1. True statement about development ofpancreas:

a) Uncinate process from ventral bud

b) Lower part of head from dorsal bud

c) Duct of Wirsung develops from dorsal bud only

d) Pancreatic divisum is due to abnormal development of ducts ofpancreas

e) Body is formed from dorsal bud

Correct Answer - A:D:E

Ans. a. Uncinate process from ventral bud; d. Pancreatic divisum is due to abnormal development of ducts ofpancreas; e. Body is formed from dorsal bud

- The pancreas develops from two endodermal buds, dorsal & ventral, which arise from the part of the gut that later forms the second part ofthe duodenum
- The ventral bud forms the lower part of the head & the uncinate Process of the pancreas, while the upper part of head, the body & the tail areformedfrom the dorsal bud .
- The main pancreatic duct (duct of Wirsung) is formed, in its distal part by the duct of the dorsal bud and in ifs proximal part, by the duct of the ventral bud

2. Which of the following combination is/are true regarding epithelial lining of urinary system:

a) Urinarybladder- transitional epithelium

b) Pre-prostatic urethra- stratified columnar

c) Membranous urethra- transitional epithelium

d) Distal part of penile urethra- non-keratinising stratified squamous epithelium

e) Urethral meatus- keratinising stratified squamous epithelium

Correct Answer - A:D:E

Ans. a. Urinarybladder- transitional epithelium; d. Distal part of penile urethra- non-keratinising stratified squamous epithelium e. Urethral meatus- keratinising stratified squamous epithelium

Urinary bladder is lined by uroepithelium (transitional epithelium)

The lining of urethra varies from urothelium of the bladder to keratinized stratified squamous epithelium of the glans.

- Pre-prostatic urethra: Transitionalepithelium
- Prostatic urethra: Transitionalepithelium
- Membranous urethra: Pseudostratified columnar epithelium
- Spongy urethra (or penile urethra): Pseudostratified columnar - proximally, Stratified squamous - distally

3. Which of the following statement is/are true regarding lesion of IX CN :

a) Gag reflex-absent

b) Deviation of tongue to one side

c) Loss of taste sensation in the posterior l/3 of the tongue

d) Loss of taste sensation in the anterior 2/3 of the tongue

e) May cause bulbar palsy

Correct Answer - A:C:E

Ans.a. Gag reflex-absent; c. Loss of taste sensation in the posterior l/3 of the tongue; e. May cause bulbar palsy

Glossopharyngeal Nerve Palsy:

- Loss of sensation over the mucous membrane of pharynx .
- Loss of taste sensation in the posterior l/3 of the tongue
- Gag reflex-Lost in lesion of IX & X CN

4. Feature(s) of oculomotor nerve palsy is/are:

a) Ptosis

b) Miosis

c) Mydriasis

d) Diplopia

e) Loss of accommodation

Correct Answer - A:B:D:E

Ans. a. Ptosis; b. Miosis ;d. Diplopia; e. Loss of accommodation

Oculomotor Nerve Palsy:

- Complete & total paralysis - ptosis, lateral squint, dilation of pupil, loss of accommodation, slight proptosis & diplopia .
- Pupillary light reflex in affected eye is absent .
- Pupil dilates & becomes fixed to light .
- Weber syndrome: a midbrain lesion causing contralateral hemiplegia & ipsilateral paralysis of the third nerve

5. Cervix is/are drained by:

a) External iliac lymph node

b) Internal iliac lymph node

c) Aortic lymph node

d) Inguinal lymph node

e) Sacral lymph node

Correct Answer - A:B:E

Ans. a. External iliac lymph node; b. Internal iliac lymph node; e. Sacral lymph node

Cervix: On each side, the lymphatics drain into

- External iliac, obturator lymph nodes either directly or through paracervical lymph nodes,
- Internal iliac groups
- Sacral group

6. Which of the following may occur in common peroneal nerve injury:

a) Dorsiflexion not possible

b) Foot drop

c) High stepping gait

d) Loss of inversion of foot

e) Eversion of foot affected

Correct Answer - A:B:C:E

Ans. a. Dorsiflexion not possible b. Foot drop c. High stepping gait e. Eversion of foot affected

Common peroneal nerve injury (usually d/t *fracture of head/neck fibula)* results in :

- Foot & toe drop
- Loss of dorsiflexion of ankle
- Extension of finger
- Eversion of foot
- Loss of sensation in 1st web space, anterolateral lower leg & dorsum of foot and toes.

In common peroneal nerve injury sensation of sole, lateral border & medial border & inversion & plantar flexion remain normal.

7. O'Donoghue's triad comprises of:

a) Anterior cruciate ligament tear

b) Posterior cruciate ligament tear

c) Medial meniscus

d) Lateral meniscus

e) Medial collateral ligament

Correct Answer - A:C:E

Ans. a. Anterior cruciate ligament tear ;c. Medial meniscus; e. Medial collateral ligament

- An unhappy triad (or terrible triad, "horrible triangle O'Donoghue's triad or a "blown knee-') is an injury to the anterior cruciate ligament, medial collateral ligament, and the medial meniscus

8.

Which of the following vein(s) is/are part of portal circulation:

a) Splenic vein

b) Paraumbilical vein

c) Superior rectal vein

d) Left gastric vein

e) Inferior rectal vein

Correct Answer - A:B:C:D

Ans. a. Splenic vein b. Paraumbilical vein c. Superior rectal vein d. Left gastric vein

- Portal vein collects blood from the foregut, midgut, and hindgut.
- The portal vein is located deep to the hepatic artery and cystic duct and is formed by the union of the superior mesenteric vein and splenic vein, deep to the neck of the pancreas.
- Blood from portal vein transported to the hepatic sinusoids of the liver for filtration and detoxification.
- The hepatic sinusoids empty into the common central vein, which empties into the hepatic veins and ultimately drains into the inferior vena cava.

9. Thrombosis of anterior cerebral artery cause:

a) Left foot paralysis in right anterior cerebral artery thrombosis

b) Urinary incontinence

c) Paralysis of the contralateral face, arm, and leg

d) Homonymous hemianopia

e) Gegenhalten rigidity

Correct Answer - A:B:E

Ans. a. Left foot paralysis in right anterior cerebral artery thrombosis ; b. Urinary incontinence; e. Gegenhalten rigidity

Signs and symptoms of anterior cerebral artery thrombosis:

- Paralysis of opposite foot and leg: Motor leg area
- A lesser degree of paresis of opposite arm area of cortex or fibers descending to corona radiate
- Cortical sensory loss over toes, foot and leg: Sensory areaforfoot andleg
- Urinary incontinence: Sensorimotor area in Paracentral lobule
- Contralateral grasp reflex, sucking reflex gegenhalten (paratonic rigidity)
- Abulia (akinetic mutism), slowness, delay intermittent interruption, lack of spontaneity, whispering reflex distraction to sights and sounds
- Impairment of gait and stance (gait apraxia)
- Dyspraxia of left limbs, tactile aphasia in left limbs

10. Fibrocartilage is/are found in:

a) Temporomandibular joint

b) Sternoclavicular joint

c) Hip joint

d) Vertebral disc

e) Inferior radioulnar joint

Correct Answer - A:B:D:E

Ans. a. Temporomandibular joint; b. Sternoclavicular joint ; d. Vertebral disc; e. Inferior radioulnar joint

Fibrocartilage is a white opaque structure due to dense collage fibres (type I and II).

- When a fibrous tissue is subjected to pressure it is replaced by fibrocartilage.
- It is seen in joints, symphysis, intervertebral discs, menisci and labra (shoulder joint and hip joint).
- Pinna is a type of elastic cartilage.
- Elastic cartilages are seen at sites concerned with production or reception of sounds e.g. external acoustic meatus (lateral part), auditory tube and epiglottis.

11. Parasympathetic nerve stimulation results in:

a) Sphincter closure of gall bladder

b) Increased peristalsis

c) Decreased GIT motility

d) Detrusor muscle relaxation

e) Gall bladder musculature contraction

Correct Answer - B:E

Ans. (B) Increased peristalsis (E) Gall bladder musculature contraction

[Ref Ganong 25th/257-60, 24th/265; Katzung 13th 110-111]

- Parasympathetic nerves are motor to musculature of the gallbladder & bile duct, but inhibitory to the sphincter.
- Sympathetic nerves from T7-9 are vasomotor & motor to sphincters.
- The cranial outflow of the parasympathetic division supplies the visceral structures in the head via oculomotor, facial, and glossopharyngeal nerves, and those in the thorax and upper abdomen via the vagus nerves.
- Pupil - Constricted (Miosis)
- Ciliary muscle - Constricted (near vision)
- Glands (Nasal, Lacrimal, Parotid, Submandibulal Gastric Pancreatic) - Stimulation of copious secretion (containing many enzymes for enzyme-secreting glands)
- Sweat glands - Sweating on palms of hands
- Bronchial muscle - Contraction
- Gallbladder and bile ducts - Contracted

- LUmen - Increased peristalsis and tone
- Detrusor - Contracted
- Trigone - Relaxed

12. True about muscle spindle:

a) Group Ia fiber contain sensory afferent

b) Nuclear bag & nuclear chain fibers present in intrafusal muscle fiber

c) Motor supply by Aa fiber

d) Motor supply by y fiber

e) Secondary ending is stimulated by nuclear bag fiber

Correct Answer - A:B:D

Ans. (A) Group Ia fiber contain sensory afferent (B) Nuclear bag & nuclear chain fibers present in intrafusal muscle fiber (D) Motor supply by y fiber

[Ref. A.K.Jain 6th/87 3-76; Guyton 12th/ 770-73]

MUSCLE SPINDLES

- Are **"Stretch receptor"** located within a muscle.
- Yet found, intermingling with muscle fibers.
- **'Intrafusal fibers' - Specialized muscle fibers seen within spindle**

(**Note: -** Fusus refers to spindle).

Nuclear bag fibers:

- **Usually, 2 per spindle.**

Nuclear bag fiber 1 -

- With low level of myosin ATPase activity.

Nuclear bag fiber 2 -

- With high level of myosin ATPase activity.
- **Nuclear chain fibers**
- **Are thinner & shorter.**
- Four or more fibers per spindle (more than nuclear bag fibers)

Sensory/afferent innervation:

- Two afferent fiber types originate intrafusally,

Annulospiral/primary endings:

- Found wound around central region of both nuclear bag & nuclear chain fiber.
- Are "Aα"/"Ia" fibers.

Flower-spray/secondary endings:

- Innervate peripheral parts/ends of nuclear chain fiber.
- Are "Aβ"/"II" fibers.

2. Motor/efferent innervation:

- Innervates peripheral parts of both nuclear bag & nuclear chain fibers.
- Mainly by "Aγ" type/"γ-motor neurons"/"Fusimotor neuron"/"Small motor nerve system of Leksell efferents".
- Because of their characteristic smaller size.

