer - A
Ans. is a i.e. Sexual maturity is attained early
Precocious puberty is the appearance of appropriate secondary sexual characters before the age of 8 years and occurrence of menstruation before 10 years of chronological age.
Also know : *Delayed puberty :* is considered delayed when the secondary sexual characters do not appear by the age of 14, and menarche is not established by 16 years of age.

KopykatApply

1520. **During which gestational age is peak serum HCG levels attained ?**

a) 7-9 weeks

b) 11-13 weeks

c) 20 weeks

d) 25 weeks

Correct Answer - A

HCG rises progressively from conception. *Levels double on the average, every 30.9 hours* until values reach 6500 mIU/ml (6,500 IU/L) at approximately the eighth week after the last menstrual period (LMP).

After that the rate of rise becomes individualized, *peaking between the 60th and 70th day (9 to 10 weeks) LMP*.

HCG decreases slightly between the 12th and 16th week post LMP, and then remains constant until birth.

KollegeApply

1521. Cephalic index is

a) BPD/OFD

b) BPD/HC

c) OFD/BPD

d) HC/FL

Correct Answer - A
Answer- A. BPD/OFD
Cephalic index = BPD / OFD (Biparietal diameter divided by the occipito - frontal diameter)

KollegeApply

1522. The role of human placental lactogen is :

a) Stimulate milk production

b) Fetal breast development

c) Growth of fetus

d) Endocrine regulation

Correct Answer - C
Growth of fetus

- Functions :

a) Provide fetal nutrition by antagonizing the action of insulin in maternal circulation, breakdown of fats and proteins and transport of fatty acids and amino acids from maternal to feta circulation.
b) Potent angiogenic, helps develop fetal vasculature.
c) Promotes growth of breast for lactation.

CollegeApply

1523. Hot flushes are experienced as a result of

a) Increased noradrenaline

b) Decreased estrogen

c) Increased noradrenaline and decreased estrogen

d) Increased noradrenaline and estrogen

Correct Answer - C
Answer- C. Increased noradrenaline and decreased estrogen
Hot flushes are caused by noradrenaline, which disturbs the thermoregulatory system. Oestrogen deficiency reduces hypothalamic endorphins, which release more norepinephrine and serotonin. This leads to inappropriate heat loss mechanism.
Other causes that can be associated with the symptom of hot flushes include: thyroid disease, epilepsy, pheochromocytoma, carcinoid syndromes, autoimmune disorders, mast cell disorders, insulinoma, pancreatic tumours and even leukemias.

CollegeApply

1524. Kallmans syndrome is associated with all of the following except

a) Amenorrhea

b) Excess stimulation of the HPO axis

c) Genetic mutation

d) Anosmia

Correct Answer - B

Answer- B. Excess stimulation of the HPO axis

When congenital GnRH deficiency is associated with anosmia or hyposmia (an absent or grossly impaired sense of smell), the disorder is known as Kallmann's syndrome.

Two genetic mutations associated with Kallman's Syndrome :

1. KAL gene - X - linked inheritance (Xp22.3) encoding anosmin - 1.
2. Gene encoding FGFR1 (Fibroblast growth factor - 1 receptor) - autosomal dominant form.

- Anosmin - 1 is a neural adhesion molecule that promotes migration of GnRH neurons and olfactory neurons, from the olfactory placode into the hypothalamus during embryonic development.

1525. Patient with NTD, dose of folic acid in next pregnancy

a) 0.5 mg

b) 1 mg

c) 2 mg

d) 4 mg

Correct Answer - D
Answer- D. 4 mg
Folic acid supplementation 4 mg daily 1 month before conception to about 12 weeks of pregnancy.

KollegeApply

1526. Absolute contraindication for IUD (Intra Uterine Contraceptive Device) are all except *?*

a) Pregnancy

b) Undiagnosed vaginal bleeding

c) Pelvic inflammatory disease

d) Uterine malformation

Correct Answer - D
Ans. is 'd i.e., Uterine malformation
Contraindications
ABSOLUTE:
a) Suspected pregnancy
b) Pelvic inflammatory disease
c) Vaginal bleeding of undiagnosed etiology
d) Cancer of the cervix, uterus or adnexa and other pelvic tumours
e) Previous ectopic pregnancy
RELATIVE :
a) Anaemia
b) Menorrhagia
c) History of PID(Pelvic Inflammatory Disease) since last pregnancy
d) Purulent cervical discharge
e) Distortions of the uterine cavity due to congenital malformations, fibroid
f) Unmotivated person

CollegeApply

1527. G2P1L1 female with 1 : 4 anti D titres at 28 weeks gestation, management is

a) MCA Doppler

b) Caesarean section

c) Induction of labour

d) Amniocentesis

Correct Answer - A

Answer- A. MCA Doppler

If Indirect Coomb's test is positive in an antenatal patient with Rh negative blood group, and antibody titres >1 : 16 or Ab level > 10 IU/ml

1. Serial MCA Doppler, every 1 - 2 weeks from 20 weeks
2. Serial ultrasonography every 2 - 3 weeks from 20 weeks

KollegeApply

1528. All are of value in modified Bishop score except

a) Dilatation

b) Effacement

c) Cervical length

d) Consistency

Correct Answer - B

Answer- B. Effacement

Bishop scoring system:

Score	Dilation (cm)	Position of cervix	Effacement (%)	Station (-3 to +3)	Cervical Consistency
0	Closed	Posterior	0-30	-3	Firm
1	1-2	Mid position	40-50	-2	Medium
2	3-4	Anterior	60-70	-1, 0	Soft
3	5-6	--	80	+1, +2	--

CollegeApply

1529. Antimullerian hormone is secreted by ?

a) Granulosa cells

b) Lyedig cells

c) Sertoli cells

d) None

Correct Answer - C
Ans. is 'c' i.e., Sertoli cells
Antimullerian hormone or Mullerian inhibiting substance is secreted by sertoli cells.

KollegeApply

1530. Number of stem villi at term in human placenta is

a) 60

b) 120

c) 240

d) 480

Correct Answer - A
Answer- A. 60
Functional subunit is called a lobule which is derived from a tertiary stem villi. About 60 stem villi persist in human placenta. Thus each cotyledon (total 15 - 29) contains 3 - 4 major stem villi. The villi are the functional unit of the placenta. The total villi surface, for exchange, approximately varies between 10 to 14 square metres. The fetal capillary system within the villi is almost 50 km long.

CollegeApply

1531. Uterus is receptive for implantation for how many days after fertilization -

a) 6 days

b) 12 days

c) 6 weeks

d) 12 weeks

Correct Answer - D
Answer- D. 12 weeks
Superfetation is the fertilization of two ova released in two different menstrual cycles. The nidation and development of one fetus over another fetus is theoretically possible until the decidual space is obliterated by 12 weeks of pregnancy.

KollegeApply

1532. Human placenta is ?

a) Discoid

b) Hemochorial

c) Deciduate

d) All the above

Correct Answer - D
Ans. is 'd' i.e., All the above
The human placenta is :

- Discoid, because of its shape.
- Hemochorial, because of direct contact of the chorion with the maternal blood andDeciduate, because some maternal tissue is shed at parturition.

KollegeApply

1533. All are true about uteroplacental circulation except

a) Blood in the intervillous space is completely replaced 3 - 4 times per minute

b) The villi depend on the maternal blood for their nutrition

c) A mature placenta has 150 ml of blood in the villi system and 350 ml of blood in the intervillous space

d) Intervillous blood flow at term is 500 - 600 ml per minute

Correct Answer - C

Answer- C. A mature placenta has 150 ml of blood in the villi system and 350 ml of blood in the intervillous space

A mature placenta has a volume of about 500 ml of blood; 350 ml being occupied in the villi system and 150 ml lying in the intervillous space.

Intervillous blood flow at term is around 500 - 600 ml per minute.

The blood in the intervilllous space is completely replaced about 3 - 4 times per minute.

The villi depend on maternal circulation for nutrition, thus it is possible for the chorionic villi to survive for a varying period even after the fetus is dead.

KollegeApply

1534. Which is increased in premature ovarian failure :

a) Sr. Inhibin

b) Sr. FSH

c) Sr. Estradiol

d) Both A and B

Correct Answer - B

Answer- B. Sr. FSH

In premature ovarian failure :-

1. FSH level increased (40 mIU/ml or more).
2. Estrogen is decreased (E2 Level 20 pg/ml or less)
3. Inhibin B is decreased.

[Ref Shaw's Gynaecology 10h/e p. 74; Speroffs Clinical Gynaecologic Endocrinology and Infertility 5th/e p. 463]

CollegeApply

1535. All of the following are markers of ovarian reserve except -

a) Inhibin A

b) Estradiol concentration

c) Inhibin B

d) Ovarian volume

Correct Answer - A
Answer- A. Inhibin A
Basal FSH and Estradiol concentration
Clomiphene Citrate Challenge Test
Inhibin B
Antimullerian hormone
Antral follicle count
Ovarian volume

KollegeApply

1536. Most common site involved in genital TB -

a) Fallopian tubes

b) Endometrium

c) Ovaries

d) Vulvo - vaginal part

Correct Answer - A
Answer- A. Fallopian tubes
Fallopian Tubes → 90 - 100

KollegeApply

1537. Which is not a side effect of POP [Progestin only pill]

a) Ovarian cysts

b) Venous thromboembolism

c) Increased risk of diabetes mellitus

d) Ectopic pregnancy

Correct Answer - B

Answer- B. Venous thromboembolism

Adverse effects of progestin only pill (minipill)

- Menstural irregularities
- Headache, nausea, dizziners
- Bloating or weight gain
- Increased risk of INDDM
- Ovarian cysts
- Breast tenderness
- Acne
- Ectopic pregnancy

KollegeApply

1538. Maternal age is not associated with -

a) Preterm labour

b) Post maturity

c) Aneuploidy

d) Hydatidiform mole

Correct Answer - A
Answer- A. Preterm labour
Recent evidence however suggests lowest incidence of preterm labor between 18 and 35 years of age and higher risk in lower and higher age groups.

KollegeApply

1539. What is to be done if 2 OCP is missed on day 17 - 18 of the cycle -

a) Take 2 pills on the next 2 days

b) Use back up contraceptive

c) Both a and b

d) Continue taking single pill per day

Correct Answer - B

Answer- B. Use back up contraceptive

Missing pills while on OCP - Management :

- Missing one pill (late upto 24 hours) -take the missed pill at once and continue the same regimen.
- Missing two pills in the first week (days 1 - 7) - take two pills on each of the next two days and then continue the schedule. Extra - precaution (back up) - alternative contraception
- Missing two pills in the third week (days 15 - 21) or if more than two pills are missed at any time - another form of contraception. Start the next pack without a break.
- Missing any of the 7 inactive pills - throw away the missed pills. Start the new pack as usual.

CollegeApply

1540. Most common complication of dermoid cyst is -

a) Cyst Rupture

b) Torsion

c) Malignant degeneration

d) None of the above

Correct Answer - B
Answer- B. Torsion
Torsion is the most common complication occurring in Dermoid cyst. Because of the fat content of the cyst, it is lighter than other ovarian tumors and therefore easily torsioned. Almost 15% of dermoid cysts undergo torsion.

KolleegeApply

1541. Cause of unilateral dysmenorrhea :

a) One horn of malformed uterus

b) Endometriosis with unilateral distribution

c) Small fibroid at the utero tubal junction

d) All of the above

Correct Answer - D
All of the above

- Causes of unilateral dysmenorrhea :
One horn of malformed uterus
Endometriosis with unilateral distribution
Small fibroid at the utero - tubal junction.
Ovarian dysmenorrhea
Right ovarian vein syndrome
Colonic or caecal spasm.

KollegeApply

1542. Management of tubal ectopic pregnancy of 2.5 x 3 cm is -

a) Medical management

b) Salpingectomy

c) According to presence of fetal cardiac activity

d) Observation

Correct Answer - C

Answer- C. According to presence of fetal cardiac activity

Conservative management

Medical management :

1. Hemodynamically stable
2. Serum hCG level < 3000IU/L
3. Tubal diameter < 4 cm without any fetal cardiac activity
4. No intraabdominal haemorrhage

Surgical management :

1. Hemodynamic instability
2. Serum hCG level > 3000 IU/L
3. Tubal diameter > 4 cm
4. Presence of fetal cardiac activity

CollegeApply

1543. Dose of dexamethasone for fetal lung maturity is -

a) 6 mg

b) 12 mg

c) 18 mg

d) 24 mg

Correct Answer - A
Answer- A. 6 mg
Betamethasone - 12 mg i.m. 24 hours apart for 2 doses
Dexamethasone - 6 mg i.m. 12 hours apart for 4 doses.
Betamethasone - Steroid of choice.

KolleeApply

1544. Most common cause of secondary PPH is :

a) Uterine inertia

b) Retained placenta

c) Episiotomy

d) Cervical tear

Correct Answer - B
Retained placenta
Secondary PPH

- Bleeding usually occurs between 8th to 14th day of delivery.
- Causes of late PPH :

Retained bits of cotyledon or membranes (M.C.)
Infection and separation of slough over a deep cervico - vaginal laceration.
Endometritis and subinvolution of the placental site.

KollegeApply

1545. Management of a patient with complete placenta previa at 38 weeks gestation without any vaginal bleeding is -

a) Expectant management

b) Macafee and Johnson regimen

c) Elective caesarean section

d) Emergency caesarean section

Correct Answer - C

Answer- C. Elective caesarean section

As this patient is more than 37 weeks gestation, active interference is mandatory.

But as this patient is not actively bleeding therefore elective caesarean section can be planned.

KollegeApply

1546. True about nabothian cyst is all except -

a) Squamous epithelium occludes the mouth of the glands

b) It is seen in chronic irritation and inflammation

c) It is a pathology of the cervix

d) It is pre - malignant

Correct Answer - D
Answer- D.It is pre - malignant
Seen in chronic inflammation of cervix.
It is the result of blockage of mouth of the glands of the cervix.
During the process of healing, the squamous epithelium replaces the columnar epithelium.
The blocked glands become distended with secretion and form small cysts which can be seen with the naked eye, the so-called nabothian follicles.
The condition is neither malignant nor pre-malignant.

KolleeApply

1547. Most common cause of pelvic inflammatory disease is -

a) Sexually transmitted disease

b) IUCD

c) Pelvic peritonitis

d) Puerperal sepsis

Correct Answer - A
Answer- A. Sexually transmitted disease
Sexually transmitted disease is the most common cause.
Gonococcal and chlamydial infections are the most common cause.
Postabortal or puerperal sepsis.
IUCD
Tuberculosis
Pelvic peritonitis, due to appendicitis and diverticulitis.

KollegeApply

1548. There is overlapping of skull sutures which can be reduced with gental pressure. What is the grade of moulding ?

a) Grade 1

b) Grade 2

c) Grade 3

d) Grade 4

Correct Answer - B

Answer- B. Grade 2

There are three gradings of moulding :

- Grade 1 - the bones touching but not overlapping
- Grade 2 -overlapping but easily separated
- Grade 3 - fixed overlapping.

CollegeApply

1549. Risk factor for cervical carcinoma is -

a) Smoking

b) Human papilloma virus

c) Low socioeconomic status

d) All of the above

Correct Answer - D
Answer- D. All of the above
HPV infection.
Coitus before 18 years.
Multiple sexual partners.
Delivery of the first baby before the age of 20 years.
Multiparity with poor birth spacing between pregnancies.
Poor personal hygiene.
Poor socioeconomic status.
Smoking.
Immunosupressive disease.

KollegeApply

1550. What is the stage of carcinoma cervix involving body of uterus -

a) Stage I

b) Stage II

c) Stage III

d) Stage IV

Correct Answer - A

Answer- A. Stage I

Cervical Cancer - FIGO Staging

Stage 0	Carcinoma in situ
Stage I	Intraepithelial carcinoma confined to the cervix
Stage IA	Diagnosed only by microscopy
Stage IA1	Microinvasiva carcinoma with stromal invasion < 3 mm in depth & < 7 mm in wide.
Stage IA2	Microinvasiva carcinoma not exceeding 5 mm in depth /7 mm in width.
Stage IB	Clinically visible or microscopic lesion > IA2.
Stage IB1	Clinical lesion not exceeding 4cm in diameter.
Stage IB2	Clinical lesion more then 4 cm in diameter.
Stage II	Extension beyond the cervix but not to the pelvic wall.
Stage	Involvement of vagina but not the lower third

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IIA	involvement of vagina but not the lower third.
Stage IIA1	Clinically visible lesion more then 4 cm.
Stage IIA2	Clinically visible lesion more then 4 cm.
Stage IIB	Parametrial involvement not reaching the pelcvic side wall.

KollegeApply

1551. Most common cause of death in cervical cancer is -

a) Renal failure

b) Infection

c) Haemorrhage

d) Metastasis to vital organs

Correct Answer - A

Answer- A. Renal failure

Renal failure is the most common cause of death in cervical cancer. Renal failure in cervical cancer occurs due to involvement of ureters in Stage 1IIB. It can also occur due to direct involvement of kidney as in stage IV B.

CollegeApply

1552. Treatment options for CIN III include all of the following except -

a) LLETZ

b) Conization

c) Hysterectomy

d) Wertheim's hysterectomy

Correct Answer - D

Answer- D. Wertheim's hysterectomy

Treatment options of (IN III

1. Conservative ablation : coagulation, cryoscrgery, laser ablation
2. Local excision : conization, laser conization, lleT2, LEEP, NETZ
3. Radical excision : Trachelectomy, hystrectomy (with or without removal of vaginal cuff).

- Wertheim's hysterectomy is generally not done in cases of CIN III if vagina or lymph nodes are not involved.

CollegeApply

1553. A 40 year old woman presents with abnormal cervical cytology on PAP smear suggestive of CIN III (HSIL). The next best step in management is:

a) Hysterectomy

b) Colposcopy and LEEP

c) Colposcopy and Cryotherapy

d) Conization

Correct Answer - B
According to FIGO classification, cervical intraepithelial neoplasia 3 (CIN 3) belong to stage 0.
Loop electrocautery excision procedure done under colposcopic visualization is the mode of treatment for CIN II and CIN III lesions.

Ref: Novak's, 14th Edition, Page 582, 583; William's Gynoecology, 1st Edition, Page 635; COGDT, 10th Edition, Pages 841, 837; Dewhurst's, 6th Edition, Pages 575, 574.

KollegeApply

1554. What size of the hegar's dilator if passed through the internal os can be labeled as cervical incompetence?

a) 4

b) 6

c) 8

d) 10

Correct Answer - C
Answer- C. 8
Passage without resistance and pain of No. 8 Hegar's dilator is a screening test for cervical incompetence.

KollegeApply

1555. Funneling in cervicogram is seen in -

a) In labour

b) Cervical incompetence

c) Cervical ectopic

d) During TVS

Correct Answer - B
Answer- B. Cervical incompetence
Cervicogram is done for diagnosis of cervical incompetence. In other conditions, cervicogram is not done.

KollegeApply

1556. In cervical incompetence diameter of internal os of cervix is -

a) 1 cm

b) 1.5 cm

c) 2 cm

d) 2.5 cm

Correct Answer - A

Answer- A. 1 cm

Cervical sonography :

- Funelling of the cervix with changes in the form of Y, V, U.
- Cervical length < 2.5 cm.
- Funnelling of the internal os > 1 cm
- Speculum examination : Detection of dilatation of internal os with herniation of the membranes.
- Cervical index = (Funnel length + 1) / (endocervical length).
- The "+1" allows an index to be calculated when funelling is absent.

Predictors of preterm birth :

- Cervical index > 0.52.
- Cervical length < 18 mm
- Funnel length > 9 mm.
- Funnel width > 6 mm.

CollegeApply

1557. Contracted pelvis is defined as shortening of one or more planes by -

a) 0.5 cm

b) 1 cm

c) 1.25 cm

d) 1.5 cm

Correct Answer - A
Answer- A. 0.5 cm
Anatomically, contracted pelvis is defined as shortening of one or more planes by 0.5 cm.

KollegeApply

1558. Vasa previa is associated with -

a) Marginal placenta

b) Velamentous placenta

c) Battledore

d) Placenta previa

Correct Answer - B
Answer- B. Velamentous placenta
If a leash of blood vessels happen to traverse through the membranes overlying the internal is, in front of the presenting part, the condition is called as vasa praevia.
It is associated with velamentous placenta.
The unsupported umbilical vessels in velamentous placenta, lie below the presenting part and run across the cervical os.
Rupture of membranes involving the overlying vessels leads to vaginal bleeding.
As it is entirely fetal blood, this may result in fetal exsanguination and even death.
[Ref Dutta's Obstetrics 8th/e p. 301]

KollegeApply

1559. First symptom invulval cancer is-

a) Pain

b) Pruritis

c) Ulcer

d) Blood discharge

Correct Answer - B

Ans. B.Pruritis

- Women with WN and yulvar cancer commonly present with pruritus and a visible lesion.
- However, pain, bleeding, and ulceration may also be initial complaints'

KollegeApply

1560. Most common type of conjoint twin is -

a) Thoracopagus

b) Omphalopagus

c) Craniopagus

d) Rachipagus

Correct Answer - A
Answer- A. Thoracopagus
Four types of fusion may occur :

- Thorapagus - Most common
- Pyopagus (posterior fusion)
- Craniopagus (cephalic)
- Ischiopagus (caudal)

KollegeApply

1561. Uterine height is greater than gestational age of the patient in a case of all except -

a) Fibroid uterus

b) IUGR

c) Wrong dates

d) Polyhydramnios

Correct Answer - B

Answer- B. IUGR

Uterine height greater than gestational age in case of :

- Wrong dates
- Polyhydramnios
- Pregnancy with fibroid uterus
- Multiple pregnancy

KollegeApply

1562. Pregnancy is contraindicated in which cardiac disease -

a) Mitral stenosis

b) Primary pulmonary hypertension

c) VSD

d) Mitral regurgitation

Correct Answer - B

Answer- B. Primary pulmonary hypertension

Place of therapeutic termination in case of following heart diseases.

Considering high maternal deaths, absolute indications are :

- Primary pulmonary hypertension
- Eisenmenger's syndrome
- Pulmonary veno - occlusive disease.

KollegeApply

1563. Following delivery, tear involves perineum, external anal spincter with intact mucosa, grade of tear is -

a) First degree

b) Second degree

c) Third degree

d) Fourth degree

Correct Answer - C

Answer- C. Third degree

Third degree : Injury to perineum, involving the anal sphincter complex (both the external and internal).

- 3a : if half thickness external anal sphincter involved.
- 3b : if full thickness external anal sphincter involved.
- 3c : if internal anal sphincter involoved.

KollegeApply

1564. Not a cause of oligohydramnios -

a) IUGR

b) Renal agenesis

c) Amnion nodosum

d) Chorioangioma

Correct Answer - D
Answer- D. Chorioangioma
Fetal,

- Chromosomal or structural anamolies
- Renal agenesis
- Obstructive uropathy
- Spontaneous rupture of membrane
- Intrauterine infection
- Drugs: PG inhibitors, ACE inhibitors
- Postmaturity
- IUGR
- Amnion nodosum
- Maternal
- Hypertensive disorders
- Uteorplacental insufficiency
- Dehydration
- Idiopathic

KollegeApply

1565. False about chorionic vinous sampling -

a) Is used for prental genetic diagnosis

b) Is performed only in second trimester of pregnancy

c) Villi collected from chorion frondosum

d) Can cause limb deformities

Correct Answer - B
Answer- B. Is performed only in second trimester of pregnancy
Is used for prenatal genetic diagnosis.
Performed transcervically through 10-12 weeks (first trimester) and transabdominally from 10 weeks to term. (Advantage over amniocentesis which is performed in second trimester of pregnancy)
Villi are collected from chorion frondosum.
Can cause oromandibular limb deformities or limb reduction defects if performed before 10 weeks of gestation.

CollegeApply

1566. A 28 year old primigravida with 32 weeks of gestation comes with complain of thin, frothy, profuse discharge through the vagina since yesterday. She was advised USG which showed Single live intrauterine gestational sac with FL and AC corresponding to the weeks of gestation and AFI as adequate.What is the diagnosis?

a) PPROM

b) Trichomoniasis

c) Normal finding

d) Candidiasis

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Correct Answer - B

Answer- B. Trichomoniasis

Patients infected with Trichomonas vaginalis complain of a typical discharge, which is thin, profuse, frothy, irritating, creamy or slight green in colour.

Slight green colour of the discharge is often not complained by the patient but spotted by the physician.

1567. Risk factors for molar gestation are all of the following except -

a) Oriental countries

b) Disturbed maternal immune mechanism

c) Higher ratio of maternal/paternal chromosomes

d) Faulty nutrition

Correct Answer - C

Answer- C. Higher ratio of maternal/paternal chromosomes

Risk factors for H. mole :

1. Oriental countries, highest incidence in Philippines.
2. Teenage pregnancies or > 35 years.
3. Faulty nutrition.
4. Disturbed maternal immune mechanism.
5. Higher ratio of paternal/maternal chromosomes (not maternal/paternal)

- Higher the ratio, greater the molar change. Complete moles show 2:0 paternal/maternal ratio whereas partial mole shows 2 : 1 ratio.

CollegeApply

1568. Poor prognostic factor for hydatidiform mole is -

a) Prior molar pregnancy

b) Metastasis to lung

c) No prior chemotherapy

d) WHO score > 8

Correct Answer - D

Answer- D. WHO score > 8

High Risk (Poor Prognosis) :

- Long duration of disease (> 4 months)
- Initial serum hCG level > 40,000 mIU/ml
- Brain or liver metastasis
- Failure of prior chemotherapy
- Following term pregnancy
- WHO score > 8

KollegeApply

1569. Drugs used in endometriosis is

a) Combined oral contraceptives

b) Letrozole

c) Mifepristone

d) All of the above

Correct Answer - D
Answer- D. All of the above
Combined oral contraceptives - Administered intermittently or continuously, oral contraceptives may alleviate the disease.
Oral progestogens - Exert anti - estrogenic effect and their continuous administration causes decidualization and endometrial atrophy.
Danazol - inhibits pituitary gonadotropins
GnRH analogues - Downregulate and suppress pituitary gonadotropins.
Aromatase inhibitors (letrozole) : Anti - estrogenic action
Anti - progestin (mifepristone)

KollegeApply

1570. Embryo gets implanted at what stage of development?

a) Two cell stage

b) Four cell stage

c) Morula

d) Blastocyst

Correct Answer - D

Answer- D. Blastocyst

After the zygote formation, typical mitotic division of the nucleus occurs producing two blastomeres.

Two cell stage is reached approximately 30 hours after fertilization.

The blastomeres continue to divide by binary division through 4, 8, 16 cell stage until a cluster of cells is formed and is called morula, resembling a mulberry.

Morula after spending about 3 days in the uterine tube enters the uterine cavity through the narrow uterine ostium (1mm) on the 4th day in the 16 - 64 cell stage.

Implantation occurs on the 6th day which corresponds to the 20th day of regular menstrual cycle.

Implantation occurs through 4 stages : apposition, adhesion, penetration and invasion.

CollegeApply

1571. Leydig cells of fetus testis secretes

a) hCG

b) LH

c) Testosterone

d) Mullerian inhibiting substance

Correct Answer - C
Answer- C. Testosterone
Leydig cells in fetal testis are the cellular site of testosterone synthesis.
Fetal testis also secretes mullerian inhibiting substance produced by sertoli cells which acts locally as a paracrine factor to cause mullerian duct regression. Mullerian duct regression completes by 9 to 10 weeks' gestation, which is much before testosterone secretion has commenced.

KollegeApply

1572. Le Fort repair is done for

a) Uterovaginal descent

b) Vault prolapse

c) VVF

d) RVF

Correct Answer - A
Answer- A. Uterovaginal descent
Le Forte's repair

- Very elderly menopausal women
- Advanced prolapse
- Unfit for any major surgical procedure

[Ref Shaw's Gynaecology 16th/e p. 360]

KollegeApply

1573. Bacteria responsible for ectopic pregnancy is

a) Staphylococcus

b) Chlamydia

c) Peptostreptococcus

d) Trichomonas vaginalis

Correct Answer - B
Answer- B. Chlamydia
Salpingitis and PID (Pelvic Inflammatory Disease) is the most important risk factor for ectopic pregnancy. Chlamydia trachomatis infection is the most common risk factor for PID and salpingitis.
[Ref Dutta's Obstetrics 8th/e p.. 207]

KollegeApply

1574. Most common site of Implantation of tubal pregnancy is :

a) Interstitial portion of fallopian tube

b) Isthmus

c) Ampulla

d) Infundibulum

Correct Answer - C
Ampulla

- *Maximum propensity* to *rupture —> Isthmic ectopic pregnancy.*
- *Minimum propensity to rupture -3 Ampullary ectopic pregnancy.*

KollegeApply

1575.

KollegeApply

In which part of fallopian tube ectopic pregnancy will have longest survival?

a) Isthmus

b) Ampulla

c) Cornua

d) Interstitium

Correct Answer - D

Ans. D. Interstitium

If the implantation occurs in the antimesenteric border in the ampulla, the pregnancy may continue a little longer time.