13. Hyperbaric oxygen therapy is/are used in:

a) Radiation induced proctitis

b) Tension pneumothorax

c) Bleomycin induced lung damage

d) Gasa angrene

e) Carbon mono-oxide poisoning

Correct Answer - A:D:E

Ans. (A) Radiation induced proctitis (D) Gasa angrene (E) Carbon mono-oxide poisoning

[Ref Manipal surgery p. 176;A.K. Jain p. 461]

Hyperbaric Oxygen Therapy- Indication:

- Anaemic hypoxia especially due to carbon mono-oxide poisoning or severe blood loss)
- Stagnant hypoxia
- Histotoxic hypoxia (Radiation induced tissue injury & gas gangrene)
- CO poisoning.
- Infection (gas gangrene).
- Cancer therapy to potentiate rcdiathcrapy
- Arterial insufficiency
- Decompression sickness & air embolism

Contraindication -

- Untreated pneumothorax
- During treatment with drugs like - Bleomycin (bleomycin-induced lung
- injury), Doxorubicin (Adriamycin), cisplatin, Disulfiram.

14. Peripheral cyanosis is/are associated with:

a) SLE

b) TAPVC

c) Atrial septal defect

d) Methemoglobinemia

e) Cardiogenic shock

Correct Answer - E

Ans. E. Cardiogenic shock

[Ref: PJM 20th/16-19; Ganong 25th/642.]

Peripheral cyanosis:

- Caused by slowing of blood flow and increased extraction of oxygen from normally saturated blood.
- Results from vasoconstriction or decreased peripheral blood flow, reduced cardiac output or vascular occlusion.
- Characterized by cyanosis of skin alone and sparing of mucous membranes

Causes:

- Vasculor occlusion
- Arterial obstruction
- Venous obstruction
- Reduced cardiac output
- Cold exposure
- Redistribution of blood flow from the extremities

15. Blood in foetus is/are formed by:

a) Liver

b) Lymph nodes

c) Spleen

d) Bone marrow

e) Yolk sac

Correct Answer - A:B:C:D:E

Ans. (A) Liver (B) Lymph nodes (C) Spleen (D) Bone marrow (E) Yolk sac

- Blood formation occur later (5wk) throughout embryonic mesenchyme, then liver, spleen/thymus, bone marrow lymph node (ref: embryology.mrd.unsw.au).
- Formation of blood include formation of RBC, WBC & platelet.
- Blood production starts from 3rd week of intrauterine life.
- 3rd week to 3rd month (intravascular phase) - Erythropoiesis occurs in the mesoderm of yolk sac
- B/w 3rd to 5th month of intrauterine life, erythropoiesis occur principally in the liver (to some extent in the spleen).
- 5th month onwards (myeloid phase) = Erythropoiesis occurs in red bone marrow (all marrow is red bone marrow at this stage)

16. Important buffer system operating in blood:

a) Protein system buffer

b) Phosphate buffer

c) Carbonic acid- Bicarbonate system buffer

d) Hemoglobin system buffer

e) None

Correct Answer - A:C:D

Ans. (A) Protein system buffer (C) Carbonic acid- Bicarbonate system buffer (D) Hemoglobin system buffer

[Ref A.K.Jain 6th/ 5 59-60,55; Ganong 25th/643 -44]

- Acid and base shifts in the blood are largely controlled by three main buffers in blood: (1) proteins, (2) hemoglobin (3) the carbonic acid-bicarbonate system
- More than 90% of blood's capacity to buffer carbonic acid is attributed to the haemoglobin buffer system.
- Carbonic acid-bicarbonate system is one of the most effective buffer systems in the body.
- In plasma, phosphate concentration is too low for this system to be a quantitatively important buffet but it is important intracellularly.

17. True about collagen :

a) Double helix structure

b) Single helix structure

c) Triple helix structure

d) β-pleated structure

e) Component of connective tissue of body

Correct Answer - C:E

Ans: c. Triple helix..., e. Component....*[Ref Harper 30th/46-47,627-32; Lippincott 6th/43-48; Vasudevan 5th/254-55]*

- In collagen, the collagen helix, or type-2 helix, is a major shape in secondary structure
- All collagen have a triple helical structure.
- A striking characteristic of collagen is occurrence of glycine residue at every third position of triple helical portion of **a** chain.
- This repeating structure, represented as $(Gly\text{-}x\text{-}y)_n$, is an absolute requirement for the formation of the triple helix.
- 300 nm long and 1.5 nm in diameter, it is made up of three polypeptide strands (called alpha chains), each possessing the conformation of a left-handed helix (its name is not to be confused with the commonly occurring alpha helix, a right-handed structure).
- These three left-handed helices are twisted together into a right-handed coiled coil, a triple helix or "super helix"
- Collagen, the major component of most connective tissues, constitutes approximately 25% of the protein of mammals.
- It provides an extracellular framework for all metazoan animals and exists in virtually every animal tissue. At least 28 distinct types of

collagen made up of over 30 distinct polypeptide chains (each encoded by a separate gene) have been identified in human tissues.

18. At isoelectric point (p1) net charge of amino acis is:

a) -1

b) +1

c) -2

d) +1

e) 0

Correct Answer - E

Ans: e. 0...[*Ref Harper 30th/201]*

- Isoelectric point (pI) is a pH in which net charge of amino acid is zero" (Harper 30th/20)
- "Isoelectric point (pI) is a pH in which net charge of amino acid is zero. In case of proteins isoelectric point mostly depends on seven charged amino acids: glutamate (6-carboxylgroup), aspartate (13-carboxyl group), cysteine (thiol group), tyrosine (phenol group), histidine (imidazole side chains), lysine (c-ammonium group) and arginine (guanidinium group).

19. Hexosaminidase A deficiency causes:

a) Niemann-pick

b) Tay-Sachs disease

c) Hurler syndrome

d) Gaucher's disease

e) Krabbe's disease

Correct Answer - B

Ans: b. Tay-Sachs disease *[Refs Harper 30th/251; Lippincott 6th/212; Harrison 19th/432e,433e*

- Hexosaminidase A deficiency is an enzyme deficiency that causes brain and other nerve cells to die, which can lead to severe neurological and mental problems.
- Hexosaminidase A (HEX A) deficiency is caused by a deficiency in an enzyme called beta-hexosaminidase A. This enzyme helps break down a particular fatty acid called GM2 ganglioside.
- Without adequate amounts of functional enzymes, GM2 ganglioside will build up in nerve cells and cause them to die.
- There are several forms of HEX A deficiency, including acute infantile (Tay-Sachs disease), juvenile, chronic, or adult-onset forms.

20. Mitchondrial matrix contains enzymes of :

a) Pyruvate dehydrogenase

b) TCA cycle enzyme

c) Acyl CoA synthetase

d) ATP synthase

e) β-oxidation enzymes

Correct Answer - A:B:D

Ans: a. Pyruvate dehydrogenase, b. TCA cycle enzyme, d. ATP synthase

- Matrix of the Mitochondrion is gel-like solution in the interior of mitochondria is 50% protein. These molecules include the enzymes responsible for the oxidation of pyruvate, amino acids, fatty acids (by n-oxidation), and those of the tricarboxylic acid (TCA) cycle.
- The synthesis of glucose, urea, and heme occur partially in the matrix of mitochondria. In addition, the matrix contains NAD+ and FAD (the oxidized forms of the two coenzymes that are required as hydrogen acceptors) and ADP and Pi, which are used to produce ATP.

21. Which of the following group(s) are present in natural amino acids:

a) Imidazole group

b) Tetrapyrrole group

c) Indole group

d) Guanidinium group

e) Keto group

Correct Answer - A:B:C:D
Ans: a. Imidazole..., b. Tetrapyrrole..., c. Indole..., d. Guanidinium *(Ref Harper 30th/20-23; Lippincott 6th/I-11; Vasudevan 5th/19]*

- Imidazole group: Histidine, Beta carboxyl group: Aspartic acid (Vasudevan 5th/19) Gamma carboxyl group: Glutamic acid (Vasudevan 5th/19) ?-amino group: Lysine (Vasudevan 5th/19).
- Special groups in Amino acids Vasudevan 5th/17:→ Benzene group- Phenylalanine Indole group in- Tryptophan Pyrrolidine group - Proline Guanidinium group- Arginine Phenol group- Tyrosine

22. Which of the following vitamin deficiency cause triad of mental confusion, ophthalmoplegia & ataxia:

a) Vit B2

b) Vit B1

c) Vit B6

d) Vit C

e) Vit. B12

Correct Answer - B

Ans: b. Vit Bl ***[Ref Lippincott 6th/378-79; Harrison 19th/96e, 18th/594-96; Harper 30th/555-56, 28th/ 468]***

- Classically, Wernicke's encephalopathy is characterized by the triad of ophthalmoplegia, ataxia, and mental confusion, but confusion & a staggering gait are perhaps most common"-Synopsis of Psychaitry by (Kaplan 11th/796-799)
- Thiamine deficiency in its early stage induces anorexia and nonspecific symptoms (e.g., irritability, decrease in short-term memory).
- Alcoholic patients with chronic thiamine deficiency also may have central nervous system (CNS) manifestations known as Wernicke's encephalopathy, which consists of horizontal nystagmus, ophthalmoplegia (due to weakness of one or more extraocular muscles), cerebellar ataxia, and mental impairment

23. Which of the following enzyme(s) is/are involved in gluconeogenesis:

a) Pyruvate carboxylase

b) Phosphoenolpyruvate carboxykinase

c) Phosphofructokinase-1

d) Glucose 6-phosphatase

e) Pyruvate dehydrogenase

Correct Answer - A:B:D

Ans: a. Pyruvate carboxylase, b. Phosphoenolpyruvate carboxykinase, d. Glucose 6-phosphatase ,*[Ref Harper 30th/188; Lippincott 6th/117-122; Harper 28th/ 165-68; Lippincott 4th/329J]*

- glucose-6-phosphatase, fructose-1,6-bisphosphatase, and PEP carboxykinase/pyruvate carboxylase.

24. Gel used in electrophoresis is/are:

a) Agarose gel

b) Polyacrylamide plain gel

c) Polyacrylamide SDS (Sodium dodecyl sulphate) impregnated Polyacrylamide gel

d) all of the above

e) None

Correct Answer - D

Ans. d- all of the above [www.lonza.com/go/literature/2043; Shinde 7th/7741]

- Separation of RNA in agarose gels is used for a number of different purposes, including Northern blots to monitor RNA expression levels, checking RNA integrity and size selection of RNA for cloning experiments. Separation of RNA based on fragment length requires conditions that are different from DNA analysis.
- These include sample preparation, the use of sample and gel denaturants, electrophoresis buffers, and visualization. The purpose of the experiment and the size of the RNA being separated are the primary drivers in determining which denaturing system to use.
- The most frequently used denaturants for RNA agarose gel electrophoresis are formaldehyde, formaldehyde/formamide, and glyoxal plus DMSO.