Earliest interruption occurs in the isthmial implantation and pregnancy may continue upto 3-4 months in interstitial implantation.

Also know:

- Isthmic rupture usually occurs at 6-8 weeks, the ampullary one at 8-12 weeks and the interstitial one at about 4 months.

Ref: Textbook of Obstetrics by DC Dutta, 6th edition, Page 181.

CollegeApply

1576. Which of the following is true about ovarian ectopic pregnancy?

a) Studdiford criteria is used for diagnosis

b) There should be no rent on the ovary or tube

c) Absence of evidence of pregnancy at any other site than ovarian

d) Conservative surgery can be done if diagnosed early

Correct Answer - D

Answer- D. Conservative surgery can be done if diagnosed early

Ovarian ectopic is a rare entity that is difficult to diagnose clinically. It usually does not proceed past the first four weeks of pregnancy.

Spiegelberg's criteria is used for diagnosis of ovarian pregnancy. It includes :

1. Tube on the affected side must be intact.
2. The gestation sac must be in the position of the ovary.
3. The gestation sac is connected to the uterus by the ovarian ligament.
4. The ovarian tissue must be found on its wall on histological examination.

CollegeApply

1577. Plane of cleavage during placental separation runs through

a) Between compact and spongy layer of decidua basalis

b) Between decidua basalis and chorion frondosum

c) Through deep spongy layer of decidua basalis

d) Between layers of chorion frondosum

Correct Answer - C

Answer- C. Through deep spongy layer of decidua basalis

Marked retraction reduces effectively the surface area at the placental site to about its half. But as the placenta is inelastic, it cannot keep pace with such an extent of diminution resulting in its buckling. A shearing force is instituted between the placenta and the placental site which brings about its ultimate separation.

KalpaCApply

1578. Amsel criteria is for

a) Bacterial vaginosis

b) Antiphospholipid antibody syndrome

c) Ovarian ectopic pregnancy

d) HELLP Syndrome

Correct Answer - A

Answer- A. Bacterial vaginosis

Amsel criteria : Three out of four of the following should be present

- A white / gray homogenous discharge
- A vaginal discharge pH of > 4.5
- A positive amine test (drop of 10% potassium hydroxide added to drop of discharge on a slide produces fishy odour), also known as Whiff test.
- Microscopy demonstrates clue cells.

KollegeApply

1579. True about Keratinocyte is ?

a) Ectoderm derived cell

b) Present only in basal layer

c) Mature in basal layer

d) Differentiate in basal layer

Correct Answer - A

Ans. A. Ectoderm derived cell

- The principal cells of epidermis are keratinocytes.
- Keratin filament is the hallmark of keratinocytes. Keratinocytes has following features:

1. Proliferate (divide) in basal layer
2. Differentiation occurs in stratum sPinosum and stratum granulosum.
3. Completely mature and die in stratum corneum.

- So, keratinocytes are present in all four layers of epidermis,
- Keratinocytes are derived from ectoderm.

KollegeApply

1580. Odland bodies are seen in which layer of epidermis?

a) Basal cell layer

b) Prickle cell layer

c) Stratum granulosum

d) Stratum corneum

Correct Answer - C

Ans. C. Stratum granulosum

Odland bodies are membrane coated granules in stratum granulosum, which contain lipids which is responsible for barrier function of this layer.

This layer also contains diamond shaped keratohyaline granules, which are the characteristic features of this layer.

These keratohyaline granules contain filaggrin protein which is responsible for aggregation of keratin filaments.

CollegeApply

1581. Anagen phase of the hair indicates:

a) The phase of activity and growth

b) The phase of transition

c) The phase of resting

d) The phase of degeneration

Correct Answer - A
A i.e. The phase of activity & growth

KollegeApply

1582. A girl about to marry has comedonal acne. Drug to treat such a case is: *March* 2013

a) Topical antibiotic

b) Benzoyl peroxide

c) Retinoids

d) Estrogen

Correct Answer - C

Ans. C i.e. Retinoids

- *Retinoids are mainly comedolytic*

Acne

- Comedones are characteristic of: Acne vulgaris
- Comedones are:
  * Small cysts,
  * formed in hair follicles,
  * due to blockage of the follicular orifice
  * by the retention of sebum and keratinous material
- Acen vulgaris is caused by: Obstruction of pilosebaceous duct

Nodulocystic acne (NA)

- Treatment of NA: Isotretinonin (synthetic retinoic acid)

KollegeApply

1583. In which of the following phototherapy is useful in treatment ?

a) Psoriasis

b) Tinea corporis

c) Pemphigus

d) PMLE

Correct Answer - A
Ans. A. Psoriasis
Indications for PUVA and UVB
1. Established major indications :- Psoriasis, atopic dermatitis, vitiligo, mycosisfungoides, Polymorphic light eruption, pompholyx.
2. Less frequently treated (less evidence of effectiveness) :- Pityriasis rosea, morphea, chronic urticaria, Pityriasis lichenoid chronica, Alopecia totalis & Universalis, Lichen planus, Pityriasis rubra pilaris, Granuloma annulare, Generalized pruritis, Nacrobiosis lipoidics.

CollegeApply

1584. Acanthosis nigricans is characterized by all of the following except ?

a) Common in obese people

b) Associated with thick skin with hyperpigmentaion

c) Histologically there is hypermelanosis

d) May be a sign of internal malignancy

Correct Answer - C

Ans. C. Histologically there is hypermelanosis

Acanthosis nigricans is brown to black discolouration which usually affects body folds like axilla, groin, umblicus, forehead.

Acanthosis nigricans occurs in individuals younger than 40 years of age.

It is associated with obesity (most common); endocrinopathy like insulin resistance DM, hypothyroidism, Bloom synd., PCOD, and internal malignancy e.g. gastric adenocarcinoma.

Histopathologically, Papillomatosis is the characteristic feature whereas there is no hypermelanosis.n

CollegeApply

1585. After hepatitis B vaccination child with allergic family history and pruritis involving face & convexities developed numerous umblicated vesicles; which became pustular & haemorhagic & crusted. After 2 days child developed high fever and lymphadenopathy. The diagnosis is

a) Secondary infected atopic dermatitis

b) Molluscum contagiosum

c) Eczema herpaticum

d) Eczema vaccinatum

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Correct Answer - C
C. i.e. Eczema herpaticurrtx
* Eczema herpeticum or Kaposi's varicelliform eruption results from wide spread (usually) primary *HSV- 1 (herpes simplexl) infection in skin damaged by atopic dermatitis (eczema)Q.*
* Patients with *atopic eczema* may develop severe *orofacial herpes simplex virus (HSV) infectionQ (eczema herpaticum),* which may rapidly involve extensive areas of skin & occasionally disseminate to visceral organs. *Systemic acyclovir or valaciclovir* is treatment of choice.
* *In atopic dermatitis* patients, *small pox vaccination or even exposure to vaccinated individual,* may cause severe wide spread erruption (k/a eczema vaccinatum) that resembles to eczema

herpaticum.

* Kaposis varicelliform eruptions manifest either as - eczema herpeticum or eczema vaccinatum.

Disease	Causative Virus
Eczema herpeticum	*HSV-1 (Herpes simplex honimis virus)Q*
Eczema vaccinatum	Vaccinia virus due to inadvertent vaccination of small pox with live virus vaccine
Milker's node	Paravaccinia / Pseudocowpox

KollegeApply

1586. Epidermal nevus follows ?

a) Blaschko's lines

b) Langer's lines

c) Vasculature

d) Lymphatics

Correct Answer - A

Ans. A. Blaschko's lines

- Blaschko's lines correspond to the pathways followed by keratinocytes migrating from the neural crest during embryogenesis.
- Lines of Blaschko represent non-random lines of development of skin.
- Epidermal nevus follow the Blaschko's line

The skin lesions that follow the Blaschko's lines are -

1. Pigmented disorders:- Nevus achromicus (including Hypomelanosis of ito), Epidermal nevus (Nevus sebaceous, Inflammatory linear verrucous nevus).
2. X-linked genetic skin conditions:- Incontinentia pigmenti, CHILD syndrome.
3. Acquired inflammatory skin rashes:- Lichen striatus, Lichen planus, lupus erythematosus.
4. Chimerism

KollegeApply

1587. Which of the following organism has a role to play in Seborrhic dermatitis ?

a) Pityrosporum ovale

b) Canida albicans

c) Propionibacterium

d) None of the above

Correct Answer - A
Ans. A. Pityrosporum ovale
Malasezia furfur or its yeast form Pityrosporum ovale plays an etilogicalrole in Seborrhic dermatitis."

KolleegeApply

1588. Pruritus is a feature of which of the following ?

a) Pemphigus foliaceous

b) Pemphigus vulgaris

c) Bullous Pemphigoid

d) All of the above

Correct Answer - C
Ans. C. Bullous Pemphigoid
Diseases causing mild or no itching: Psonasis, Pityriasis rosea, SLE, parapsoriasis, Secondary syphilis, Pemphigus.
Diseases causing moderate itching: Contact dermatitis, Dry skin, Bullous pemphigoid, Photosensitivity (sunburn).
Diseases causing severe itching: Lichen planls, Lichen simplex chronicus, Herpes gestationis, Mastocytosis, Dermatitis herpetiformis, scabies, Prurigo nodularis.

CollegeApply

1589. Goekarman regimen used in for treatment of psoriasis is?

a) UVB plus coal tar

b) UVB plus anthralin

c) Coal tar plus anthralin

d) UVB plus methotrexate

Correct Answer - A
Ans. A. UVB plus coal tar
Goekerman regimen was invented for the treatment of mild to moderate psoriasis.
In this therapy application of crude coal tar application for 2-10 hours is followed by exposure to UVB light.
Treatment is now obsolete.
Similarly UVB plus anthralin combination is known as Ingram regimen.

KollegeApply

1590. Among various types of psoriatic arthrirtis, which variety is most common ?

a) Classic

b) Oligoarticular

c) Rheumatoid

d) Spondylitis

Correct Answer - B

Ans. B. Oligoarticular

Psoriatic arthritis (Affects 5-1Och of psoriatic patients)

- Classic or polyarticular type (16%):- affects DIP joints with “sausage shape apearance"of fingers
- and toes. Nail involvement is common.
- Monoarticular or oligoarticular type (70%) most common type, affects large joints like knee.
- Rheumatoid type (15%) :- RA like presentation. Symmetrical. Affects PIP joints leading to "swan neck deformity."
- Axial type or spondylitis :- associated with HLA - B27.

CollegeApply

1591. Drug of choice for bubos in a pregnant female is ?

a) Tetracycline

b) Doxycycline

c) Ceftriaxone

d) Erythromycin

Correct Answer - D
Ans. D. Erythromycin
Buboes are most commonly caused by LGV.
Doxycycline/tetracycline is the drug of choice for LGV in a non-pregnant female.
In a pregnant female and children below 8 years, it should be treated with erythromycin.

KollegeApply

1592. Which 'P' is not a feature of lichen planus ?

a) Polygonal

b) Polyhedral

c) Pruritus

d) Plane

Correct Answer - B
Ans. B. Polyhedral
5 characteristic 'P' of lichen planus
1. Pruritic (itching)
2. Polygonal
3. Purple (violaceous)
4. Plane (flat topped)
5. Papule or plaque

These 5 Ps are the characteristic features of lichen planus lesions presentation.

KollegeApply

1593. In lichen planus all the following sites are affected except ?

a) Flexor aspect of upper extrimities

b) Oral mucosa

c) Nails

d) Extensor aspect of upper extrimities

Correct Answer - D

Ans. D. Extensor aspect of upper extrimities

Sites of involvement in lichen planus

- Flexors aspect of upper extremities and legs are the most common site involved.
- Oral mucosa involvement may lead to lacy pattern of lesions
- Nail involvement may cause pterygium (most characteristic), onychorrhexia, nail atrophy, anychia.
- Hair involvement cause scaring alopecia
- Inverse lichen planus affects axillae, groin, infraaxillary areas.

CollegeApply

1594. Not a hemorrhagic lesion ?

a) Petechiae

b) Echymosis

c) Plaque

d) None of the above

Correct Answer - C
Ans. C. Plaque
Petechiae are small pin point purpuric macular lesions that occur due to extravasation of red blood cells from cutaneous vessels into the skin.
Echryosis are larger bruise like hemorrhagic lesions. Cause is generally non inflammatory.
Plaque is a solid plateau like elevation that occupies a large surface area in comparison to its height above the normal skin and has a diameter more than 0.5 cms. There is no hemorrhage involved as such

KollegeApply

1595. Maculae cerulea is seen in ?

a) Pediculosis hominis corporis

b) Pediculosis capitis

c) Scabies

d) Lupus erythematosus

Correct Answer - A

Ans. A. Pediculosis hominis corporis

Maculae cerulea:

- This is a latin name for blue-grey macula.
- Pathognomic of lice infestation (Pediculosis corporis and Pediculosispthiris)
- They are hemosiderin-stained purpuric spots at the site of insect bite.
- Enzymes in insect salive breaks down human bilirubin to biliverdin, causing the color change in the skin.

KollegeApply

1596. Incontinentia pigmenti involves all exept ?

a) Skin

b) Bones

c) Teeth

d) Heart

Correct Answer - D

Ans. D. Heart

Incontinentia pigmenti (also k/a Bloch-Sulzberger syndrome) is a X-linked dominant genetic disorder. It involves

- Skin (100% of affected people)
- Teeth (80-90 % of affectedpeople)
- Bones (30-40% of affected people)
- CNS i.e. brain & spinal cord (30-40% of affected people)
- Eyes (25-35% of affected people)

CollegeApply

1597. Most common site for atopic dermatitis -

a) Scalp

b) Trunk

c) Popliteal fossa

d) Knees

Correct Answer - C
Ans. C. Popliteal fossa
Sites of itching patch in atopic dermatitis
Infant; Face (especially cheek), extensors offorearm& legs.
Childhood & adult > Flexures (antecubitalrbitalfoxa, Poplitealfossa).

KolleeApply

1598. Bull's eye lesions are found in ?

a) Erythema nodosum

b) Erythema gangrenosum

c) Erythema multiforme

d) Erythroderma

Correct Answer - C
Ans. C. Erythema Multiforme
Clinical features of erythema multiforme
Typical lesion of EM is a Target lesion (Iris lesion or Bulle's eye lesion) which consists of three concentric components : -
1. Central dusky erythma, surrounded by vesicle bulla
2. Pale edematous ring
3. Erythematous halo

KollegeApply

1599.