25. Which of the following method(s) is/are used for detection of nucleic acid:

a) Northern blotting

b) Southern blotting

c) Western blotting

d) Microarray

e) ELISA

Correct Answer - A:B:D

Ans: a. Northern..., b. Southern"', d' Microarray'

Technique	Sample Analysed	Gel Used	Purpose
Southern blot	DNA°	Yes	Detect DNA changes
Northern blot	RNA°	Yes	Measures mRNA amounts & size
Western blot	Protein°	Yes	Measures protein amount
ASO	DNA°	No	Detects DNA mutations°
Microarray	RNA or cDNA	No	Measures many mRNA levels at one time
ELISA	Proteins° or antibodies	No	Detects proteins (antigens)or antibodies°
Proteomics	Proteins°	Yes	Measures abundance, distribution, posttranslai.iuri modifications, functions &

interactions of cellular proteins

26. Function of reverse transcriptase:

a) RNA dependent DNA synthesis

b) DNA dependent RNA synthesis

c) DNA dependent DNA synthesis

d) RNA dependent RNA synthesis

e) Involved in protein synthesis

Correct Answer - A
Ans. a. RNA dependent DNA synthesis

27. Which of the following is not a pyrimidine base ?

a) Cytosine

b) Uracil

c) Guanine

d) Thymine

e) Adenine

Correct Answer - C

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

Purines	Pyrimidines
Adenine	Cytosine
Guanine	Uraci I
Thymine	

- Both purines (adenine and guanine) are found both in DNA & RNA.
- Among pyrimidines -
- Li Cytosine and uracil are found in RNA (thymine is not found in RNA).
- Cytosine and thymine are found in DNA (uracil is not found in DNA).
- In DNA, adenine is always paired with thymine by two hydrogen bonds; and guanine always paired with cytosine by three hydrogen bonds.

28. Restriction endonuclease cleaves:

a) dsDNA

b) RNA

c) Histone

d) Protein

e) ssDNA

Correct Answer - A
Ans: a. dsDNA

- Restriction endonucleases (restriction enzymes), which cleave *double-stranded (ds) DNA* into smaller, more manageable fragments, has opened the way for DNA analysis"
- Restriction enzyme (RE or Restriction Endonuclease) is an enzyme that *cleave double-stranded DNA*Q *at specific recognition nucleotide known as restriction sites*Q
- The cut DNA fragments by RE may have *sticky ends (cohesive ends)*° or *blunts ends*° depending on the mechanism used by enzyme
- DNA fragments with sticky ends are particularly useful for recombinant DNA experiments (hybrid or chimeric DNA molecules)
- Restriction enzyme is *named according to the organism from which it was isolated*

29. True about miliary tuberculosis:

a) Occur primarily due to hematogenous spread

b) Miliary lesion is generally of size 1-2 mm

c) Diffuse bilateral crepitation is always present

d) Onset is generally acute

e) Sputum smear microscopy is negative in 80% of cases

Correct Answer - A:B:E

Answer- (A) Occur primarily due to hematogenous spread (B) Miliary lesion is generally of size 1-2 mm (E) Sputum smear microscopy is negative in 80% of cases

- Miliary TB is due to hematogenous spread of tubercle bacilli.
- Blood-borne dissemination gives rise to miliary TB.
- The lesions are usually yellowish granulomas l-2 mm in diameter that resemble millet seeds (microscopic or small, visible).

Clinical features-

- Fever, night sweats, anorexio, weaknas, and weight loss are presenting symptoms in the majority of cases.
- Patients have a cough and other respiratory symptoms.
- Hepatomegaly, splenomegaly, and lymphadenopathy.
- Eye examination- choroidal tubercles, which are pathognomonic of miliary TB

Investigations-

- Chest radiography reveals a miliary reticulonodular pattern.
- Sputum smear microscopy is negative in 80% of cases.
- TST (Tuberculin skin test) may be negative.
- Bronchoalveolar lavage and transbronchial biopsy are more likely to provide bacteriologic confirmation.

- Ausculution is frequently normal but in more advanced disease, widespread crackles are evident

Treatment-

- Regimens that are effective for treating pulmonary TB are also effective for treating extrapulmonary disease.

30. Which of the following cancer spread primarily by hematogenous route:

a) Papillary carcinoma thyroid

b) Renal cell carcinoma

c) Pheochromocytoma

d) Glioblastoma multiforme

e) Follicular carcinoma of thyroid

Correct Answer - B:C:E

Answer- (B) Renal cell carcinoma (C) Pheochromocytoma (E) Follicular carcinoma of thyroid

- The most common locations of metastasis are the lungs and bones.
- Renal cell carcinoma: Tumour cell line the blood vessel which are responsible for early blood spreadfrom RCC
- Papillary carcinoma thyroid: Foci of lymphatic invasion by tumor are often Present, but no blood vessel involvement
- Pheochromocytomas is the presence of metastases.
- Follicular carcinoma of thyroid: Blood borne metastases are more common.

31. Presentation of Pierre-Robin syndrome includes:

a) Retrognathia

b) Low set ear

c) Prominent forehead

d) Isolated cleft palate

e) Glossoptosis

Correct Answer - A:D:E

Answer- (A) Retrognathia (D) Isolated cleft palate (E) Glossoptosis

Triad of micrognathia, glossoptosis & cleft palate

- Cleft soft palate
- High-arched palate
- Jaw that is very small with small (receding) chin
- Jaw that is far back in the throat

32. True about mammalian mitochondrial DNA:

a) Contains around 16500 nucleotide sequence

b) Makes up around 3% total cellular DNA

c) Makes up around 10% total cellular DNA

d) Makes up around 0.3% total cellular DNA

e) Makes up around 1% total cellular DNA

Correct Answer - A:E

Answer- (A) Contains around 16500 nucleotide sequence
(E) Makes up around 1% total cellular DNA

- In mammalian cells, mitochondrial DNA makes up less than 1% of the total cellular DNA.
- A unique feature of mitochondrial DNA is maternal inheritence.
- mitochondria have there own genomes consisting of double-strand mitochondrial DNA (mtDNA) molecule consisting of a 16, 569 nucleotide sequence.
- mtDNA sequence contains a total of 37 genes encoding 13ETC.

33. High level of hCG is/are seen in all except :

a) Down syndrome

b) Neural tube defect

c) Germ cell tumor

d) Gestational trophoblastic disease

e) Multiple pregnancy

Correct Answer - B

Answer- B. Neural tube defect

- 'High level of hCG auld be detected in- multiple pregnancy, hydatiform mole, choriocarcinoma, Down syndrome,
- Plasma lower levels are found in ectopic pregnancies & in spontaneous abortion.
- hCG is producedby the syncytiotrophoblast of the placenta.

34. Human papilloma virus is/are associated with all except:

a) Oropharyngeal tumors

b) Carcinoma nasophraynx

c) Carcinoma anal canal

d) Carcinoma pancreas

e) Carcinoma cervix

Correct Answer - B:D
Answer- (B) Carcinoma nasophraynx (D) Carcinoma pancreas
Skin warts (Plantar wart, common wart, flat wart &
Epidermodysplasia verruciformis)
Papilloma (Laryngeal, Oral)
Condyloma acuminatum (genital wart)
Oral squamous cell carcinoma
Cervical intraepithelial neoplasia (CIN)
Carcinoma cervix

35. True about Hodgkin's lymphoma :

a) Often localized to single axial group of lymph node

b) Hepatomegaly is always present

c) Contiguous spread of lymph node

d) Can be cured by chemotherapy & radiotherapy

e) Commonly resents with painless lymphadenopathy

Correct Answer - A:C:D:E

Answer- (A) Often localized to single axial group of lymph node (C) Contiguous spread of lymph node (D) Can be cured by chemotherapy & radiotherapy (E) Commonly resents with painless lymphadenopathy

Hodgkin's lymphoma is a malignant neoplasm of lymphoreticular system.

It can involve lymph nodes, spleen and liver.

Common in males.

Classic diagnostic feature is the presence of Reed- Sternberg (RS) cells or Dorothy- Reed Sternberg cells.

Classic markers for Hodgkin's disease is CD 15 & CD 30.

Axial lymphatic system is almost always affected in Hodgkin's disease.

Cervical & mediastinal lymph nodes are involved most frequently.

Most commonly in patients present as painless, movable and firm lymphadenopathy.

Treatment-

- Stage I/ II classical Hodgkin's disease-
- Chemotherapy + field radiotherapy

36. CD 30 is/are marker for:

a) Anaplastic large cell lymphoma

b) Embryonal cell carcinoma

c) Squamous Cell Carcinoma

d) Seminoma

e) Hodgkin's lymphoma

Correct Answer - A:B:E

Answer- (A) Anaplastic large cell lymphoma (B) Embryonal cell carcinoma (E) Hodgkin's lymphoma

CD30 is positive in anaplastic large cell lymphoma & Hodgkin's lymphoma.

Activated B cells, T cells, and monocytes; also expressed by Reed-Sternberg cells and variants in classical Hodgkin lymphoma.

37. All are true about intestinal polyp syndrome except:

a) Cowden disease- Hamartomatous polyps

b) Hereditary nonpolyposis colorectal carcinoma(HNPCC)- Multiple adenomatous polyps

c) Peutz-Jeghers syndrome-associated with colonic carcinoma

d) Colonic hyperplastic polyp has malignant potential

e) Cronkhite-Canada syndrome- may have associated breast tumour

Correct Answer - D
Answer- D. Colonic hyperplastic polyp has malignant potential
Colonic hyperplastic polyps are bening epithelial proliferation.

38. Increase thickness of gastric mucosal fold is seen in:

a) Menetrier's disease

b) Gastritis cystica

c) Boerhaave syndrome

d) Zollinger-Ellison syndrome

e) All

Correct Answer - A:B:D
Answer- (A) Menetrier's disease (B) Gastritis cystica (D) Zollinger-Ellison syndrome
Two well defined examples are Menetrier's disease & Zollinger-Ellison syndrome
Gastric gland hyperplasia secondary to excessive gastrin secretion, in the setting of a gastrinoma.

39. Blood transfusion reaction can leads to:

a) Acute glomerulonephritis

b) Myoglobinuria

c) Hemoglobinuria

d) Transfusion-related acute lung injury

e) Acute renal tubular necrosis

Correct Answer - C:D:E
Answer- (C) Hemoglobinuria (D) Transfusion-related acute lung injury (E) Acute renal tubular necrosis
Hemolytic transfusion reaction
Intravascular hemolysis
Transfusion-related acute lung injury (TRALI)
Renal failure

40. Not seen in post streptococcal glomerulonephritis(PSGN):

a) Nephrotic range proteinuria

b) Neutrophilic infiltration of tubules

c) Subepithelial deposits

d) Linear deposits along glomerular basement membrane

e) None

Correct Answer - A:B:D

Answer- (A)Nephrotic range proteinuria (B)Neutrophilic infiltration of tubules (D)Linear deposits along glomerular basement membrane

It typically affects children between the ages of 2 and 14 years.

It is more common in males.

Poststreptococcal glomerulonephritis due to impetigo develops 2-6 weeks after skin infection and l-3 weeks after streptococcal pharyngitis.

There is granular subendothelial immune deposits of IgG, IgM, C3, C4 and C5-9, and subepithelial deposits.

Clinical features-

- Acute nephritis with hematuria, pyuria red blood cell casts, edema, hypetension, and oliguric renal failure.
- 20% of adults have proteinuria in the nephrotic range.
- Antibodies in streptococcal infection: ASO Anti-DNAase B, Anti-Streptokinase, anti-Nicotinyl adenine dinucleotidase &
- Anti-Hyaluronidase.