KollegeApply

All of the followings are part of the treatment of scabies except?

a) Topical Permathrin

b) Oral ivermactin

c) Oral antihistamines

d) Long term oral steroids

Correct Answer - D
Ans. D. Long term oral steroids
Drugs used in scabies
1. Topical: Permethrin (drug of choice), GBH/BHC, benzyl - benzoate, crotamine, malathion.
2. Oral: Ivermectin.
3. For pruritis :Antihistaminics

KollegeApply

1600. A pregnant lady comes with itchy hand lesions as shown. Her husband also gets it. The best treatment that can be given is ?

a) Permathrin

b) Ivermectin

c) GBH

d) Benzyl benzoate

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Correct Answer - A
Ans. is 'a' i.e., Permathrin

- Permethrin 5% cream is considered the drug of choice for treating scabies in patients, including pregnant women.
- Other scabicides considered safe for use during pregnancy are sulfur 5-10% in petrolatum and crotamiton 10%.
- Sulfur is effective and it has a good safety profile; however, sulfur preparations can stain clothing and they are odorous.
- Crotamiton 10% cream is not absorbed percutaneously and is considered safe in pregnancy although it is not effective as other therapies

1601. True regarding Bowen's disease is ?

a) In situ BCC

b) More common in dark skinned people

c) HSV infection plays a role

d) Chronic sun damage plays a role

Correct Answer - D

Ans. D. Chronic sun damage plays a role

Bowen's Disease

- Bowen's disease is SCC in situ.
- More common in fair skinned people.
- More common on sun exposed areas such as head & neck followed by limbs.
- When arises on glans penis, it is called "erythroplasia of Queytat."

KollegeApply

1602. True about pemphigus vulgaris A/E:

a) Subepidermal

b) Autoimmune disease

c) Tzanck smear shows acanthoyltic cells

d) Antibody are formed against desmogleins

Correct Answer - A
A i.e. Subepidermal

KollegeApply

1603. Which of the following is characterized by a solitary painless ulcer on genitalia?

a) Herpes

b) Soft chancre [chancroid]

c) Hard chancre

d) Traumatic ulcer

Correct Answer - C

Ans. C. Hard Chancre

Characteristics of various different types of genital ulcers -

- Primary syphilis (hard chancre) :- punched out, painless, non-bleeding(avascular) ulcer with 6rm induration.
- Donovanosis :- one or more, painless, bleeding (vascular) ulcers with induration.
- Chancroid (soft chancre):- multiple, painful, bleeding (vascular)ulcers with no or soft induration.
- LGV: - single, painless, non-bleeding ulcer.
- Herpes genitalis: - multiple painful/asymptomatic ulcers.

KollegeApply

1604. **Lines of Blaschko represent:**

a) Lines along lymphatics

b) Lines along blood vessels

c) Lines along nerves

d) Lines of development

Correct Answer - D
The lines of Blaschko are defined by a pattern determined by nevoid representing non random lines on the human skin or mucosa.

Blaschko lines or the lines of Blaschko are thought to represent pathways of epidermal cell migration and proliferation during the development of the fetus.
Lines of Blaschko represent non-random developmental lines of the skin fundamentally differing from the system of dermatomes. They follow a'V' shape over the back, 'S' shaped whorls over the chest, stomach, and sides, and wary shapes on the head. The lines are belived to trace the migration of embryonic epidermal cells. The stripes are a type of genetic mosaicism. These lines characteristically do not follow the underlying nervous, Vascular, muscular or lymplatic structures in the skin. Lines of Blaschko are not ordinarily visibk, but are recognized in several cutaneous disorders that follow these arallel streaks.

Ref: Syndromes: Rapid recognition and perioperative implications, by Bruno Bisonnette, Page 400; Neurocutaneous disorders: Phakomatosis and Hamartoneoplastic Syndromes, by Martino Ruggieri, Page 364.

KollegeApply

1605. All are true about actinic lichen planus except ?

a) Associated with severe pruritus

b) Autoimmune etiology

c) Voilaceous brown papules

d) Usually affects exposed areas of body

Correct Answer - A

Ans. A. Associated with severe pruritus

Actinic Lichen Planus (lichen planussubtropicus/tropicus / lichen planusactinicus)

- Lichen planus is an autoimmune disease.
- Common in spring and summers in tropical countries.
- Usually affects children and young adults
- Sunlight is considered to be the predisposing factor therefore lesions are more common on sun exposed areas (face, dorsum ofhand, forearms and arms, nape of the neck).
- Papules are hyperpigmented with voilaceous-brown with well-definedhypopigmented border.
- Pruritrus and scaling are minimal.

CollegeApply

1606. Muehrcke lines in nails are seen in

a) Nephrotic syndrome

b) Barrter syndrome

c) Nail patella syndrome

d) Acute tubular necrosis

Correct Answer - A
Ans. is 'a' i.e., Nephrotic syndrome

- Muehrcke's lines are characteristic of hypoalbuminemia. Nephrotic syndrome causes hypoalbunemia.

KollegeApply

1607. Which of the following drug can lead to pemphigus?

a) Penicillamine

b) Isoniazid

c) Carbamazepine

d) Furosemide

Correct Answer - A
Ans. A. Penicillamine
Drugs causing pemphigus-

- Penicillamine
- Penicillins and Cefalosporins
- Captopril,
- Iodine,
- Lithium
- Phenophthelin,
- Propanolol
- Rifampicine
- Phenytoin,
- Phenylbutazone,
- Salicylates,
- Piroxicam,
- Sulphonamides

KollegeApply

1608. Periungual desquamation, which is a characteristic feature of Kawasaki syndrome, occurs at ?

a) 1^{st}-2^{nd} week

b) 2^{nd}-3^{rd} week

c) 3^{rd}-4^{th} week

d) 4th_5th week

Correct Answer - B

Ans. B. 2^{nd}-3^{rd} week

Periungualdesequamation in kawasaki disease starts between 10-18 days.

KollegeApply

1609. Arm tongue time is ?

a) 13 secs

b) 15 secs

c) 20 secs

d) 40 secs

Correct Answer - A
Ans. A. 13 secs
Arm to tongue time is method for knowing the circulation time i.e. time taken by a particle in the blood to flow from one point in circulation to other.
It measures the linear velocity of blood.
To calculate-the arm to tongue time 5 ml of 2% of decholine is injected into cubital vein.
As soon as drug reaches the tongue, patient feels a bitter taste.
The total time taken from arm to tongue is 13 seconds.
Similarly arm to lung time is calculated with the help of ether. It is d seconds.

KollegeApply

1610. Respiratory failure in a post operative patient is ?

a) Type 1

b) Type 2

c) Type 3

d) Type 4

Correct Answer - C

Ans. C. Type 3

Type 3 or perioperative respiratory failure

- Increased atelectasis due to low functional residual capacity (FRC) in the setting of abnormal abdominal wall mechanics.
- Often results in type I or type II respiratory failure.
- Can be ameliorated by anesthetic or operative technique, posture posture, incentive spirometry, post -operative analgesia, attempts to rower intra - abdominal-pressure.

CollegeApply

1611. Laryngeal mask airway [LMA] is contraindicated in?

a) Difficult airways

b) Ocular surgeries

c) Pregnant female

d) In CPR

Correct Answer - C

Ans. C. Pregnant female

Contraindications of LMA

1. Conditions with high risk of aspiration. i.e.,full stomach patients, hiatus hernia, pregnancy.
2. Oropharyngeal abscess or mass (tumor).
3. Massive thoracic injury
4. Massive maxillofacial trauma

KollegeApply

1612. All of the following are advantages of LMA except?

a) More reliable than face mask

b) Prevent aspiration

c) Alternative to Endotracheal intubation

d) Does not require laryngoscope & visualization

Correct Answer - B

Ans. B. Prevent aspiration

LMA is intermediate between the face mask and Endotracheal intubation in terms of reliability,
invasiveness and facilitation of gas exchange (face mask has minimum and endotracheal intubation has maximum).
LMA does not prevent asPiration + should not be used in full stomach patients.
LMA can be used as an alternative to endotracheal intubation for minor surgeries, where anaesthetist wants to avoid intubation.
LMA is introduced blindly (without laryngoscopy)

KollegeApply

1613. Which anesthetic gas was used by WTG Morton in his experiment ?

a) Nitrous oxide

b) Ammonia

c) Diethyl ether

d) Trichloroethylene

Correct Answer - C
Ans. C. Diethyl ether
William Thomas Green Morton, a dentist and medical student at Boston, after experimenting pon animals, gave a demonstration of general anesthesia, In 1846.

KolleegeApply

1614. Mouth to mouth respiration provides what percentage of oxygen ?

a) 10%

b) 16%

c) 21%

d) 100%

Correct Answer - B

Ans. B. 16%

Mouth to mouth breathing provides 0.8 to 1.2 liters of exhaled air per breath and 16% of oxygen which is enough to sustain life.

The use of Ambu bag and room air provides 21% O2.

The American Heart Association recommends tidal volumes of 700 to 1000 mL during mouth-to-mouth ventilation, but smaller tidal volumes of 500 mL may be of advantage to decrease the likelihood of stomach inflation, as mouth-to-mouth ventilation gas contains only 17% oxygen, but 4% carbon dioxide.

Kolegeapply

1615. The most appropriate circuit for ventilating a spontaneously breathing infant during anaesthesia is?

a) jackson Rees modification of Ayre's T piece

b) Mapleson A or Magill's circuit

c) Mapleson C or Waters to and fro canister

d) Bains circuit

Correct Answer - A
Ans. is 'a' i.e., Jackson Rees modification

KollegeApply

1616. Best uterine relaxation is seen with ?

a) Chloroform

b) Nitrous oxide

c) Ether

d) Halothane

Correct Answer - D
Ans. 'd' i.e., Halothane

- Halogenated inhalational anaesthetic agents like halothane are powerful tocolytic agents. Halothane is anaesthetic of choice for internal version and manual removal of placenta.

KollegeApply

1617. Hepatotoxic agent *is*

a) Ketamine

b) Ether

c) N20

d) Halothane

Correct Answer - D
D i.e. Halothane

KollegeApply

1618. Which of the following drugs produces dissociative anesthesia

a) Ketamine

b) Propofol

c) Thiopentone

d) Enflurane

Correct Answer - A
A i.e. Ketamine

KollegeApply

1619. Which one of the following agents sensitizes the myocardium to catecholamines -

a) Isoflurane

b) Ether

c) Halothane

d) Propofol

Correct Answer - C
Ans. is 'c' i.e., Halothane
o *Halothane tends to sensitize the heart to arrhythmogenic action of adrenaline* - contraindicated in pheochromocytoma.

KollegeApply

1620. Anesthetic agent (s) safe to use in TICP

a) Halothane

b) Thiopentone

c) Ketamine

d) Ether

Correct Answer - B
B i.e. Thiopentone
Anesthetic agents safe to use in raised intracranial pressure (ICP) are *thiopentone, propofol & etomidateQ*

KollegeApply

1621. Ketamine can be used in all of the situations except

a) Status asthamaticus

b) For analgesia & sedation

c) Obstetric hemorrhage

d) Ischemic heart disease

KollegeApply

Correct Answer - D
D i.e. Ischemic heart disease
Ketamine causes *profound analgesiaQ, disociative anesthesiaQ,* and *emergence psychomimetic hallucinations and delirium Q.*
Ketamine increases *cerebral metabolism, 0_2 consumption, blood flow & intracranial pressure.Q*
Ketamine
* It causes *profound analgesiaQ* and *dissociative anesthesiaQ (i.e.* patient appears conscious e.g. eye opening, swallowing but unable to process or respond to sensory input). Ketamine causes *Dissociative AnesthesiaQ* by acting on cortex and subcortical areas (not on RAS) *l/t* feeling of dissociation from ones own body and surroundings. *Post Operative Delirium and HallucinationQ* is part of this Dissociative phenomenon. Drug of choice for post op. delirium & hallucination *is* Lorazepam.Q
* It is *closest to being a complete anesthetic* since it induces analgesia, amnesia & unconsciousness.
* It is associated with *emergence psychotomimetic side effects (delirium, illusions, hallucination)Q.* It is less common in children and pretreatment with *lorazepam (drug of choice)Q.*

1622. Which of the following anesthetic agent is a potent bronchodilator -

a) Propofol

b) Ketamine

c) Thiopentone

d) Methoxytone

Correct Answer - B
Ans. B. Ketamine
Ketamine is a potent bronchodilator, therefore it is the i.v. anaesthetic agent of choice in bronchial asthma patients.

KolleegeApply

1623. Blood : Gas partition coefficient is a measure of ?

a) Potency of anaesthetic agent

b) Speed of induction and recovery

c) Lipid solubility of agent

d) None

Correct Answer - B

Ans. is 'b' i.e., Speed of induction and recovery

- Minimum alveolar concentration (MAC) —> Measure of potency.
- Blood : Gas partition coefficient Blood solubility of anaesthetic agent and determines the speed of induction & recovery.
- Oil : Gas pa*rtition coefficient* -4 Lipid solubility of anaesthetic agent and is related to potency of anaesthetic agent.

KalpaApply

1624. At the end of anaesthesia after discontinuation of nitrous oxide and removal of endotracheal tube, $100^{0}/0$ oxygen is administered to the patient to prevent:

a) Diffusion Hypoxia

b) Second gas effect

c) Hyperoxia

d) Bronchospasm

Correct Answer - A
A i.e. Diffusion Hypoxia

- *(Ref : Willer 8/e p656, 3401)*
- On discontinuation of N2O administration, nitrous oxide gas can diffuse from blood to the alveoli, diluting O2 in the lung.
  - Produce an effect called “Diffusional hypoxia”.
- To avoid hypoxia, 100% O2, rather than air should be administered when N2O discontinued.

CollegeApply

1625. Landmark for pudendal nerve block is ?

a) Ischial tuberosity

b) Iliac spine

c) Sacroiliac joint

d) None of the above

Correct Answer - A

Ans. A. Ischial tuberosity

Pudendal block:

- When performing a transvaginal pudendal nerve block, the ischial spine is the palpated through the wall of the vagina and the needle is then passed through the vaginal mucous membrane toward the ischial spine.
- In a perineal pudendal nerve block, the ischial tuberosity is palpated through the buttock and the needle is inserted into the pudendal canal about one inch deep medial to the ischial tuberosity.

CollegeApply

1626. Post dural puncture headache usually presents with in ?

a) 0-6 Hrs

b) 6-12 Hrs

c) 12-72 Hrs

d) 72-96 Hrs

Correct Answer - C
Ans. C. 12-72 Hrs
Post dural puncture headache is due to CSF leak.
Typical location is bifrontal or occipital.
Headache gets worsen on sitting or upright posture and is relieved by lying down position and abdominal pressure).
The hallmark of postdural puncture headache i.e., association with body position.
The onset of headache is usually 12-72 hrs following the procedure, however, it may be seen almost immediately.
In most cases it lasts for 7_10 days.

KollegeApply

1627. Not included in neuraxial block ?

a) Spinal block

b) Epidural block

c) Bier's block

d) Caudal block

Correct Answer - C
Ans, C. Bier's block
Central neuraxial block, as the name suggests, is the pertains to local anaesthetics placed forwaround the nerves of the central nervous system.
Examples are spinal anaesthesia, Epidural anaesthesia and caudallaesthesia.
BIER’s block or intravenous regional anesthesia (IVRA) is a form of regional anesthesia used most often for surgery of the forearm and hand.

KollegeApply

1628. Contraindication to neruaxial block is ?

a) Hypertension

b) Renal disease

c) Clotting disorders

d) Diabetes

Correct Answer - C

Ans. C. Clotting disorders

Contraindications of central neuroaxial block:

- Absolute :- Infection at the site of injection, patient refusal, coagulopathyor other bleeding disorder, severe hypovolemia, increased ICT, severe aortic or mitral stenosis.
- Relative :- Sepsis, unco-operative patient, pre-existing neurological deficit, demyelinating lesions, severe spinal deformity, stenotic valvular heart disease

KollegeApply

1629. Long acting local anaesthetic ?

a) Procaine

b) Lignocaine

c) Prilocaine

d) Dibucaine

Correct Answer - D
Ans. is 'd' i.e., Dibucaine

KollegeApply

1630. Shortest acting local anesthetic agent is

a) Procaine

b) Lidocaine

c) Tetracaine

d) Bupivacaine

Correct Answer - A
A i.e. Procaine

KollegeApply

1631. Most common cause of maternal mortality in spinal anesthesia is ?

a) Allergy to local anesthesia

b) Nerve injury

c) High block

d) Hypotension

Correct Answer - C
Ans. C. High block
Most common cause of maternal death or brain damage in neuraxial anesthesia claims was high block"

KollegeApply

1632. Cauda equina syndrome is associated with ?

a) Lidocaine

b) Halothane

c) N20

d) Ether

Correct Answer - A
Ans. A. Lidocaine
Caudaequina syndrome may occur as a rare devastating complication of spinal anesthesia due to maldistribution of injected local anesthesiaaround caudaequina nerve roots resulting in loss offunction ofthe lumbar plexus.
Associated with all local anesthetic like lidocaine, bupivacaine, chlorprocaine etc.

CollegeApply

1633. Local anaesthetic injected directly into the tissue ?

a) Infiltration anaesthesia

b) Nerve block

c) Field block

d) Bier's block

Correct Answer - A
Ans. is 'a' i.e., Infiltration anaesthesia
o Infiltration anaesthesia is the injection of local anaesthetic directly into tissue without taking into consideration the course of cutaneous nerve.

KollegeApply

1634. **Composition of soda lime is:**

NaOH - Ca (OH)2 - KOH - Moisture

a) 4% - 90% - 1% - 5%

b) 4% - 80% - 1% - 15%

c) 80% - 10% - 5% - 5%

d) 15% - 80% - 1% - 4%

Correct Answer - B

Soda lime is the more common absorbent and is capable of absorbing up to 23 L of CO2 per 100 g of absorbent.

It consists primarily of calcium hydroxide (80%), along with sodium hydroxide (4%), water, and a small amount of potassium hydroxide (1%).

Commercial soda lime has a water content of 14% to 19%.

CO2 absorbents (eg, soda lime or calcium hydroxide lime) contain hydroxide salts that are capable of neutralizing carbonic acid. Reaction end products include heat (the heat of neutralization), water, and calcium carbonate.

Ref: Butterworth IV J.F., Butterworth IV J.F., Mackey D.C., Wasnick J.D., Mackey D.C., Wasnick J.D. (2013). Chapter 3. Breathing Systems. In J.F. Butterworth IV, J.F. Butterworth IV, D.C. Mackey, J.D. Wasnick, D.C. Mackey, J.D. Wasnick (Eds), *Morgan & Mikhail's Clinical Anesthesiology*, 5e.

KollegeApply

1635. Suxamethonium acts through which channels ?

a) Sodium channels

b) Potassium channels

c) Calcium channels

d) Chloride channels

Correct Answer - A
Ans. A. Sodium channels
Suxamethonium (succinylcholine) is a depolarizing neuromuscular blocking agent which act by opening the Na+ channels at muscle end Plate.

KollegeApply

1636. Only available depolarizing muscle relaxant is ?

a) Decamethonium

b) Suxamethonium

c) Mivacurium

d) None

Correct Answer - B
Ans. B. Suxamethonium
Suxamethonium (succinylcholine) and decamethonium come under depolarizing muscle relaxants.
Out of these only suxamethonium is avalaible for clinical use.

KollegeApply

1637. **All of the following statements about neuromuscular blockage produced by succinylcholine are true, except:**

a) No fade on Train of four stimulation

b) Fade on tetanic stimulation

c) No post tetanic facilitation

d) Train of four ratio > 0.4

Correct Answer - B

Succinylcholine is a depolarizing neuromuscular blocker.
With succinylcholine no fading is observed after train of four or tetanic stimulation.
All four stimulatory responses after TOF stimulation are suppressed to the same extent.

Ref: Neuromuscular Monitoring in Clinical Practice and Research By Thomas Fuchs-Buder, Page 16

Kollege Apply

1638. All of the following about MRI are correct except:

a) MRI is contraindicated in patients with pacemakers

b) MRI is useful for evaluating bone marrow

c) MRI is better for calcified lesions

d) MRI is useful for localizing small lesione in the brain

Correct Answer - C
C i.e. MRI is better for calcified lesions
* MRI is very poor in detection of calcification. It is *inferior to CT scan, mammography and x-ray* in detecting calcification. That is why it *lags behind mammography in early detection of noninvasive ductal carcinoma in situ (DCIS)Q,* which most commonly has *microcalcification* as its only presenting feature. And similarly it has *a very limited role in detection of renal stones and gall stonesQ.* However, it is important to note that only upto 60% of gall stones have enough calcium density (more than that of bile) to get visualized on CT. Becaus of its superior calcification detection abilities, MDCT is used in Agatston scoring (Coronary calcium scoring) of *calcified plaques of coronary artery* using coronary calcium as a surrogate marker to detect the presence and measure the amount of coronary atherosclerosis. Because with *exception of patients with renal failure calcification of arteries occurs exclusively in context of atherosclerosis.*
Similarly nonenhanced helical **CT** is *superior to all other imaging modalities in diagnosis of urinary tract calculiQ* but at the cost of higher radiation exposure.
Now there is no need to say that MRI is better that CT for evaluation of bone marrow, small brain lesions, meniscus/ ligament injuries,

soft tissue tumors and meningeal pathology. But MRI is very poor in detection of calcification.

KollegeApply

1639. Which of the following is not a contraindication of MRI

a) Cardiac pacemaker

b) Cochlear implant

c) Ryle's tube

d) Metallic splinter in eye

Correct Answer - C

Answer- C. Ryle's tube

Contraindications for MRI

A) Absolute

- Electronically, magnetically, and mechanically activated implants.
- Ferromagnetic or electronically operated active devices like automatic cardioverter defibrillators.
- Cardiac pacemaker
- Metallic splinters in the eye.
- Ferromagnetic haemostatic clips in the CNS.

B) Relative contraindications

- Cochlear implants
- Prosthetic heart valves
- Other pacemakers, e.g., for Carotid sinus
- Haemostatic clips
- Insulin pumps and nerve stimulators
- Non-ferromagentic stapedial implants
- Lead wires or similar wires
- Women with a first - trimester pregnancy

CollegeApply

1640. All are done to minimize radiation, exposure to the patient under fluroscopy, except

a) Decrease in field of view

b) Increasing the Kv of radiation

c) Decreasing fluroscopic time

d) Using low dose of radiation

Correct Answer - A

Answer- A. Decrease in field of view

Decreasing the field of view during fluroscopy increase the radiation dose rate :-

1. Field of view diameter 25 cm has dose rate 0.3 mGy/s
2. Field of view diameter 17 cm has dose 0.6 mGy/s

KollegeApply

1641. Amount of radiation exposure in 1 CT-scan of chest is

a) 1 mSv

b) 3 mSv

c) 5 mSv

d) 7 mSv

Correct Answer - D
Answer- D. 7 mSv
CT chest causes radiation exposure of 7mSv.
CT abdomen-pelvis causes radiation exposure of 10 mSv.
CT head causes radiation exposure of 2 mSv.

KollegeApply

1642. Which of the following is a late severe adverse effect of radiation therapy

a) Nausea

b) Erythema

c) Anemia

d) Osteoradionecrosis

Correct Answer - D
Answer- D. Osteoradionecrosis
Osteoradionecrosis is a late complication of radiation while nausea, erythema and anemia are early complications.

KollegeApply

1643. Substance used for PET scan is

a) 18FPCT

b) Gadolinium

c) Gastrogarfin

d) Iodine

Correct Answer - A

Answer- A. 18FPCT

- Fluorine-18-labeled 2Ali-carbomethoxy-3AY-(4-chloropheny1)-8-(-3-fluoropropyl) nortropane (FPCT) has been synthesized as a new dopamine transporter imaging agent.

Other substances used for PET scan are :

1. FDG
2. 64Cu-ATSM (4Cu diacetyl-bis(N4-methylthiosemicarbazone)
3. 18F-fluoride
4. FLT (3'-deoxy-3'-[18F]fluorothymidine)
5. FMISO (18F-fluoromisonidazole)
6. Gallium
7. Technetium-99m
8. Thallium

KollegeApply

1644. Which common tracer in PET is usually administered in the form of a glucose sugar

a) Oxygen 15

b) Fluorine 18

c) Saccharide - 12

d) Aluminum - 12

Correct Answer - B

Answer- B. Fluorine 18

- Fluorine-18 is used in the form of FDG in PET scan.
- The most **common tracer** has a complicated name but is mostly known as FDG (which stands for 2-[18F]fluoro-2-deoxy-D-**glucose**).
- The biologically active molecule most commonly used for PET is 2-deoxy-2-18F-fluoro-β-D-glucose (18F-FDG), an analogue of glucose, for early detection of tumors.

CollegeApply

1645. Intraoperative radiotherapy is used in

a) Gastric cancer

b) Colon carcinoma

c) Pancreatic carcinoma

d) All of the above

Correct Answer - D

Answer- D. All of the above

Intraoperative radiotherapy can be used In -

1. Pancreatic carcinoma
2. Retroperitoneal sarcomas
3. Gastric carcinoma
4. Genitourinary cancers
5. Colorectal carcinoma
6. Brain tumor
7. Head & Neck cancers
8. Some gynecological malignancies

KollegeApply

1646. Precisely directed high dose radiation is used in

a) IMRT

b) EBRT

c) Stereotectic radiosurgery

d) None of the above

Correct Answer - A
Answer- A. IMRT
Intensity modulated radiation therapy (IMRT) is an advanced mode of high precision radiotherapy that utilizes computer controlled X-ray accelerators to deliver precise radiation doses to a malignant tumour or specific areas within the tumour.

KolleeApply

1647. Stereotactic radiosurgery is done for -

a) Glioblastoma multiforme

b) Medulloblastoma spinal cord

c) Ependymoma

d) AV malformation of brain

Correct Answer - D
Ans. is 'D' i.e., AV malformation of brain
It is also used for-
1. Solitary cerebral metastasis
2. Arteriovenous malformation
3. Small meningiomas
4. Schwannomas
5. Pituitary adenomas

KollegeApply

1648. Not used for internal radiotherapy

a) Iodine-125

b) Iodine-131

c) Cobalt-60

d) Iridium-192

Correct Answer - B
Answer- B. Iodine-131
Isotpes used for internal radiotherapy (brachy therapy)
A) Interstitial brachytherapy

- Permanent implants of interstitial brachytherapy :- Cesium - 131, Yttrium, Gold - 198 (Au - 198), 125I, Radon - 222 (Rn - 222), Pallidum - 103 (Pd - 103).
- Temporary implants of Interstitial brachytherapy :- Iridium - 192 (Ir - 192), Cesium - 137 (Cs - 137), Cobalt - 60 (Co -60), Californium, Radium - 226 (Ra - 226), Tantolum.

CollegeApply

1649. Radioiodine generates which type of radiation

a) X-rays

b) Alpha and beta rays

c) Beta and gamma rays

d) Alpha and beta rays

Correct Answer - C
Answer- C. Beta and gamma rays
Radioiodine generates both beta and gamma rays but predominantly beta rays.

KollegeApply

1650. Radioactive iodine is administered through which route

a) Intravenous

b) Subcutaneous

c) Oral

d) All of the above

Correct Answer - D
Answer- D. All of the above
Radioactive iodine is administered orally as well as parentrally i.e. IV, SC & IM.

KollegeApply

1651. "Tree in bud appearance" on CT is seen in

a) Pulmonary tuberculosis

b) Silicosis

c) Pulmonary hydatid cyst

d) Small cell carcinoma

KollegeApply

Correct Answer - A

Answer- A. Pulmonary tuberculosis

- It is usually visible on standard CT, however, it is best seen on HRCT chest.
- Typically the centrilobular nodules are 2-4 mm in diameter and peripheral, within 5 mm of the pleural surface.
- The connection to opacified or thickened branching structures extends proximally (representing the dilated and opacified bronchioles or inflamed arterioles)
- Associated CT findings of bronchiolitis are seen in about 70% of patients with bronchiectasis. Small centrilobular nodular and linear branching opacities (tree-in-bud sign) express inflammatory and infectious bronchiolitis

Pathogenesis-

The tree-in-bud sign occurs as a result of a number of processes, although often they co-exist in the same condition:

a. bronchioles filled with pus or inflammatory exudate
e.g. pulmonary tuberculosis, aspiration bronchopneumonia

b. bronchiolitis: thickening of bronchiolar walls and bronchovascular bundle
e.g. cytomegalovirus pneumonitis, obliterative bronchiolitis

c. bronchiectasis with mucus plugging
e.g. cystic fibrosis

d. tumor emboli to centrilobular arteries (or carcinomatous endarteritis)
e.g. breast cancer, stomach cancer

e. bronchovascular interstitial infiltration
e.g. sarcoidosis, lymphoma, leukemia

KollegeApply

1652. Investigation of choice for lung abscess is

a) Chest X-ray

b) CECT scan

c) MRI

d) Ultrasound

Correct Answer - B

Answer- B. CECT scan

Contrast enhanced CT in usually considered to be investigation of choice for lung abscess, showing a cavity with thick walls and central mobile fluid. It helps to differentiate abscess from empyma, necrotizing pneumonia, sequestration, pneumatocele or underlying congenital abnormalities such as bronchogenic cyst.