41. True about fibrolamellar carcinoma of liver:

a) Better prognosis than typical hepatocellular carcinoma

b) Associated with cirrhosis

c) AFP-positive

d) Occur in younger adults

e) More common in females

Correct Answer - A:D:E

Answer- (A)Better prognosis than typical hepatocellular carcinoma (D)Occur in younger adults (E)ore common in females

It is a distinctive variant of hepatocellular carcinoma
It is seen in young adults (20-40 yrs of age)
It has equal sex incidence
It has better prognosis
It has no association with HBV or cirrhosis
It is grossly encapsulated mass.
AFP elevation is not seen in Fibrolamellar Ca

42. Chromosomal abnormalities in Down syndrome is/are due to:

a) Nondisjunctional of maternal chromosome

b) Nondisjunctional of paternal chromosome

c) Translocations between chromosome 21 & 14

d) Disjunction of paternal chromosome

e) Disjuction of maternal chromosome

Correct Answer - A:B:C

Answer- (A)Nondisjunctional of maternal chromosome (B) Nondisjunctional of paternal chromosome (C)Translocations between chromosome 21 & 14

Trisomy 21 (47, XX+21) is the most common (95%) chromosomal abnormality in Down syndrome.

In Down syndrome large fragment of 14 or 15 or 22 chromosome fuses with large fragment of chromosome 21→ Extra material comes on 21 and it acts like third 21st chromosome → Trisomy 21.

Extra chromosome is of maternal in origin.

I% have mosaic with some all have 46 chromosome.

4% have robertsonian translocation.

1. t (13 : 21)
2. t (14 : 21)
3. t (15 : 21)

Very rarely long arm of chromosome 21 is triplicate (Partial trisomy).

43. Schaumann bodies are not seen in :

a) Sarcoidosis

b) Histoplasmosis

c) Cryptococcosis

d) Hypersensitivity pneumonitis

e) Tuberculosis

Correct Answer - B:C
Answer- B,Histoplasmosis C,Cryptococcosis
Sarcoidosis,
Hypersensitivity pneumonitis,
Berylliosis
Crohn's disease & tuberculosis

44. Neuroendocrine cell tumour markers are:

a) Chromogranin A

b) CD56

c) Neuron-specific enolase

d) Synaptophysin

e) Cytokeratin 7

Correct Answer - A:B:C:D
Answer- A,Chromogranin A B,CD56 C,Neuron-specific enolase D, Synaptophysin
Chromogranin A is the most widely used
Neuron-specific enolase (NSE) is a cytosolic marker of neuroendocrine differentiation.
Synaptophysin found in small vesicles of neurons and neuroendocrine tumors.
CD 56 are markers.

45. All are true about focal nodular hyperplasia except:

a) Multiple nodule may present

b) More common in male

c) May be associated with contraceptive pills use

d) Hypovascular on the arterial-phase and hypervascular on the delayed-phase CT images

e) CT is less sensitive than MRI in depicting the characteristic central scar

Correct Answer - B

Answer- B. More common in male

FNH is typically benign

- "FNH is most frequently found in young to middle-aged adults, with a strong female predilection.
- the lesion is multinodular
- Bile ductules are usually found at the interface between hepatocytes and fibrous regions.
- Kupffer cells are present

46. All are true about tamoxifen except:

a) Used as adjuvant therapy in estrogen receptor positive breast cancer

b) No effect on uterus

c) Pro-estrogen effect on bone

d) Reduces chance of osteoporosis

e) Reduces coronary artery diseases

Correct Answer - B:E

Ans. (B) No effect on uterus (E) Reduces coronary artery diseases

[Ref: KDT 7th/ 312-15; Katzung 13th/713; Harrison 19th/2498]

Tamoxifen:

- Approval for the primary prophylaxis of breast cancer in high risk women.
- Reduces the recurrence rate of breast cancer in ipsilateral as well as contralateral breast.
- Associated with reduced risk of cancer in the contralateral breast.
- Improves the bone mass due to antiresorptive effect.
- Increases the risk of thromboembolic events.
- Hypertglyceridaemia, deep vein thrombosis, ischemic heart disease, retinopathy & other complications to be observed during tamoxifen therapy.

47. True about Hyoscine :

a) Cause mydriasis

b) Cause miosis

c) Used for motion sickness

d) Better BBB penetration than atropine

e) Central nervous system depressant

Correct Answer - A:C:D:E

Ans. (A) Cause mydriasis (C) Used for motion sickness (D) Better BBB penetration than atropine (E) Central nervous system depressant

Hyoscine (scopolamine):

- Applied to eyes they freely penetrate cornea
- Has better BBB penetration
- Shorter duration of action than atropine.
- Most effective drug for motion sickness
- CNS depressant.
- Produce sedation and amnesia during labour(twilight sleep)
- Cause definite mydriasis & loss of accommodation"
- Lie detector during world war II

48. True statement(s) about Rutin:

a) Has anti-fibrinolytic action

b) Has anti-platelet action

c) Antioxidant property

d) A citrus flavonoid glycoside found in many plants including buckwheat

e) None

Correct Answer - B:C:D

Ans. (B) Has anti-platelet action (C) Antioxidant property (D) A citrus flavonoid glycoside found in many plants including buckwheat

Rutin (Bioflavonoids):

- Richest source is buckwheat.
- Plant glycoside claimed to reduce capillary bleeding.
- Used in a dose of 60mg oral BD-TDS along with Vit. C which is believed to facilitate its action (support blood circulation, as an antioxidant, afld to treat allergies, yiruses, or arthritis and other inflammatory conditions).
- Strengthens the lining of the blood vessels throughout the body.
- Helps treat hemorrhoids, internal bleeding.
- Helps prevent hemorrhagic strokes.
- Stop the formation of a blood clot (thrombosis).
- Very effective with blood clots because it treats and prevent clots in both arteries and veins
- Most potently anti-thrombotic.
- An antioxidant.

49. Side-effect(s) of Zoledronic acid is/are all except:

a) Flu-like symptoms

b) Osteonecrosis of the jaw

c) Dizziness

d) Constipation

e) Renal toxicity

Correct Answer - D
Ans. D. Constipation
Zoledronate:

- Flu-like symptoms due to cytokine release attend the i.v infusion
- Nausea, vomiting, bodyache, dizziness are common
- Renal toxicity has been encountered
- Osteonecrosis of Jaw is a rare complication of i.v high dose

50. Anti-microbial agents acting on nucleic acid are all except:

a) Acyclovir

b) Linezolid

c) Fluroquinolones

d) Streptomycin

e) Rifampin

Correct Answer - B:D

Ans. (B) Linezolid (D) Streptomycin

[Ref:KDT 7th/ 689-90]

1. Inhibit cell wall synthesis: Penicillins, Cephalosporins, Cycloserine, Vancomycin, Bacitracin.
2. Cause leakage from cell membranes: Polypeptides-Polymyxins, Colistin, Bacitracin. Polyenes-Amphotericin B, Nystatin, Hamycin
3. Inhibit protein synthesis: Tetracyclines, Chloramphenicol, Erythromycin, Clindamycin, linemlid,
4. Cause misreading of m-kNA code and affect permeability: Aminoglycosides-Streptomycin, Gentamicin, etc.
5. Inhibit DNA gyrase: Fluoroquinolones - Ciprofloxacin and others
6. Interfere with DNA function: Rifampin
7. Interfere with DNA synthesis: Acyclovir, Zidovudine
8. Interfere with intermediary metabolism; Sulfonamides, Sulfones, PAS, Trimethoprim, Pyrimethamine, Metronidazole

51. CNS stimulants are:

a) Cocaine

b) Amphetamine

c) Cannabis

d) Dexamphetamine

e) MDMA (ecstasy)

Correct Answer - A:B:D:E

Ans. (A) Cocaine (B) Amphetamine (D) Dexamphetamine (E) MDMA (ecstasy)

[Ref,KDT 7th/ 486,452.]

- Psychotogenic (Hallucinogens) drugs are Cannabis, LSD, mescaline, endocannabinoid.

CNS Stimulant:

1. Convulsants: Strychnine, picrotoxin, bicuculline, penty lenetetrazol
2. Analeptics: Doxapram
3. Psychostimulants: Amphetamine, Methylphenidate, atomoxetine, modafinil, armodafinil, pemoline, cocaine & caffeine.

52. Drug contraindicated in pregnancy:

a) Sulfonamide

b) ACE inhibitors

c) Phenytoin

d) Ciprofloxacin

e) Furosemide

Correct Answer - B:C

Ans. (B) ACE inhibitors (C) Phenytoin

[Katzung 10th/975]

- ACE inhibitors - In All trimester, especially second and third - Renal damage.
- Phenytoin - In All trimester - Fetal hYdantoin sYndrome
- Thalidomide - First trimester = Phocomelia (shortened or absent long bones of the limbs) and many Internal malformations

53. In which of the following liver flukes, triclabendazole is/are used:

a) Clonorchis sinensis

b) Opisthorchis viverrini

c) Fasciola hepatica

d) Fasciola gigantica

e) Opisthorchis felineus

Correct Answer - C:D

Ans. (C) Fasciola hepatica (D) Fasciola gigantica

[Ref: Harriison 19th/1428; I(DT 7th/851]

- Triclabendazole is highly effective against adults of the common liver fluke (Fasciola hepatica) as well as all immature stages.
- Also effective against Fasciola gigantica and Fascioloides magna.
- No efficacy against roundworms or tapeworms.

54. True statement(s) regarding the power of chief judicial magistrate:

a) Can give imprisonment of <3 year only

b) Can give imprisonment of any duration

c) Can give imprisonment up to 5 year

d) Can give imprisonment up to 7 year

e) Can impose unlimited fine

Correct Answer - D:E

Ans: d. Can give imprisonment up to 7 year e. Can impose unlimited fine ***[Ref Reddy 32nd/6; Reddy 27th/6 indiankanoon.orgl***

- The Court of a Chief Judicial Magistrate may pass any sentence authorised by law except a sentence of death or of imprisonment for life or of imprisonment for a term exceeding seven years.
- The Court of a Magistrate of the first class may pass a sentence of imprisonment for a term not exceeding three years, or of fine not exceeding five thousand rupees, or of both.
- The Court of a Magistrate of the second class may pass a sentence of imprisonment for a term not exceeding one year, or of fine not exceeding one thousand rupees, or of both.
- The Court of a Chief Metropolitan Magistrate shall have the powers of the Court of a Chief Judicial Magistrate and that of a Metropolitan Magistrate, the powers of the Court of a Magistrate of the first class.

55. Which of the following feature is/are related to mandible of male in comparison to female:

a) Ascending ramus- smaller breadth

b) Angle of ramus- More obtuse

c) Larger condyle

d) Mental tubercles- larger & prominent

e) Symphyseal height more

Correct Answer - C:D:E

Ans: c. Larger condyle d. Mental tubercles- larger & prominent e. Symphyseal height more*[Ref. Reddy 32nd/60; Parikh 7th/ 79]*

Symphyseal height is more in males (Parikh 7th/79)

Trait General size	**Male Larger & thicker**	**Female Smaller & thinner**
Chin	Square(U-shaped)	Rounded
Body height	At symphysis greater	At symphysis smaller
Ascending ramus	Greater breadth	Smaller breadth
Angle of body & ,amus (Gonion)	Less obtuse(under 1250); Prominent & Everted	More obtuse & not prominent
Condyles	Larger	Smaller
Mental tubercles	Large & prominent	Insignificant

56. Which of the following statement is/are true about carbamate poisoning:

a) Cause pinpoint pupil

b) Atropine is antidote

c) Adrenergic action

d) Spontaneously hydrolyses from the cholinesterase enzymatic site

e) CNS toxicity is more as compared to organophosphorus

Correct Answer - B:D

Ans: b. Atropine is antidote d. Spontaneously hydrolyses from the cholinesterase enzymatic site*[Ref Reddy 32nd/495-98; Parikh 7th/625-28; G er G I lth/210;KDT 7th/111 ; Katzung 13th/979-80 ; Pharmacology by Satoskar 24th/297*

- It differs toxicologically from organophosphate: They will spontaneously hydrolyse from the cholinesterase enzymatic site within 24 to 48 hours, whereas organophosphates will not.
- They do not effectively penetrate into the CNS, & as such CNS toxicity is limited.
- Treatment: Atropine is the specific antidote. Pralidoxime may diminish the severity of symptoms & help prevent some morbidity.