KollegeApply

1653. On CT chest 'halo sign' is noted in

a) Pulmonary hydatid cyst

b) Invasive pulmonary aspergilossis

c) Round pneumonia

d) Bronchiectasis

Correct Answer - B
Answer- B. Invasive pulmonary aspergilossis
The halo sign (HS) in chest imaging is a feature seen on lung window settings (typically HRCT), ground glass opacity surrounding a pulmonary nodule or mass and represents hemorrhage.
It is typically seen in angioinvasive aspergillosis.

KollegeApply

1654.

KollegeApply

A 50 year old male presents with fever and malaise for 4 months& pain in the knees and ankles. Blood tests are normal apart from a raised ESR. Chest x-ray shows bilateral hilar adenopathy and pulmonary infiltrates most severe in the upper and mid zones. Mantoux test is negative. What is the most likely diagnosis

a) Tuberculosis

b) Sarcoidosis

c) Asbestosis

d) Berylliosis

KollegeApply

Correct Answer - B
Answer- B. Sarcoidosis
Sarcoidosis is the most likely diagnosis given the presentation with malaise, arthralgia and a chest x-ray showing bilateral hilar adenopathy.
"The characteristic radiological finding in patients with pulmonary sarcoidosis is bilateral hilar lymphadenopathy"

1655. 22-year-old women presents to the emergency department with a chief complaint of severe left upper quadrant [LUQ] pain after being punched by her husband. Her blood pressure is 110/76, her pulse is 80 bpm, and her respiration rate is 24 breaths per minute. The best means to establish a diagnosis is which of the following ?

a) Four-quadrant tap of the abdomen

b) CT of the abdomen

c) Peritoneal lavage

d) Upper gastrointestinal [GI] series

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Correct Answer - B

Answer- B. CT of the abdomen

Clinical picture of the patient in above question indicates that patient is hemodynamically stable. Therefore best mode of evaluation should be CT scan of abdomen to see the extent of injury.

If the patients is hemodynamically stable and can be shifted - CT scan

1656. A 35 year-old female presented to the emergency department with the sudden onset of severe epigastric pain. She had a history of heart burn and dyspeptic symptoms for past 10 years. On physical exam, she had a temperature of 101.4°F, a pulse of 118 and a blood pressure of 128/72. Abdomen was tender & rigid. Expected finding on X-ray will be

a) Blood under diaphragm

b) Air under diaphragm

c) Hazy lung fields

d) Prominent markings

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Correct Answer - B

Answer- B. Air under diaphragm

Above clinical picture is suggestive of perforated peptic ulcer, Which is the most common cause of pneumoperitoneum (air under diaphragm).

Perforation results in pneumoperitoneum and the best view to see pneumoperitoneum is chest x-ray in erect position which detects air under the domes of diaphragm.

1657. A 50 year-old chronic alcoholic male patient, after a large binge of alcohol, presented to the emergency department in subconscious state. He vomited several times, few of them mixed with blood. He had a history of heart burn and dyspeptic symptoms for past few tears. On physical exam, he had a temperature of 102°F, a pulse of 110, respiratory rate of 20 per minute and a blood pressure of 90/60. On physical examination there was abdominal guarding and tenderness. A plane erect chest X-ray reveals air under diaphragm. Probable diagnosis is

a) Perforated peptic ulcer

b) Acute MI

c) Dissected abdominal aorta

d) None of the above

Correct Answer - A

Answer- A. Perforated peptic ulcer

History of heart burn and dyspepsia, acute onset of bloody vomiting after binge alcohol, general and physical examination findings and

air under diaphragm on chest X-ray, all these indicate towards the perforation of peptic ulcer.

KollegeApply

1658. Ring enhancing lesion on CT is a feature of

a) Toxoplasmsis

b) Intracranial hemorrhage

c) Cysts

d) Hamartoma

Correct Answer - A
Answer- A. Toxoplasmsis
Ring enhancing brain lesions
1. Neoplasms :- High grade glioma, meningioma, lymphoma, acoustic schwannoma, craniopharyngioma, metastasis.
2. Abscess :- Pyogenic, tuberculoma, toxoplasmosis, cysticercosis, empyema.
3. Hemorrhagic - ischemic lesion :- Resolving infarction, Aging hematoma, operative bed following resection.
4. Demyelinating disorder

KottageApply

1659. About lipoma, radiologically true is -

a) Low attenuation on CT

b) Anechoic on US

c) Hypo-intense on T1 -MRI

d) Hypo-intense on T2-MRI

Correct Answer - A
Answer- A. Low attenuation on CT
Lipomas are benign fat tumors which show

- Variable echos on US
- Hyper-intense shadows on both T1 & T2 MRI
- Low attenuation on CT.

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1660. Following X-ray finding is associated with Chilaiditi syndrome -

a) Pseudopneumoperitoneum

b) Pseudopneumothorax

c) Pneumothorax

d) Hydropneumothorax

Correct Answer - A
Answer- A. Pseudopneumoperitoneum
Chilaiditi syndrome is the anterior interposition of the colon (usually tranverse colon) to the liver reaching the under-surface of the right hemidiaphragm with associated upper abdominal pain.
It is one ofthe causes ofpseudopneumoperitoneum

KolleGeApply

1661. **Which of the following agents is used to measure Glomerular Filtration Rate (GFR)?**

a) Iodohippurate

b) Tc99m-DTPA

c) Tc99m-MAG3

d) Tc99m-DMSA

Correct Answer - B

Tc99m-Diethylene Triamine Pentothenic Acid (DTPA) is an agent of choice widely used in measuring GFR.

Ref: Renal Disease: Techniques and Protocols By Michael S Goligorsky, Page 87; Paediatric Uroradiology By Richard Fotter, ALbert L Baert, Page 47

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1662. Ultrasonographic finding of autosomal recessive polycystic kidney disease [ARPKD] are all except

a) Cysts more than 2 cm

b) Corticomedullary differentiation is eventually lost

c) Enlarged kidney

d) Oligohydramnios

Correct Answer - A

Answer- A. Cysts more than 2 cm

On antenatal ultrasound associated oligohydramnios may be identified

- Cysts
- Initially too small to resolve but with time may become discernible
- Unlike ADPKD the cysts rarely exceed 1-2 cm in diameter

The kidneys appear enlarged and echogenic but usually retain a reniform shape

- Medullary pyramids

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1663. Cobra head appearance on excretory urography is suggestive of:
March 2010

a) Horseshoe kidney

b) Duplication of renal pelvis

c) Simple cyst of kidney

d) Ureterocele

Correct Answer - D
Ans. D: Ureterocele
The term *ureterocele* denotes a cystic ballooning of the distal end of the ureter. This type of ureterocele is also termed *orthotopic,* since it arises from a ureter with a normal insertion into the trigone.
An intravesical ureterocele results from the prolapse of the mucosa of the terminal segment of the ureter through the ureterovesical orifice into the bladder.
This prolapsed ureteral mucosa carries with it a portion of the continuous sheet of the bladder mucosa around the orifice. The prolapsed segment thus has a wall that consists of a thin layer of muscle and collagen interposed between the bladder uroepithelium and the ureter uroepithelium.
Since the terminal ureteral orifice is usually narrowed and partially obstructed, and since there is no muscle support for the double mucosal walls of the prolapsed segment, it dilates. This dilated segment fills with urine and protrudes into the bladder.
On excretory urography, cobra head sign is classically seen with an intravesical ureterocele.

KollegeApply

1664. CT of gastric Volvulus shows -

a) Shortened twisted stomach

b) Enlarged twisted stomach

c) Normal twisted stomach

d) None of the above

Correct Answer - B
Answer- B. Enlarged twisted stomach
CT scan of gastric Volvulus shows enlarged twisted stomach in thorax with one or more sites of torsion. It is useful in showing the sites of ischemia.

KollegeApply

1665. Investigation of choice to evaluate intracranial hemorrhage of less than 48 hours is -

a) CT scan

b) MRI

c) PET

d) SPECT

Correct Answer - A
Answer- A. CT scan
Primary procedure of choice for evaluating intracranial complications of acute head injury 4 CT scan.
Best modality for assessing fractures of the skull base, calvarium and facial bone 4 CT scan.
Investigation of choice for demyelinating disorders 4 MRI.

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1666. Investigation of choice for acute intracerebral hemorrhage is -

a) NCCT

b) MRI

c) PET scan

d) None of the above

Correct Answer - A
Answer- A. NCCT
"NCCT remains the main stay of emergency imaging of stroke in order to exclude intracranial hemorrhage".
"In investigation of stroke with delayed presentation gradient-echo MRI is the investigation of choice for exclusion of old hemorrhage".

KottageApply

1667. Epidural hematoma on CT scan shows -

a) Crescent shaped hyperdense lesion

b) Biconvex hyperdense lesion

c) Biconcave hyperdense lesion

d) Crescent shaped hypodense lesion

Correct Answer - B

Answer- B. Biconvex hyperdense lesion

Acute extradural (epidural) hematoma is biconvex hyperdense or mixed density lesion.

Extradural (epidural) hematoma appearance radiolgically :-

- Biconvex (lens shaped or lenticular)
- In Acute cases 4 Hyperdense (2/3) or mixed density (1/3).
- In chronic cases 4 Hypodense

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1668. Investigation of choice for acute subarachnoid hemorrhage is -

a) MRI

b) CT scan

c) Enhance MRI

d) Angiography

Correct Answer - B
Answer- B. CT scan
Investigation of choice for acute SAH - CT scan
Investigation of choice for chronic SAH - MRI

KolleegeApply

1669. Sausage finger appearance is seen in -

a) Psoriatic arthritis

b) Rickets

c) Hyperthyroidism

d) Addison's disease

Correct Answer - A

Answer- A. Psoriatic arthritis

The common causes of sausage digit are :

- Psoriatic arthropathy.
- Ankylosing spondylitis
- Tuberculosis
- Osteomyelitis.
- Sickle cell disease
- Leprosy

KollegeApply

1670. Skyline view X-ray is useful in diagnosing -

a) Patellofemoral problem

b) Radioulnars problem

c) Tibiofibular problem

d) Skull fracture

Correct Answer - A
Answer- A. Patellofemoral problem
A 'Skyline' or 'Sunrise' or 'sunset' or 'axial' or 'tangential' or 'mountain view' gives most information about patellofemoral joint.

KollegeApply

1671. Investigation of choice for optic neuritis is ?

a) MRI Brain and orbit

b) Ct scan Brain and orbit

c) Vitreous biopsy

d) Electooculogram

Correct Answer - A

Ans. is 'a' i.e., MRI Brain and orbit [Ref Kanski 8th/e Chap. 19, p. 784]

Magnetic Resonance Imaging (MRI) is far more superior for the study of soft tissue and thus, for most neuro-ophthalmic conditions, MRI is the investigation of choice.

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1672. Investigation of choice for soft tissue sarcoma is -

a) CT

b) MRI

c) Ultrasound

d) X-ray

Correct Answer - B

Answer- B. MRI

"Any patient with a suspected STS should be referred to a diagnostic centre for triple assessment with clinical history, imaging and biopsy. Whilst the preferred method of imaging is MRI, other options including computerized tomography (CT) or ultrasound may be appropriate depending on local expertise."

KolleeApply

1673. Tigriod pattern on MRI is seen in -

a) Wilson's disease

b) Metachromatic leukodystrophy

c) Parkinsonism

d) GB syndrome

Correct Answer - B
Answer- B. Metachromatic leukodystrophy
It is characteristically seen in -

- Metachromatic leukodystrophy
- Pelizaeus-Merzbacher disease
- Autosomal recessive spastic ataxia of charlevoix.

KollegeApply

1674. Theory of human motivation was given by ?

a) Pavlov

b) Abraham Maslow

c) Alios Alzheimer

d) Aaron Beck

Correct Answer - B
Ans. B. Abraham Maslow
Maslords hierarchy of needs is a theory in psyehslag proposed by Abraham Maslow in his 1943 paper.
"A Theory Of Human Motivation" in Psychological Review.
Maslow subsequently extended to include his observations of humans innate curiosity'.
His theories parallel many other theories of human developmental psychology, some of which focus on describing the stages of growth in humans.
Maslow used the terms "physiological", "safety', "beloftingness" and love, esteem, self-actualization", and "self-transcendence" to describe the pattern that human motivations generally have through.

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1675. Illusion is:

September 2007

a) A false unshaken belief not keeping one's sociaocultural background

b) Perception without stimuli

c) Abnormal perception by a sensory misinterpretation of actual stimulus

d) Fear of closed spaces

Correct Answer - C
Ans. C: Abnormal perception by a sensory misinterpretation of actual stimulus
Illusion is an abnormal perception caused by a sensory misinterpretation of actual stimulus, sometimes precipitated by strong emotion, e.g. fear provoking a person to imagine they have seen an intruder in the shadows.

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1676. Medical treatment for paraphillia includes ?

a) SSRIs

b) Benzodiazepines

c) Opioids

d) Barbiturates

Correct Answer - A
Ans. A. SSRIs
Medical treatment for paraphillia -

- Antidepressants, such as lithium and various selective serotonin reuptake inhibitors (SSRIs)
- Long-acting gonadotropin-releasing hormones (ie, medical castration), such as leuprolide acetate and triptorelin
- Antiandrogens (to lower sex drive)' such as medroxyprogesteroneacetate (10 mgqt2hr, with the dosage doubled every3 days to a maximum of 200 mg/day, then maintained for I month and adjusted as necessary).
- Phenothiazines, such as fluphenazine
- Mood stabilizers

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1677. Husband having suspicion that his wife is having affair with another man, diagnosis is ?

a) Illusion

b) Delusion

c) Hallucination

d) Delirium

Correct Answer - B

Ans. B. Delusion

A delusion is false, firm (unshakeable) beliefthat is not accepted by other members of patient's culture and society.

Above is an example of delusion of infedility (morbid jealousy, othello syndrome) i.e-. False belief that one's lover has been unfaithful.

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1678. A 25 year old male believes that his penis is decreasing in size everyday and one day it will disappear one day and he will die. Diagnosis is ?

a) Obsession

b) Somatization

c) Hypochondriasis

d) Delusion disorder

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Correct Answer - D

Ans. D. Delusion disorder

- Description given in the question is of Koro syndrome, a delusional disorder.
- Koro syndrome
  - Koro is a culture-specific syndrome delusional disorder in which an individual has an overpowering belief that one's genitalia are retracting and will disappear, despite the lack of any true longstanding changes to the genitals.
  - Koro is also known as shrinking penis. The syndrome is commonly known as genital retraction syndrome.