57. Which of the following is NOT rape:

a) Sexual intercourse with wife, of age below 15 year, with consent

b) Sexual intercourse with wife, of age 16 year, with consent

c) Sexual intercourse with a girl below 18 years of age, with consent

d) Sexual intercourse with a girl of 18 year with consent

e) Sexual intercourse with wife who is living separately from him under a decree of separation, or any custom or usage with her consent

Correct Answer - B:D:E

Ans: b. Sexual intercourse with..., d. Sexual intercourse with a girl..., e. Sexual intercourse with wife who is living ..... *[Ref Reddy 32nd/ 392-95; Parikh 7th/389-911*

Rape: The Criminal Law (Amendment) Bill, 2013 (5.375, I.P.C)

- Acc to Gazette Notification of GOI regarding Criminal Law (amendendment) Act, 2013 released on 2 april, 2013, 1t is age 15 year .
- **Exception to S. 375, I.P.C: Sexual intercourse or sexual acts by a man with his own wife, the wife not being under 15 years.**
- There is controversial reference regarding age of wife, either 16 or 15 year in Reddy (old & new ed.) & Parikh.
- *With her consent, when the man knows that he is not her husband and that her consent is given because she believes that he is another man to whom she is or believes herself to be lawfully married.*
- *With her consent when, at the time of giving such consent, by*

reason of unsoundness of mind or intoxication or the administration by him personally or through another of any stupefying or unwholesome Substance, she is unable to understand the nature and consequences of that to which she gives consent.

- *With or without her consent, when she is under eighteen years of age.*
- *When she is unable to communicate consent*

58. True about rigor mortis are all, *except:*
FMGE 08

a) Seen immediately after death

b) It last 18-36 h in summer

c) It disappears in the sequence as it appears

d) It last 24-48 h in winter

e) None

Correct Answer - A
Ans. Seen immediately after death

59. Post-mortem caloricity is/are seen in all except:

a) Strychnine poisoning

b) Septicaemic condition

c) Cholera

d) Barbiturate poisoning

e) Tetanus

Correct Answer - D

Ans: d. Barbiturate poisoning*[Ref Reddy 33rd/155, 32rd/149; Parikh 7th/143,6th/ 3.8-3.9]*

- Post-Mortem Caloricity [1.] Reddy 33rd/155- In this condition, the temperature of the body remains raised for the first two hours or so after death.
- When the regulation of heat production has been severely disturbed before death, as in sunstroke & in some nervous disorder
- When there has been a great increase in heat production in the muscle due to convulsions, as in tetanus & strychnine poisoning etc
- Post-Mortem Caloricity: Seen I Parikh th/ 3.8-3.9, Pontine haemorrhage & sunstroke, Tetanus & strychnine poisoning., acute viral or viral infections such as lobar pneumonia, typhoid fever, encephalitis & encephalomyelitis

60. Treatment of carbolic acid poisoning includes:

a) Repeated lavage should be done

b) Intubation may be required in case of respiratory compromise

c) Emetics is very beneficial

d) Saline containing sodium carbonate is given

e) None

Correct Answer - A:B:D

Ans: a. Repeated lavage should be done b. Intubation may be required in case of respiratory compromise d. Saline containing sodium carbonate is given [Ref Reddy 32nd/507 ; Parikh 7th/535-37]

- An emetic often fails due to the anaesthetic effect
- Lavage: The stomach should be washed repeatedly, carefully with plenty of lukewarm water containing activated charcoal, olive oil, caster oil etc. Washing continued until the washings are clear & odourless
- When lavage is completed, 30 9ram of magnesium sulphate or a quantity of medicinal liquid paraffin should left in the stomach
- Saline containing sodium carbonate is given i.v to combat circulatory depression, to dilute carboilic acid content of blood & to encourage excretion by producing diuresis, Haemodialysis, if there is renal failure
- Carbolic acid management: Evaluate and support airway, breathing, and circulation. Children may be more vulnerable to corrosive agents than adults because of the relatively smaller diameter of their

airways.

- In cases of respiratory compromise secure airway and respiration via endotracheal intubation. If not possible, surgically create an airway.

61. Griffith experiment was done on ?

a) Salmonella

b) Streptococcus pneumoniae

c) Enterococcus

d) Staphylococcus

e) None

Correct Answer - B

Ans. is 'b' i.e., Streptococcus pneumoniae *[Ref Advanced biology p. 396]*

- In 1928, Frederick Griffith's experiment first demonstrated transformation in streptococcus pneumoniae.
- Frederick Griffith's experiment on pneumococcus (streptococcus pneumoniae) proved that genetic characters are transmitted from one generation to the other through transformation.
- It is transfer of genetic information through the agency of free DNA.
- It was the first example of genetic exchange in bacteria to be been discovered Griffith in 1928 found that mice died when injected with a mixture of live non-capsulated (R) Streptococcus pneumoniae & heat killed capsulated (S) S.pneumoniae, neither of which separately proved fatal

62. All are true about Ebola virus infection except?

a) Air dropler is most common mode of transmission

b) Haemorrhagic manifestation may occur

c) Thai forest type - most common species in epidemics

d) presents as sudden onset of fever and sore throat

e) Case fatality rate may be high as 70%

Correct Answer - A:C

Ans. is 'a' i.e., Air dropler is most common mode of transmission & 'c' i.e., Thai forest type - most common species in epidemics]Ref *Park 24^{m}/e* p. *374]*

- The virus is transmitted through direct contact with blood, organs, body secretions or other body fluids of infected animals like chimpanzees, gorillas, monkeys, fruit bats etc.
- Human to human transmission is through blood or body fluids of an infected symptomatic person or through exposure to objects (such a needle) that have been contaminated with infected secretions.
- It is not transmitted through air, water, or food.
- The virus is transmitted through direct contact with blood, organs, body secretions or other body fluids of infected animals like chimpanzees, gorillas, monkeys, fruit bats etc.
- Human to human transmission is through blood or body fluids of an infected symptomatic person or through exposure to objects (such as needle) that have been contaminated with infected secretions
- It is not transmitted through air, water, or food
- The illness is characterized by sudden onset of fever, intense

weakness, muscle pain, headache, sore throat, vomiting, diarrhea, rash, impaired kidney and liver function and in some both internal and external bleeding.

- **The virus family Filoviridae includes three genera: Cuevavirus, Marburgvirus, and Ebolavirus.**
- **Within the genus Ebolavirus, five species have been identified: Zaire, Bundibugyo, Sudan, Reston and TalForest.**
- **The first three, Bundibugyo ebolavirus, Zaire ebolavirus, and Sudan ebolavirus have been associated with large outbreaks in Africa.**

63. True about chancroid:

a) Bacilli causing the disease shows School of fish appearance

b) Painful ulcer

c) Incubation period is 10-90 day

d) Presents as painless lymphadenopathy

e) Sharply demarcated & elevated edge

Correct Answer - A:B:D

Ans: a. Bacilli causing..., b. Painful..., d. Presents.*[Ref Ananthanarayan 9th/ 331;Harrison 19th/880,1012-13]*

- Chancroid or soft sore is a venereal disease characterized by
- tender non-indurated irregular ulcers on the genitalia
- The bacilli may be arranged in small groups or whorls or in parallel chains, giving a 'school of fish' or 'rail road track' appearance
- The infection remains localized, spreading only to the regional lymph nodes which are enlarged & painful
- Infection is acquired as the result of a break in the epithelium during sexual contact with an infected individual.
- Approximately half of patients develop enlarged, tender inguinal lymph nodes, which frequently become fluctuant and spontaneously rupture.

64. Which of the following spread by ingestion of eggs:

a) Strongyloides

b) Trichinella

c) Trichuris

d) Ascaris

e) Ancylostoma duodenale

Correct Answer - C:D

Ans: c. Trichuris d. Ascaris

- Strongyloides: Infective form is *filariform larva (Panikar 7th/178)*
- "Trichinella: Infective form is *encysted larva* found in muscles of pigs & other animals" *(Panikar 7th/168)*
- "Ancylostoma duodenale- Infective form is third stage filariform larva" *(Panikar 7th/168)*

Mode of Infection Panikar Parasitology7th/162

1. By ingestion
2. Eggs: Ascaris, enterobius, Trichuris
3. Larva within intermediate host: Dracunculus
4. Encysted larvae in muscle: Trichinella
5. By penetration of skin: Ancylostoma, Necator, Strongyloides
6. By blood sucking insects: Filariae
7. By inhalation of dust containing eggs: Ascaris, enterobius

65. To check the efficiency of the heat sterilization, which of the following microbe is/are used :

a) Geobacillus stearothermophilus

b) Bacillus subtilis

c) Salmonella

d) Pneumococcus

e) Bacillus stearothermophilus

Correct Answer - A:B:E

Ans: a. Geobacillus stearothermophilus b. Bacillus subtilis e. Bacillus stearothermophilus*[Ref Ananthanarayan 9th/30,32 ; Greenwood 16th/771*

Sterilisation Control (Dry Heat)

- The spores of a non-toxigenic strain of clostridium tetani or Bacillus subtilis subspecies niger are used as a microbial test of dry heat efficiency.
- For determining the efficacy of moist heat sterilization, spores of Bacillus stearothermophilus are used as the test organism
- "Geobacillus stearothermophilus (or Bacillus stearothermophilus) is constantly used in the biotech industry to test the success of sterilization cycles of equipment.
- Due to the bacteria's high resistance to heat, it is a suitable biological Indicator of microbe life after a sterilization cycle.

66. Dimorphic fungi is/are?

a) Histoplasma capsulatum

b) Sporothrix schenckii

c) Malassezia furfur

d) Cryptococcus neoformans

e) Aspergillus

Correct Answer - A:B

Ans. is 'a' i.e., Histoplasma capsulatum; & 'b' i.e., Sporothrix schenckii [Ref Ananthanarayan ele p. 601,609; Jawetz 23'/e p. 6451.

- Fungi that have two growth forms, such as mold (filaments) and a yeast, which develop under different growth conditions.
- In host tissues or cultures at 37°C they occur as yeasts, while in the soil and in cultures at 22°C they appear as moulds.
- *Yeasts* are seen as rounded single cells or as budding organisms. *Candida* and *Cryptococcus* are traditionally classified as yeasts.
- Most fungi causing systemic infections are dimorphic fungi

Dimorphic Fungi are *Jawetz 27th/853*

- Blastomycosis dermatitidis
- Paracoccidioides brasiliensis
- Coccidioides posadasii & Coccidioides immitis
- Histoplasma capsulatum
- Sporotrix schenckii
- Penicillium marneffe
-

67. True about enteroviruses:

a) In 1999, wild polio virus 2 was eradicated from world

b) Vaccine associated paralytic poliomyelitis(VAPP) most frequently caused by serotype 1 vaccine

c) Bivalent OPV contains type 1 & type 3 strain

d) Primary course of OPV consists of only 1 dose

e) Coxasackie A7 & enterovirus type 71 causes aseptic meningitis

Correct Answer - A:C:D:E

Ans: (A) In 1999, wild polio virus 2 was eradicated from world (C) Bivalent OPV contains type 1 & type 3 strain (D) Primary course of OPV consists of only 1 dose (E) Coxasackie A7 & enterovirus type 71 causes aseptic meningitis

[Ref Park 23rd/ 202-09; Harrison 19th/1289-91; Ananthanarayan 9th/485]

- Of the 3 strains of wild poliovirus, wild poliovirus type 2 was eradicated in 1999 & case numbers of type 3 are down to the lowest-ever levels with the last case reported in Nov 2012 from Nigeria.
- The WHO programme on immunization(EPI) & the national immunization programme in India recommended a primary course of 3 doses of OPV at one-month intervals, commencing the first dose when infant is 6 weeks old.
- Poliovirus type 1 is responsible for most epidemics of paralytic poliomyelitis. Type 3 also causes epidemics to a lesser extent. . Type 2 usually causes inapparent infections in western countries but in India paralysis due to type 2 is quite common"

GROUP	SEROTYPE
Poliovirus	1-3
Coxsackie virus A	1-22 AND 24
Coxsackie virus **B** s	1-6
Echovirus	1-9, 11-27, 29-34
Numbered echovirus	(EV) 68-78

68. All are true about cytomegalovirus except:

a) May be transmitted from pregnant mother to foetus

b) Type 5 Human herpes virus

c) Lymphocyte enlargement

d) Cause congenital diseases

e) May lead to fetal death

Correct Answer - C

Ans: c. Lymphocyte enlargement *[Ref Harrison 19th/1190-91; Ananthanarayan 9th/473-74 ; Jawetz 27th/470-74]*

Cytomegalovirus (Human Herpes Virus Type 5)

- It is cytomegalic (not lymphoproliferative, which occur in HHV4, 6 & 7)
- Characterized by enlargement of infected cells
- Congenital infection- Intrauterine infection leads to fetal death or cytomegalic inclusion disease of newborn which is often fatal
- The hallmark of such infection is the appearance of atypical lymphocytes in the peripheral blood; these cells are predominantly activated CD8+ T lymphocyte***s.***

69. True about bacteriorhodopsin:

a) Present in the cell membrane

b) It acts as proton pump

c) Generate ATP

d) Use light energy

e) Same as rhodopsin found in human

Correct Answer - A:B:C:E

Ans: a. Present in the cell membrane b. It acts as proton pump c. Generate ATP d. Same as rhodopsin found in human

- Bacteriorhodopsin is a protein used by Archaea, most notably by Halobacteria, a class of the Euryarchaeota.
- It acts as a proton pump; that is, it captures light energy and uses it to move protons across the membrane out of the cell. The resulting proton gradient is subsequently converted into chemical energy.
- Bacteriorhodopsin is a trans-membrane protein found in the cellular membrane of Halobacterium salinarium, which functions as a light-driven proton pump.
- Bacteriorhodopsin is a proton pump found in Archaea, it takes light energy and coverts it into chemical energy i.e. ATP, that can be used by the cell for cellular functions.

70. **All of the following are true about vasectomy, EXCEPT:**

a) Take about 3 months before the sperm stores are used up

b) Sperm granulomas are less common if electrocautery is used

c) Reversal is most successful within 10 years of initial surgery

d) There is a risk of chronic testicular pain

e) None

Correct Answer - B

Ans. (B) Sperm granulomas are less common if electrocautery is used

Sperm granulomas are less common if thermal cautery is used rather than electrocautery.

Some complications of vasectomy:

1. Hematoma and infection
2. Sperm Granulomas
3. Chronic testicular pain
4. Spontaneous recanalisation
5. Antisperm antibody formation

Ref: Oxford Handbook of Clinical Specialities, 8th Edition, Page 305; Shaw's Textbook of Gynaecology, 12th Edition, Page 182

71. All are elements of primary health care except:

a) Adequate supply of safe water

b) Provision of free essential drugs only to poor

c) Promotion of food supply & proper nutrition

d) Prevention & control of locally endemic disease

e) Education concerning health problems

Correct Answer - B

Ans: b. Provision of free....

Elements of primary health care: 8 Essential component:

1. Education concerning prevailing health problems & the methods of preventing & controlling them
2. Promotion of food supply & proper nutrition,
3. An adequate supply of safe water & basic sanitation.
4. Maternal & child health care including family planning
5. Immunization against major infectious diseases
6. Prevention & control of locally endemic disease
7. Appropriate treatment of common diseases & injuries
8. Provision of essential drug

72. MMR (Measles, mumps, rubella) vaccine is an example of:

a) Live attenuated vaccine

b) Conjugated vaccine

c) Polysaccharide vaccine

d) Killed vaccine

e) Toxiod

Correct Answer - A

Ans: a. Live attenuated.. ***[Ref Park 23rd/ 103; 0.P.Ghai 8th/195-96; Community Medicine with recent Advances by Suryakantha 3rd/320]***

LIVE ATTENUATED	KILLED WHOLE ORGANISM	TOXOID PROTEINS	POLYSACCHARIDE	GLYCO
BCG, Yellow fever, OPV, Measles, Mumps, Rubella, Typhoid, Varicella, Rotavirus, Cholera, Cold-adapted influenza, Rotavirus reassortants	Typhoid, Cholera, Plague, Pertussis, Influenza, Typhus, IPV, Rabies, JE,Tick borne encephalitis,	Diphtheria, Tetanus, Acellular pertussis, Anthrax, Influenza subunit	Pneumococcus, Meningococcus, Hib, Typhoid(Vi)	Hib, Pne cus,Men (Meningo

reassortants: Zost	HAV

73. All are steps of investigation of an epidemic except:

a) Verify the diagnosis

b) Before starting investigation, inform the media

c) Formulation of hypotheses

d) Confirmation of the existence of an epidemic

e) Plan & implement control measures

Correct Answer - B

Ans: b. Before starting....*[Ref Park 23rd/131-33; Community Medicine by Piyush Gupta 1st/598603]*

Investigation of an Epidemic aln *Steps Park 23rd/ 131-33*

- Verification of diagnosis
- Confirmation of existence of an epidemic
- Defining the population at-risk
- Rapid search for all cases & their characteristic
- Data analysis
- Formulation of hypotheses
- Testing of hypotheses
- Evaluation of ecological factors
- Further investigation of population at risk
- Writing the report

74. Which of the following is/are method of health communication:

a) Lecture

b) Imitation

c) Group discussion

d) Panel discussion

e) Role play

Correct Answer - A:C:D:E

Ans: a. Lectu... c. Group..., d. Panel..., e. Role play ***[Ref Park 23rd/863-65; Cummunity Medicine with recent Advances by Suryakantha 4th/763;Community Medicine by Piyush Gupta 1st/75665]***

- GROUP dISCCUSION- 1. Lectures, 2. Demonstration, 3. Discussion methods, 4- Group discussion, 5- Panel discussion,6-- Symposium - Workshop, 7-- Conferences, 8-- Seminars - Role play
- MASS APPROACH- 1. Television, 2. Radio, 3. Newspaper, 4. Printed material, 5. Direct mailing, 6. Posters, 7. Health museums and exhibitions, 8. Folk methods, 9-Internet.
- Individual approach, 1. Personal contact, 2. Home visits, 3- Personal letter

75. All are true about lepromatous leprosy(LL) except:

a) Multibacillary(MB)- Multi drug therapy(MDT) is given for treatment

b) On split stain-multiple bacilli

c) Sensation present in lesions

d) Multiple symmetrical skin lesion present

e) Lepromin test positive

Correct Answer - E

Ans: e. Lepromin test....*[Ref Neena Khanna 5th/ 272-83; Roxburg 17th/;Park 23rd/314-29]*

- Slit smear: All patients who are AFB positive should be given multibacillary treatment, irrespective of the clinical presentation- Neena Khanna 5th/ 281,283
- Skin lesion in Lepromatous leprosy(LL): Normal Aesthetic/ minimally hyperaesthetic"- Neena Khanna 5th/ 276.

Multi Drug Therapy (MDT) Blister Packs are Available in 4 Colours Neena Khanna 5th/ 284

1. Adult multibacillary(MB) pack: Pink-red colour
2. Child multibacillary(MB) pack: Yellow colour
3. Adult paucibacillary(PB) pack: Green colour
4. Child paucibacillary(PB) pack: Blue colour

76.

Which of the following is part of national health policy 2015 draft except:

a) Increase GDP share to health to 5%

b) Assure universal availability of free, comprehensive primary health care services, as an entitlement, for all aspects of reproductive, maternal, child and adolescent health

c) Provision of right to health

d) Engage private doctors

e) Enable universal access to free essential drugs & diagnostics in public health facilities

Correct Answer - A

Ans: a. Increase GDP share to health to 5% ***[Ref http://www.mohfw.nic.in/showfile.php?lid=3014;*** **www.mohfw.nic.in/showfile.php?lid=30141]**

- The National Health Policy accepts and endorses the understanding that a full achievement of the goals and principles as defined would require an increased public health expenditure to 4 to 5% of the GDP
- However, given that the NHP, 2002 target of 2% was not met, and taking into account the financial capacity of the country to provide this amount and the institutional capacity to utilize the increased funding in an effective manner, this policy proposes a potentially achievable target of raising public health expenditure to 2.5 % of the GDP.

77. Which is true about Tuning fork test in hearing loss:

a) Rinne test is negative in conductive deafness

b) Weber test- lateralized to the worst ear in sensorineural deafness

c) Lateralization of sound in Weber test with a tunning fork of 512 Hz implies a conductive loss of 15-20 dB in ipsilateral ear

d) Negative Rinne test indicates a minimum air-bone gap of 15-20 dB

e) A Rinne negative for all the three tunning forks of 256,512 & 1024 Hz indicates air-bone gap of 30-45

Correct Answer - A:C:D

Answer- (A)Rinne test is negative in conductive deafness (C)Lateralization of sound in Weber test with a tunning fork of 512 Hz implies a conductive loss of 15-20 dB in ipsilateral ear (D)Negative Rinne test indicates a minimum air-bone gap of 15-20 dB

Rinne Test

- A negative test (BC>AC) is seen in conductive deafness.
- Negative Rinne indicates a minimum air-bone gap of 15-20 dB.
- A prediction of air-bone gap can be made if tuning forks of 256, 512 & 1024 Hz are used
- A Rinne negative for all the three tunning forks of 256,512 & 1024 Hz indicates air-bone gap of 45-60 dB

Weber Test-

- It is lateralized to the worst ear in conductive deafness & to the

better ear in sensorineural deafness.