1679. Most common substance of abuse in India ?

a) Cannabis

b) Tobacco

c) Alcohol

d) Opium

Correct Answer - B

Ans.B. Tobacco

National Household Survey of Drug and Alcohol Abuse in India – Estimated users: (2001)

1. Tobacco - 162 million.
2. Alcohol - 62 million
3. Cannabis - 9 million.
4. Opiates - 2.5 lakh

KollegeApply

1680. In Neuroleptic malignant syndrome, cause of death is ?

a) Respiratory failure

b) Liver failure

c) Drug toxicity

d) None of the above

Correct Answer - A

Ans. A. Respiratory failure

Causes of death in NMS

- Respiratory failure
- Renal failure
- Pneumonia
- Thromboembolism
- Cardiac failure

KollegeApply

1681. The site of lesion in Korsakoff's psychosis *is*

a) Frontal lobe

b) Corpus striatum

c) Mammilary Body

d) Cingulate gyrus

Correct Answer - C
C i.e. Mammilary body

KollegeApply

1682. Sex reassignment surgery is done in ?

a) Gender identity disorder

b) Premature ejaculation

c) Erectile dysfunction

d) Orgasmic dysfunction

Correct Answer - A
Ans. A. Gender identity disorder
Many persons with gender identity disorder have sought sex-reassignment surgery, that is, physical change that is constant with their cross sexual identity.

KollegeApply

1683. All are reversible causes of dementia except

a) Hypothyroidism

b) Hydrocephalus

c) Meningoencephalitis

d) Alzheimer's disease

Correct Answer - D

Ans. 'D' i.e., Alzheimer's disease

Reversible causes of dementia

1) *S*urgically treatable:- Normal pressure hydrocephalus, brain tumors (frontal lobe tumor), meningioma, subdural hematoma due to head injury, hydrocephalus.

2) Medically treatable:- Depression, hypothyroidism, alcohol abuse, vitamin B 12/folate/Niacin deficiency, any metabolic or endocrine disturbance, neurosyphilis, Hashimoto's encephalopathy, Wilson's disease, celiac disease, Whipple's disease, chronic meningoencephalitis, drugs and toxin *(*toxic dementia).

Irreversible causes of dementia:-

- Alzheimer's disease, vascular (multi-infarct) dementia, Parkinsonism, Huntington's chorea, Lewy body dementia, Pick's disease.

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1684. Which of the following is not associated with dementia:
March 2011

a) Forgetfulness

b) Alteration of consciousness

c) Reduced personal care

d) Loss of neurons in brain

Correct Answer - B
Ans. B: Alteration of consciousness
There is impairment of judgement and impulse control, and also impairment of abstract thinking There is however usually no impairment of consciousness in dementia (unlike in delirium) Dementia:

- Chronic onset
- No disturbance of consciousness
- Cognitive impairment
- Personality alteration
- Impaired memory
- Impaired judgment
- Absent diurnal variation

KollegeApply

1685. A girl with bad behavior like smashing and throwing objects was admitted in the hospital. There also she was behaving very badly with staff & abusing nurses. But she behaves very well with a one very good looking resident doctor. Diagnosis is?

a) Bipolar disorder

b) Schizoaffective disorder

c) Borderline personality disorder

d) Antisocial personality

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Correct Answer - D

Ans. D. Antisocial personality

Antisocial (Dissocial) personality disorder

- The essential features of antisocial personality disorder are a disregard for and violation of the rights of the other and the rules of the society.
- It is characterized by repeated violation of the law and rules of the society (drug abuse); physical aggressiveness; Reckless disregard for safety of self or others; consistent irresponsibility in work and family environment and lack of remorse.
- This disorder is synonymous with previously used terms like psychopath or sociopath.

1686. Trichophagia is characterized by?

a) Compulsive pulling of hair

b) Compulsive eating of hair

c) Compulsive shopping

d) Compulsive stealing

Correct Answer - B
Ans. B. Compulsive eating of hair
Trichophagia is compulsive eating of hair and is usually associated with trichotillomania i.e. compulsive pulling of hair.

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1687. All of the following are essential features of attention deficit hyperactive disease (ADHD) except -

a) Lack of concentration

b) Impulsivity

c) Mental retardation

d) Hyperactivity

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Correct Answer - C
Ans. is 'c' i.e., Mental Retardation
Inattentive

This must include at least 6 of the following symptoms of inattention that must have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

- Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- Often has difficulty sustaining attention in tasks or play activities
- Often does not seem to listen to what is being said
- Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- Often has difficulties organizing tasks and activities
- Often avoids or strongly dislikes tasks (such as schoolwork or homework) that require sustained mental effort
- Often loses things necessary for tasks or activities (school assignments, pencils, books, tools, or toys)
- Often is easily distracted by extraneous stimuli

- Often forgetful in daily activities

Hyperactivity/impulsivity

This must include at least 6 of the following symptoms of hyperactivity-impulsivity that must have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

- Fidgeting with or tapping hands or feet, squirming in seat
- Leaving seat in classroom or in other situations in which remaining seated is expected
- Running about or climbing excessively in situations where this behavior is inappropriate (in adolescents or adults, this may be limited to subjective feelings of restlessness)
- Difficulty playing or engaging in leisure activities quietly
- Unable to be or uncomfortable being still for extended periods of time (may be experienced by others as “on the go” or difficult to keep up with)
- Excessive talking
- Blurting out answers to questions before the questions have been completed
- Difficulty waiting in lines or awaiting turn in games or group situations
- Interrupting or intruding on others (for adolescents and adults, may intrude into or take over what others are doing)

Other

- Onset is no later than age 12 years
- Symptoms must be present in 2 or more situations, such as school, work, or home
- The disturbance causes clinically significant distress or impairment in social, academic, or occupational functioning
- Disorder does not occur exclusively during the course of schizophrenia or other psychotic disorder and is not better accounted for by mood, anxiety, dissociative, personality disorder or substance intoxication or withdrawal

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1688. MC cause of delirium ?

a) Infection

b) Liver failure

c) Belladonna poisoning

d) None of the above

Correct Answer - A
Ans. A. Infection
Infection is one of the most common causes of delirium.

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1689. Capgras syndrome is ?

a) Sharing of delusion

b) Delusion of double

c) Erotomania

d) Hypochondriacal delusions

Correct Answer - B

Ans. is 'B' i.e., Delusion of double

- Capgras syndrome is a delusion of double.

The delusional misidentification syndrome (DSM)

- DSM is characterized by misidentification delusions of others or self. Four main syndromes are differentiated : ?

1. Capgras syndrome (Delusion of double):- Patient falsely sees a familiar person as a complete stranger who is imposing on him as a familiar person.
2. Fregoli syndrome (illusion de fregola): - The patient falsely identifies stranger as a familiar person.
3. Syndrome of subjective double: - The patient's own self is perceived as being replaced by a double.
4. Syndrome of intermetamorphosis: - A false belief that a person can transform into another person.

- These syndromes most commonly appear in schizophrenia. Other causes are Alzheimer syndrome, head injuries, and delusional disorders.

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1690. Jamais vu is -

a) Illusion that what one is hearing, one has heard previously

b) A unfamiliar thought regarded as repetition of a previous thought

c) Unfamiliar situations or events feel strangely familiar

d) Feeling of strangeness to familiar situation

Correct Answer - D
Ans. D. Feeling of strangeness to familiar situation
famais vu :- A feeling of strangeness to familiar situations or events.

KollegeApply

1691. Features like increased psychomotor acitivity, waxy flexinbility at time are seen classically in :

a) Simple schizophrenia

b) Hebephrenic schizophrenia

c) Catatonic schizophrenia

d) None of the above

Correct Answer - C
C. i.e. Catatonic schizophrenia

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1692. Characteristic hallucination of schizophrenia is

a) Auditory hallucinations commanding the patient

b) Auditory hallucinations giving running commentary

c) Auditory hallucinations criticizing the patient

d) Auditory hallucinations talking to patient

Correct Answer - B

Ans. B. Auditory hallucinations giving running commentary

- Third-person hallucinations, e.g. voices heard arguing, commenting or discussing the patient or giving a running commentary on one's action; are characteristic of schizophrenia.

In schizophrenia auditory hallucinations are the most common type of hallucinations.

1. First-person hallucination:- Audible self-thoughts
2. Second person hallucination:- Voices address the person directly or commanding one's action and
3. Third-person hallucinations:- voices heard arguing, commenting or discussing the patient or giving a running commentary on his action or thought. Only the "third person hallucinations' are characteristic of schizophrenia.

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1693. Good prognostic factor for schizophrenia is ?

a) Blunted affect

b) Early onset

c) Presence of depression

d) Male sex

Correct Answer - C
Ans. is 'c' i.e., Presence of depression

- Good prognostic factors :- Acute onset; late onset (onset after 35 years of age); Presence of precipitating stressor; Good premorbid adjustment; catatonic (best prognosis) & Paranoid (2nd best); short duration (< 6 months); Married; Positive symptoms; *Presence of depression;* family history of mood disorder; first episode; pyknic (fat) physique; female sex; good treatment compliance & good response to treatment; good social support; presence of confusion or perplexity; normal brain CT Scan; outpatient treatment.

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1694. Self mutilation is a feature of ?

a) Von-Gogh syndrome

b) Catatonic schizophrenia

c) Paranoid schizophrenia

d) None of the above

Correct Answer - A
Ans. A. Von-Gogh syndrome
Dramatic self-mutilation occurring in schizophrenia has also been called Von-Gogh syndrome'

KollegeApply

1695. A patient inventing new words, is a feature of ?

a) Neurosis

b) Schizophrenia

c) OCD

d) Von-Gogh syndrome

Correct Answer - B
Ans B. Schizophrenia
Neologism: - New words or condensations of several words that are not readily understood by others.
Neologism is seen in schizophrenia and organic brain syndrome.

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1696. Increased dopamine levels are associated ?

a) Depression

b) Mania

c) Delirium

d) Schizophrenia

Correct Answer - D
Ans. D. Schizophrenia
Dopamine hypothesis is the most accepted hypothesis for schizophrenia.
There is hyperactivity of dopaminergic system.
Other neurotransmitters involved are : - Increased serotonin, Decreased GABA, variable change (Increased or decreased) glutamate, and increased norepinephrine.

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1697. Loosening of association is an example of

a) Formal thought disorder

b) Schneider's first symptoms

c) Perseveration

d) Concrete thinking

Correct Answer - A
Ans. is 'a' i.e., Formal thought disorder
Thought disorders

Formal thought disorders (Disorders of thought process)	Disorders of thought process
Racing thoughts :- Anxiety, Schizophrenia Retarded thoughts :- Depression Circumstantiality :- Mania, Schizophrenia Thought blocking :- Schizophrenia, Severe anxiety Perseveration :- Organic brain disease, Schizophrenia (occasionally Loosening of association :-	Delusion :- Psychosis (Schizophrenia mania, depression & others Obsession Compulsion Preoccupations Phobias Depersonalization & Derealization

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Schizophrenia
Flight of ideas :- Mania
Tangentiality
Clunging & punning :-
Mania & schizophrenia
Neologism, word salad,
Echolalia :-
Schizophrenia

- In schizophrenia and mood disorders (depression, mania) all parts of the thought (thought process as well as content) are involved.
- However, schizophrenia is conventionally referred as formal thought disorder.

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1698. Visual hallucinations is seen in :

a) Alcoholism

b) Mania

c) Depression

d) Phobia

Correct Answer - A
A. i.e. Alcololism

KollegeApply

1699. Treatment of choice for acute panic attacks is ?

a) Barbiturates

b) Benzodiazepines

c) TCAs

d) MAO inhibitors

Correct Answer - B
Ans. B. Benzodiazepines
DOC for Panic disorders - SSRI's
DOC for acute panic attack - Benzodiazepines.

KollegeApply

1700. Which of the following is not true about sleep ?

a) REM sleep comes earlier than NREM sleep

b) REM sleep is also called paradoxical sleep

c) Sleep walking comes in NREM sleep

d) Dreams come in REM sleep

Correct Answer - A

Ans. A. REM sleep comes earlier than NREM sleep

The NREM (with its four stages) and REM sleep repeat several times a night in cyclic manner, 4-6 times depending on the length of sleep.

A typical cycle starts with stage I of the NREM sleep which is followed by second, third and fourth stages.

REM sleep occupies 20-30% of total sleep and NREM sleep occupies 60-70% (Stage I occupies 5- 10%; Stage 2 occupies 40-50% ;Stage 3 occupies 15-20%

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1701. Gamma waves of REM sleep in sleep cycle are associated with ?

a) Intense attention

b) Subconscious thinking

c) Deep subconscious thinking

d) Deep sleep

Correct Answer - A

Ans. A. Intense attention

Beta and gamma waves (20-80Hz) occur spontaneously during REM sleep and waking and are evoked by intense attention, conditioned responses, tasks requiring fine movements and sensory stimulus

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1702. Behavioral therapy is done in ?

a) Schizophrenia

b) Agoraphobia

c) Delirium

d) Neurotic depression

Correct Answer - B
Ans. B. Agoraphobia
Most important use of behavioral therapy - Phobia & OCD.
Other users are - Other anxiety disorders (including panic), Eating disorders, Autism, ADHD, some personality disorder, sexual dysfunctions, depression.

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1703. Not seen in anorexia nervosa:
September 2009

a) Osteoporosis

b) Refusal to feeds

c) Weight loss

d) Menorrhagia

Correct Answer - D
Ans. D: Menorrhagia
Physical Signs of anorexia nervosa
* Excessive weight loss
* Scanty or absent menstrual periods
* Thinning hair
- Dry skin
* Cold ors wollen hands and feet
Bloated or upset stomach
* Downy hair covering the body Low blood pressure
* Fatigue
* Abnormal heart rhythms
*Osteoporosis
Psychological and Behavioral Signs in anorexia nervosa
* Distorted perception of self (insisting they are overweight when they are thin)
* Being preoccupied with food Refusing to eat
* Inability to remember things
* Refusing to acknowledge the seriousness of the illness
Obsessive-compulsive behavior
* Depression

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1704. Main difference between anorexia nervosa and bulimia nervosa lies in:

March 2013

a) Symptomatology

b) Weight

c) Gender

d) Age

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Correct Answer - B

Ans. B i.e. Weight

Anorexia nervosa and bulimia

- Both anorexia nervosa and bulimia are characterized by an overvalued drive for thinness and a disturbance in eating behavior.
- The main difference between diagnoses is that anorexia nervosa is a syndrome of self-starvation involving significant weight loss of 15 percent or more of ideal body weight, whereas patients with bulimia nervosa are, by definition, at normal weight or above.
- Bulimia is characterized by a cycle of dieting, binge-eating and compensatory purging behavior to prevent weight gain.
- Purging behavior includes vomiting, diuretic or laxative abuse.
- Excessive exercise aimed at weight loss or at preventing weight gain is common in both anorexia nervosa and in bulimia.