78. Which of the following causes lower motor neuron(LMN) type of facial nerve paralysis :

a) Bell palsy

b) Parotid tumor

c) Guillain-Barre syndrome

d) Middle cerebral artery infarct

e) Multiple sclerosis

Correct Answer - A:B:C

Answer- (A)Bell palsy (B)Parotid tumor (C)Guillain-Barre syndrome

1. Idiopathic (Bell's palsy)

- Pregnancy - 3x more common.
- Diabetes mellitus

2. Infective

- Herpesvirus
- Herpes zoster (Ramsay Hunt syndrome)
- Epstein-Barr virus

3. Neurological

- Guillain-Barre syndrome.
- Mononeuropathy- e.g. due to diabetes mellitus, sarcoidosis or amyloidosis

4. Parotid gland tumours.

79. True about tympanometry:

a) Flat in ossiccular discontinuity

b) As type in otosclerosis

c) Dome shaped indicates fluid in middle ear

d) Ad type in ossiccular discontinuity

e) C type in eustachian tube obstruction

Correct Answer - B:C:D:E

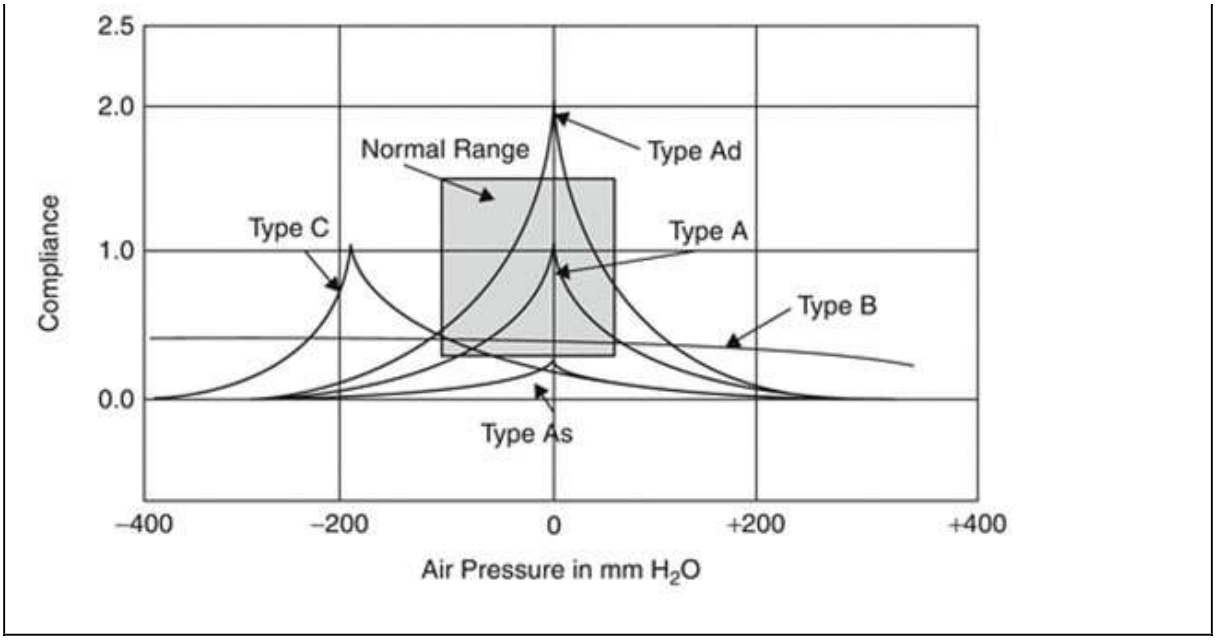
Answer- (B)As type in otosclerosis (C)Dome shaped indicates fluid in middle ear (D)Ad type in ossiccular discontinuity (E)C type in eustachian tube obstruction

A- Normal

- As- Reduced compliance at ambient pressure (otosclerosis).
- 's'stands for shallow tympanogram but remember for stiffness
- AD- Increased compliance at ambient pressure (ossicular discontinuity). 'd' stands for deep qrmpanogram.

B- Flat or dome-shaped (fluid in middle ear).

C- Maximum compliance at pressures more than -200 mm H2O



80. True about bilateral abductor paralysis:

a) Voice is good

b) Stridor is present

c) Cords lie in abducted position

d) Urgent tracheostomy is needed

e) None

Correct Answer - A:B:D

Answer- A,Voice is good B,Stridor is present D,Urgent tracheostomy is needed

Trecheostomy

Transyerse cordotomy

- Partial arytenoidectomy
- Reinnervation procedures
- Thyroplasty II
- Woodman's operation (External arytenoidectomy) is done in b/l abductor paralysis.
- Endoscopic laser arytenoidectomy & Isshiki type II thyroplasty is done for lateralization of coril (in bilateral abductor paralysis).

81. All are true about mandible fracture except:

a) Condylar neck is most common site

b) Malocclusion of teeth may occur

c) Anterior superior alveolar nerve is most commonly injured

d) Panorex radiographs are useful for diagnosis

e) Malunion & non-union are complications

Correct Answer - C

Answer- C. Anterior superior alveolar nerve is most commonly injured

- The condylar neck is the weakest part of the mandible and, is the most frequent site of fracture.
- Trauma to the inferior alveolar nerve leads to permanent numbness of the lower lip and teeth on the affected side.
- Fractures of the coronoid process of the mandible can result in trismus
- In fracture of condyle,displaced fragments leads to malocclusion of teeth & deviation of jaw to the opposite side on opening the mouth.
- X-rays useful in mandibular fractures are PA view of the skull (for condyle), right & left oblique view of mandible & panorexview.
- Condylar and subcondylar mandible fractures are most often treated by IMF alone.
- Delayed union and nonunion occur in approximately 3% of fractures.

82. True about chronic suppurative otitis media (CSOM):

a) Foul smelling discharge in atticoantral variety

b) Facial nerve involvement in tubotympanic variety

c) Atticoantral variety is associate with cholestetoma

d) May cause hearing loss

e) All

Correct Answer - A:C:D

Answer- (A)Foul smelling discharge in atticoantral variety (C)Atticoantral variety is associate with cholestetoma (D)May cause hearing loss

Types

Differences between atticoantral and tubotympanic type of CSOM

	Tubotympanic (safe)	atticoantral (unsafe)
Discharge	profuse mucoid	scanty purulent foul smell
Perforation	central	Marginal
Granulation	uncommon	Common
Polyp	Pale	Red, fleshy
Cholesteatoma	Absent	Present
Complications	Rare	Common
Audiogram	Mild to moderate conductive deafness	Conductive or mixed deafness

83. True about ranula:

a) Mucous retention cyst

b) Seen in floor of mouth

c) Marsupialization for large cyst

d) Parotid is most common site of origin

e) Arises from sublingual salivary gland

Correct Answer - A:B:C:E

Answer- (A)Mucous retention cyst (B)Seen in floor of mouth (C)Marsupialization for large cyst (E) Arises from sublingual salivary gland

- It is a thin walled bluish retention cyst.
- Seen in the floor of mouth on one side of the frenulum.
- It arises due to obstruction of duct of sublingual salivary gland.
- It is almost always unilateral.

Clinical Features

- Seen mostly in children and young adults.
- Only complain—swelling in the floor of mouth
- Cyst may rupture spontaneously but recurrence is common
- Treatment is complete surgical excision if small or marsupialization, if large

84. Premalignant lesion of oral cavity includes

a) Lichen planus

b) Erythroplakia

c) Bowen disease

d) Behchet disease

e) None

Correct Answer - B

Answer- B. Erythroplakia

- Premalignant condition: - Leukoplakia, Erythroplakia, Speckled erythroplakia, chronic hyperplastic candidiasis.

85. Which of the following vitamin deficiency can cause centrocecal scotoma:

a) Vit A

b) Vit E

c) B6

d) B2

e) B12

Correct Answer - E

Answer- E. B12

- Field defect involving both the macula and the blind spot.
- Seen in optic nerve disease.
- Typical of vitamin B12 deficiency optic neuropathy.
- Damage to papillomacular fibers causes a cecocentral scotoma may develop in optic neuritis, nutritional optic neuropathy,
- toxic optic neuropathy, Leber's hereditary optic neuropathy, and compressive optic neuropathy.

86. True about electroretinogram:

a) a wave- arises from rods and cones

b) b wave - d/t activity of bipolar cells

c) b-wave response is subnormal in early cases of retinitis pigmentosa

d) c wave - representing metabolic activity of pigment epithe-lium

e) Best disease shows abnormal ERG

Correct Answer - A:B:C:D

Answer- (A) a wave- arises from rods and cones (B) b wave - d/t activity of bipolar cells (C) b-wave response is subnormal in early cases of retinitis pigmentosa (D) c wave - representing metabolic activity of pigment epithe-lium

- The changes induced by the stimulation of light in the resting potential of the eye are measured by electroretinography. It is extinguished or absent in complete failure of function of rods and cones, e.g. pigmentary retinal dystrophy, complete occlution of retinal artery, complete retinal detachment, advanced siderosis etc.

1. Negative 'a' wave represent the activity in rods and cones.
2. Positive 'b' wave arises in inner retinal layers.
3. Positive 'c' wave is associated with the pigmentary epithelium

87. True about Ciliary body:

a) It forms aqueous humour

b) Anterior smooth part is called pars plana

c) Ciliary processes are finger-like projections from the pars plicata part

d) Ciliary muscles help in accommodation

e) All

Correct Answer - A:C:D

Answer- (A) It forms aqueous humour (C) Ciliary processes are finger-like projections from the pars plicata part (D) Ciliary muscles help in accommodation

- Ciliary body is forward continuation of the choroid at ora serrata.
- It is triangular in shape

The inner side of the triangle is divided into two Parts:

1. anterior part -pals Plicata (finger-like ciliary processes)
2. posterior part- pars plana (smooth part)

- Microscopic structure- five layers
- Supraciliary lamina
- Stroma of the ciliary body
- Layer of pigmented epithelium
- Layer of non-pigmented epithelium
- Internal limiting membrane
- Functions of ciliary body.

1. Formation of aqueous humour.
2. Ciliary muscles help in accommodation

88. Which of the following statement(s) is/are true about Jones dye test:

a) Done for assessment of epiphora

b) Positive test-1: primary hypersecretion

c) Negative test-1: partial obstruction or failure of lacrimal pump mechanism

d) Positive test-2: failure of lacrimal pump mechanism

e) Negative test-2: partial obstruction

Correct Answer - A:B:C

Answer- (A) Done for assessment of epiphora (B) Positive test-1: primary hypersecretion (C) Negative test-1: partial obstruction or failure of lacrimal pump mechanism

- Jones dye tests are of no value in the presence of total obstruction.
- Dye-stained cotton bud indicates adequate drainage & primary hypersecretion
- Unstained cotton bud indicates either a partial obstruction or failure of lacrimal pump mechanlsm
- Primary test is negative inferior meatus and lacrimal syringing is performed
- Negative test partial obstruction
- Negative test indicates presence of lacrimal pump failure.

89. True about Kayser-Fleischer ring -

a) Deposition of copper

b) Deposition of iron

c) Found in Wilson disease

d) Deposition under Descemet's membrane of the cornea

e) None

Correct Answer - A:C:D

Answer- (A) Deposition of copper (C) Found in Wilson disease (D) Deposition under Descemet's membrane of the cornea

- Kayser-Fleischer rings take the form of a crescentic rusty-brown discoloration of the deepest layer of the cornea (Descemet membrane)
- 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.
- Characterised by abnormalities of the basal ganglia of the brain, liver cirrhosis, splenomegaly, involuntary movements, muscle rigidity, psychiatric disturbances, dystonia and dysphagia.