1705. Eating disorder with normal weight is?

a) Anorexia nervosa

b) Bulimia nervosa

c) Binge eating disorder

d) None of the above

Correct Answer - B
Ans. B. Bulimia nervosa
Anorexia nervosa - Under weight
Bulimia nervosa - Normal Weight
Binge eating disorder - Over weight.

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1706. Binge eating disorder is characterized by ?

a) Normal weight

b) Weight loss

c) Obesity

d) Self induced vomiting

Correct Answer - C
Ans. C. Obesity
Binge eating disorder (BED) is characterized by insatiable cravings that can occur any time day or night, usually secretive, and filled with shame.
There are no comPensatory mechanisms associated with the binge to get rid of calories, so individulas with BED are more likely to be overweight or obese, while patients with bulimia nervosa may be underweight, normal weight.

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1707. Tricyclic antidepressants have all of the following actions except ?

a) Anticholinergic action

b) MAO inhibition

c) Block 5-HT or NE reuptake

d) Causes sedation

Correct Answer - B

Ans- B. MAO inhibition

Tricyclic antidepressants (TCAS) are either NA + 5HT reuptake inhibitors (e.g. - Imipramine,
Amitriptyline) or predominantly NA reuptake inhibitors (e.g. Desipramine, nortriptyline).
TCAs are not MAO inhibitors.
Adverse effects of TCFs are : anticholinergic side effects, sedatior, mental confusion, weakness, increase appetite & weight gain, sweating & fine tremor, postural hypotension and cardiac arrhythmia.

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1708. Which of the following is a feature of opioid withdrawal?

a) Tremors

b) Goose flesh

c) Dry nose and mouth

d) Constipation

Correct Answer - B

Ans. B. Goose flesh

Manifestations of morphine withdrawal -

- Lacrimation
- Sweating
- Yawning
- Gooseflash(Piloerection)
- Mydriasis
- Anxiety & fear
- Restlessness
- Insomnia
- Abdominal colic
- Diarrhea
- Dehydration
- Hypertension
- Palpitation
- Rapid weight loss

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1709. Phototherapy is used in the treatment of ?

a) Anorexia nervosa

b) Seasonal affective disorder

c) Schizophrenia

d) Obsessive compulsive disorder

Correct Answer - B
Ans. B. Seasonal affective disorder
Phototherapy is primarily indicated in the treatment of seasonal depressions.
In addition to seasonal depression, the other major indication for phototherapy may be in sleep disorders.

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1710. Feature associated with mania is ?

a) Neologism

b) Perseveration

c) Echolalia

d) Flights of ideas

Correct Answer - D
Ans. D. Flights of ideas
Diagnostic criteria for mania
Three or more of the following for at least 1 week:-
1. Inflated selfvesteem or grandiosity
2. Decreased need for sleep
3. Overtalkativeness
4. Flightofvideas
5. Distractibility
6. Psychomotor agitation or Increased goal directed activities
7. Excessive involvement in pleasurable activities

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1711. Drug not used in prophylaxis of MD P ?

a) Haloperidol

b) Lithium

c) Carbamazepine

d) Valproate

Correct Answer - A
Ans. A. Haloperidol
Prophylactic treatment for bipolar disorder:
1. Lithium (drugof choice)
2. Carbamazepine
3. Valproate
4. Other drugs which can be used are topiramate, Lamotrigine, atypical antipsychotics (artpiprazale, olanzapine,quetiapine, risperidone, Clozapine) and Gabapentin.

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1712. Characterized by chronic, multiple tics ?

a) Parkinson's disease

b) Wilson's disease

c) Shy-Drager syndrome

d) Tourette's syndrome

Correct Answer - D
Ans. D. Tourette's syndrome
Tourette syndrome (also called Tourette's syndrome, Tourette's disorder, Gilles de la Tourette syndrome, GTS or, more commonly, simply Tourette's or TS) is an inherited neuropsychiatric disorder with onset in childhood, characterized by multiple physical (motor) tics and at least one vocal (phonic) tic.

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1713. Tourette syndrome is a type of ?

a) Tic disorder

b) Mental retardation disorder

c) Seizure disorder

d) None of the above

Correct Answer - A
Ans. A. Tic disorder
Tourette syndrome (also called Tourette's syndrome, Tourette's disorder, Gilles de la Tourette syndrome, GTS or, more commonly, simply Tourette's or TS) is an inherited neuropsychiatric disorder with onset in childhood, characterized by multiple physical (motor) tics and at least one vocal (phonic) tic.
Average onset between the ages of 3 and 9 years.
Males are affected about three to four times more often than females.
Common associations are ADHD and OCD.

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1714. True about flumazenil is ?

a) Can be used in barbiturate poisoning

b) Specific antidote for opiate overdose

c) Can be used in benzodiazepine overdose

d) All of the above

Correct Answer - C

Ans. C. Can be used in benzodiazepine overdose

Fumazenil is an imidazobenzodiazepine derivative and a potent benzodiazepine recePtor antagonist that competitively inhibits the activity at the benzodiazepine recognition site on the GABA benzodiazepine receptor complex thereby reversing the effects of benzodiazepine on the central nervous system.

Flumazenil does not antagonize the central nervous system effects of drugs affecting GABA-ergic neurons by means other than the benzodiazepine receptor (including ethanol, barbiturates, or general anesthetics) and does not reverse the effects of opioids.

1715. Which of the following typical antipsychotic drug is not available in depot form ?

a) Haloperidol

b) Risperidone

c) Olanzapine

d) Chlorpromazine

Correct Answer - D

Ans. D. Chlorpromazine

Antipsychotic drugs with depot preparations are risperidone, poliperidone, halopetidol, fluphenazine, flupenthixol, zuclopenthixol, olannpine, clozapine, imipramine and quetiapine.

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1716. Conventional drug used in the treatment of delirium is?

a) Haloperidol

b) Lithium

c) SSRIs

d) Morphine

Correct Answer - A
Ans. A. Haloperidol
Drugs used for delirium:

- Typical antipsychotics: - Haloperidol (Doc), Thioridazine, chlorpromazine.
- Atypical antipsychotics: - Risperidone, quetiapine, olanzapine.
- Benzndiazepines (for delirium tremens): - Chlordiazepoxide, Diazepam, Lorazepam, Clonazepam.

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1717. General paralysis of insane is associated with ?

a) Neurosyphillis

b) Alzheimer's disease

c) Parkinson's disease

d) None of the above

Correct Answer - A
Ans, A. Neurosyphillis
General paresis, also known as general paralysis ofthe insane or paralytic dementia, is a severe neuropsychiatric disorder, classified as an organic mental disorder and caused by the chronic meningoencephalitis that leads to cerebral atrophy in late-stagesyphilis.
Degenerative changes are associated primarily with the frontal and temporal lobar cortex-
General paralysis of the Insane (GPI) is progressive deterioration of the whole mental and physical personality.
Symptoms included exaggeratedkneejerk, Iack ofreaction ofthe pupils to light, an inabilityto pay attention, a'clouding'of consciousness, poor short-term memory, tremulous voice, reflex disturbances, and retinal anomalies' and diminished skin sensation. Patients were often recognizable by their striking 'delusions of grandeur”

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1718. Sign of oppositionalism in a young child is due to?

a) Mental retardation

b) Organic mental disorder

c) Mental distress

d) All of the above

Correct Answer - C
Ans. C. Mental distress
“Oppositionalism, temper tantrums and breath holding spells are not unusual during 1st years of life and are age typical expression of frustration and anger”

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1719. All of the following are associated increased REM latency, except ?

a) First night effect

b) SSRIs

c) Narcolepsy

d) Restless leg syndrome

Correct Answer - C

Ans. C. Narcolepsy

Increased REM latency -

- PTSD
- Restless leg syndrome.
- First night effect
- SSRI’s
- TCA’s
- Ethanol
- Lithium

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1720. Modafinil is used for the treatment of ?

a) Narcolepsy

b) Sexual dysfunction

c) Depression

d) Anxiety

Correct Answer - A
Ans. A. Narcolepsy
Modafinil is a wakefulness-promoting agent (or eugeroic) used for treatment of disorders such as narcolepsy,shift work sleep disorder, and excessive daytime sleepiness associated with obstructive sleep apnea'

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1721. Drug with no mood stabilizing property is -

a) Lithium

b) Lamotrigine

c) Imipramine

d) Carbamazepine

Correct Answer - C

Ans. C. Imipramine

The 5 individual drugs that can be used as mood stabilizers are:

1. Lithium
2. CarbamazePine
3. Lamotrigine
4. Valproate
5. Asenapine

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1722. Haloperidol induced extarpyramidal side effects are treated by ?

a) Benzodiazepines

b) Barbiturates

c) Anticholinergic drugs

d) SSRIs

Correct Answer - C
Ans. C. Anticholinergic drugs
Commonly used medications for extra-pyramidal symptoms are anticholinergic agents such as Benztropine, Diphenhydramine and trihexyphenidyl.
Another common course of treatment includes dopamine agonist agents such as pramipexole.

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1723. Most common complication of modified ECT

a) Intracerebellar Bleed

b) Fracture spine

c) Body ache

d) Amnesia

Correct Answer - D

D i.e. Amnesia

* Electro convulsive **therapy (seizure)** *increases production of brain derived neurotrophic factor (BDNF)Q.* Madsen proposed *generation of new neurons in the hippocampus* may be an important neurobiological element underlying the clinical effects of ECT.

* *ECT is most commonly indicated (-85% of all ECT) and most effective in treatment of major depression (with psychosis / delusions /or suicidal tendency)Q. ECT is indicated in psychotic (delusional) depressionQ* because nihilistic delusions may induce suicidal tendency, *whereas ECT is not indicated in neurotic depression (dysthynia), cyclothymiaQ.* ECT may be useful in MDP (bipolar) in decreasing duration of depressive episode.

ECT is not (or less) useful in chronic conditions like chronic schizophrenia (with negativ symptoms esp)Q. Use of ECT is not the first line (choice) of treatment in mania & schizophrenia (lithium & anti psychotics are mainstay of treatment). Panic disorder is also treated with drugs not ECT.

Indications of ECT

* ECT is most useful in acute and positive symptoms (eg suicidal tendency, catatonia), whereas it is least effective in chronic conditions and negative symptoms

* Clinical indications of ECT include

Primary use	Secondary use
1. *Rapid definitive response* required on medical or psychiatric grounds 2. *Risk of alternative treatments* out weight benefits 3. *Past history of poor response to psychotropics or good response to ECT* 4. Patient preferance	1. Failure to respond or intolerance to pharmacotherapy in current episode i.e. drugs are ineffective, contraindicated or have serious side effects 2. Rapid definitive response necessitated by deterioration of the patients condition.

* ECT should be considered when the onset of disorder is acute, when changes in *mood, thought, and motor activities are pronounced,* when the cause of disorder is believed to be biochemical or physiological, when the condition interferes with the daily life or when other treatments have failed. Diagnosis for which ECT may be indicated include (especially when a/w delusions).

Major (Severe) Depression with	Mania (Bipolar	Schizophrenia (Severe	Other conditions
1. *Psychosis (i.e. delusional or psychotic depression)Q,* who are guilt ridden or	disorder) 1.Psychosis 2. Manic delirium 3.Rapid cycling	Psychosis) *1. Catatonia particularlyQ* 2. *Schizoaffective disorder (i.e.*	1. Delirium d/t general medical conditions or substance intoxication

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feel worthless, who states *depressive* 2. Catatonia d/t believe others 4. Acute *features)Q* and GMC, neurolept control their lives *&* uncontrolled schizophreniform malignantContraindications

I. Absolute (relatively) *Raised Intra Cranial TensionQ* d/t fear of brain herniation.

.. Relative

* Cerebro vascular Accident (CVA) = intracerebral hemorrhage
* Recent Myocardial infarction (MI)
* Severe hypertension
* Pheochromocytoma - Severe Pulmonary disease
* Retinal detachment - Space occupying intracerebral lesions (except for small, slow growing tumors without edema or other mass effect)
* Unstable vascular aneurysms or malformations Complications

Direct (Modified) ECT (when ECT is given without muscle relaxant & anesthesia)

Most common side effect is fracture T4 *T8 spineQ*

Causes decreased intraocular tension (JOT)

. Modified ECT (with MR & anesthesia) Both retrograde & antegrade amnesia is found but the *most common complication* is *retrograde amnesiaQ* Antegrade amnesia usually resolves within 5 hours whereas retrograde memory deficits may take 6-9 *monthsQ*

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1724. Causes of neuroregression in a child can be all except ?

a) Wilson's disease

b) Vitamin B12 deficiency

c) ADHD

d) Ataxia telengiectasia

Correct Answer - C

Ans. C. ADHD

Causes of neuroregression

Inherited

A. GreY matter involvement-

- With visceromegaly :- Niemann pick disease, Sandholf disease (GM2), sialidosis, Goucherdisease, Mucopolyschharidoses (MPS)
- Without visceromegaly :- TaySach Disease, Rett syndrome, Menke’s kinky hair disease

B. White matter involvement:-

- Leukodystrophies :- Metachromatic leukodystrophy, Krebbe's disease, Adrenoleukodytrophy, Alexander disease, Cannavan disease .
- Acquired/Demyelinating:- Multiplesclerosis,schilder'sdisease,Devicdisease

C. Basal ganglia involvement - Wilson’s disease, Dystonia muscular deformans, Huntington's disease

D. Spinocerebeller :- Friedrich's ataxia, Ataxia telengiectasis

E. Acquired

- Infections:- SSPE, progressive rubella syndrome, HIV
- Metabolic:Chronicleadpoisoning,Hypothyoidism,VitB12&Edeficienry,Dru

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1725. Mechanism of action of duloxetine is ?

a) Selective Inhibition of serotonin reuptake

b) Selective inhibition of nor-epinephrine reuptake

c) Selective inhibition of both serotonin and nor-epinephrine reuptake

d) None of the above

Correct Answer - C

Ans. C. Selective inhibition of both serotonin and nor-epinephrine reuptake

Duloxetine, is a drug classified under serotonin-norepinephrine reuptake inhibitors (sNRJs).

At lower doses it is more prominent serotonin reuptake inhibitor. Whereas at higher doses it is more prominent inhibitor of nor-epinephrine reuptake.

It has minimal dopamine agonist action.

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1726. Which of the following describes the points marked in the diagram?

a) Oblique conjugate

b) Diagonal conjugate

c) Obstetric conjugate

d) True conjugate

Correct Answer - B
Answer- B. Diagonal conjugate
Diagonal conjugate : Distance between the lower border of pubic symphysis to the midpoint on the sacral promontory. It measures 12 cm.

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