90. Ectopia lentis is/are associated with:

a) Homocystinuria

b) Alport syndrome

c) Lowe syndrome

d) Marfan syndrome

e) Sulphite oxidase deficiency

Correct Answer - A:D:E

Answer- (A) Homocystinuria (D) Marfan syndrome (E) Sulphite oxidase deficiency

- Marfan syndrome
- Homocystinuria
- Weil-Marchesani syndrome
- Sulfite oxidase deficiency
- Hyperlysinemia

91. True about congenital esotropia:

a) Amblyopia may develops

b) Angle of deviation is usually fixed & large

c) Surgery should be done after 2 year

d) Onset only after 1 year of age

e) May be associated with inferior oblique overaction

Correct Answer - A:B:E

Answer- (A) Amblyopia may develops (B) Angle of deviation is usually fixed & large (E) May be associated with inferior oblique overaction

- Age of onset, is usually 1 -2 months of age, but occur any time in first 6 months of life.
- Angle of deviation is usually constant & fairly large.
- Amblyopia develops in 25-40 % of cases
- Associations include inferior oblique overaction dissociated vertical deviation (DVD).

Treatment-

- Time of surgery: Surgery should be done b/w 6 months to 2 years (preferably before 1 yr of age)

92. Hain test is/are used for:

a) Detection of INH resistance only

b) Detection of rifampicin resistance only

c) Detection of both rifampicin & INH resistance

d) Detection of resistance of all drugs of first line ATT

e) All

Correct Answer - C

Answer- C. Detection of both rifampicin & INH resistance

- "Genotype MTBDR plus ("HAIN test") qNAA and hybridization-based test use immobilized DNA probes on nitrocellulose membranes (line probe assay LPA) & Colorimetric change indicates hybridization.
- Identifies M.tuberculosis and detects Rif & INH resistance in a day.

93. True about Pulmonary artery catheterization (Swan-Ganz catheter placement):

a) Measures right atrial pressure

b) Measures left ventricular filling pressure

c) Measure PCWP

d) Inserted through left subclavian vein

e) Measures central venous pressure

Correct Answer - A:B:C:D

Answer- (A) Measures right atrial pressure (B) Measures left ventricular filling pressure (C) Measure PCWP (D) Inserted through left subclavian vein

- Continuous cardiac output monitoring
- Central temperature monitoring
- Measurement of pulmonary artery pressure (can also measure RA and RV pressures during insertion)
- Measurement of mixed venous saturations.
- Estimation of diastolic filling of left heart
- It measures the pressure at three different places: right atrium, pulmonary artery and pulmonary capillaries.

94. Presentation of tabes dorsalis includes:

a) Lancinating pain in leg

b) Loss of proprioception

c) Sensory defect

d) No involvement of bladder & bowel

e) Sensory ataxia

Correct Answer - A:B:C:E

Answer- (A) Lancinating pain in leg (B) Loss of proprioception (C) Sensory defect (E) Sensory ataxia

- Symptoms are
- Ataxic wide-based gait
- Foot drop
- Paresthesia;
- Bladder disturbances;
- Impotence;
- Areflexia; and
- Loss of positional, Deep-pain, and Temperature sensations.
- Trophic joint degeneration (Charcot's joints) can result from loss of pain sensation.
- Optic atrophy occurs in tabes.

95. True about Prinzmetal's angina:

a) May present at rest

b) Occurs due atherosclerotic obstruction of coronary arteries

c) Smoking is a risk factor

d) Nitrates are used for treatment

e) CCBs are used for treatment

Correct Answer - A:C:D:E

Answer- (A) May present at rest (C) Smoking is a risk factor (D) Nitrates are used for treatment (E) CCBs are used for treatment

- This syndrome is due to focal spasm of an epicardial coronAry artery, leading to severe myocardial ischemia leading to severe myocardial ischemia.
- The right coronary artery is the most frequent site, followed by the left anterior descending coronary artery.
- Acetylcholine released by the parasympathetic system at rest will simply cause contraction of the vascular smooth muscle.
- It usually occurs at rest and is associated with transient ST- segment elevation.
- Etiology
- cigarette smokers

Treatment-

- Nitrates and calcium channel blockers are the main treatments for patients with variant angina.

96. Which of the following is/are true about Revised Jones Criteria 2015 of AHA for diagnosis of acute rheumatic fever -

a) Polyarthritis in low-risk populations is a major criteria

b) Polyarthralgia in moderate- and high-risk populations is a minor criteria

c) Monoarthritis in moderate- and high-risk populations is a major criteria

d) Echocardiography with Doppler study should be performed in all cases of confirmed and suspected ARF

e) Echocardiography/Doppler study should be performed to assess whether carditis is present in the absence of auscultatory findings

Correct Answer - A:C:D:E

Answer- (A) Polyarthritis in low-risk populations is a major criteria (C) Monoarthritis in moderate- and high-risk populations is a major criteria (D) Echocardiography with Doppler study should be performed in all cases of confirmed and suspected ARF (E) Echocardiography/Doppler study should be performed to assess whether carditis is present in the absence of auscultatory findings

Clinical manifestations and diagnosis

2015 Revised Jones Criteria for diagnosis of Rheumatic Fever

B. Major Criteria

Low-risk populations	**Moderate-and high-risk** population

Carditis
- Clinical and/or subclinical carditis

Arthritis
- Polyarthritis

Chorea
Erythema marginatum
Subcutaneous nodules

Carditis
- Clinical and/or subclinical carditis

Arthritis
- Monoarthritis or polyarthritis
- Polyarthralgia

Chorea
Erythema marginatum
Subcutaneous nodules

C. Minor criteria

Low-risk populations	**Moderate-and high-risk populations**
Polyarthralgia	Monoarthralgia
Fever (>38.5°)	Fever (>38°C)
ESR .60 mm in 1^{t} hour and/ CRP>3.0 mg/dl	ESR 30 mm/h and/or CRP >3.0 or mg/dL

4. Prolonged PR interval, **after accounting for age** variability (unless carditis is a major criterion) in all **population.**

97. Feature(s) of increased ICP is/are:

a) Hypotension

b) Decrease HR

c) Increase HR

d) Hypertension

e) Decreased level of consciousness

Correct Answer - B:D:E

Answer- (B) Decrease HR (D) Hypertension (E) Decreased level of consciousness

- Cushing's triad is the triad of widening pulse pressure (rising systolic, declining diastolic), change in respiratory
- Pattern (irregular respirations), and bradycardia. It is sign of increased intracranial pressure, and, it occurs as a result of the Cushing reflex.

98. All are true about Hepatitis E except:

a) May be fatal in pregnant women

b) Caused by non-enveloped, positive-sense, single stranded RNA genomic ,HAV like virus

c) Carrier state is common

d) Majority progress to chronicity

e) Feco-oral transmission

Correct Answer - C:D

Answer- (C) Carrier state is common (D) Majority progress to chronicity

- HEV is transmitted via the faecal-oral route.
- It is caused by non-enveloped, positive-sense, single-stranded RNA genomic, HAV like virus.
- Hepatitis E is a waterborne disease, and contaminated water or food supplies have been implicated in major outbreaks. In general, hepatitis E is a self-limiting viral infection followed by recovery. Prolonged viraemia or faecal shedding are unusual and chronic infection does not occur.
- Occasionally, a fulminant form of hepatitis develops, with overall patient population mortality rates ranging between 0.5 - 4.0%. Fulminant hepatitis occurs more frequently in pregnancy and regularly induces a mortality rate of 20% among pregnant women in the 3rd trimester.
- Since cases of hepatitis E are not clinically distinguishable from other types of acute viral hepatitis, diagnosis is made by blood tests which detect elevated antibody levels of specific antibodies to hepatitis E in the body or by reverse transcriptase polymerase chain

reaction (RT-PCR). Unfortunately, such tests are not widely available.

99. Which of the following favours diagnosis of chronic renal failure rather than acute renal failure -

a) Anemia

b) Peripheral neuropathy

c) Small kidney

d) Renal osteodystrophy

e) Daily increase in creatinine

Correct Answer - A:B:C:D

Answer- A, B, C, D, Anemia, Peripheral neuropathy, Small kidney, Renal osteodystrophy

- Renal sonogram showing small kidneys- Usually CKD
- Oliguria, daily increases in serum creatinine and BUN- Probably ARF or ARF superimposed on CKD
- Severe anemina renal osteotdystrophy (hyperphosphatemia, hypocalcemia)- Possibly CKD but may be ARF Peripheral neuropathy

100. All are feature(s) of sarcoidosis except:

a) High CD4: CD8 ratio

b) Hypercalciuria and hypercalcimia maybe present

c) f Serum levels of angiotensin-converting enzyme (ACE)

d) Schauman and asteroid bodies are pathognomic

e) None

Correct Answer - D

Answer- D. Schauman and asteroid bodies are pathognomic

- Hypercalcemia and/or Hypercalciuria occurs in about 10% of sarcoidosis patients.
- Bronchoalveolar lavage fluid In sarcoidosis is usually characterized by an increase in lymphocyte and a high CD4/ CD8 ratio.
- "Schauman and asteroid bodies- although characteristic, these cells are not pathognomic of sarcoidosis because they may be encountered in other granulomatous diseases.
- The granuloma is the pathologic hallmark of sarcoidosis.
- "Serum levels of anglotensin-converting enzyme (ACE) can be helpful in the diagnosls of sarcoidosis.

101. Which of the following cranial nerve is/are involved in Gag reflex :

a) 9

b) 10

c) 11

d) 12

e) 7

Correct Answer - A:B
Answer- (A) 9 (B) 10

- Gag reflex
- Afferent
- Glossopharyngeal nerve
- Efferent
- Vagus nerve

102. Which of the following is/are true about Duchene muscular dystrophy:

a) Mental impairment may present

b) TSerum CK levels

c) Cardiomyopathy may be present

d) Autosomal recessive disorder

e) Onset during puberty

Correct Answer - A:B:C

Answer- (A) Mental impairment may present (B) TSerum CK levels (C) Cardiomyopathy may be present

- Duchenne Muscular Dystrophy: This X-linked recessive disorder sometimes also called pseudohypertrophic muscular dystrophy.
- Age- Before 5 years
- C/F
- Progressive weakness of girdle muscles
- Unable to walk after age 12
- Progressive kyphoscoliosis
- Respiratory failure in 2d or 3d decade
- Cardiomyopathy
- Mental impairment

103. True about acute intermittent porphyria:

a) Occur due to deficiency of enzyme HMB-synthase

b) Uroporphyrin is present in urine

c) Abdominal pain is common symptom

d) T Porphobilinogen in the urine

e) Leukocytosis is often present

Correct Answer - A:B:C:D

Answer- (A) Occur due to deficiency of enzyme HMB-synthase (B) Uroporphyrin is present in urine (C) Abdominal pain is common symptom (D) T Porphobilinogen in the urine

- Deficient enzyme- HMB- synthase
- Inheritance- Autosomal dominant
- Abdominal pain, the most common symptom.
- Cramping, Ileus, abdominal distention, and decreased bowel sound.
- Peripheral neuropathy
- Abdominal tenderness, fever, and leukocytosis are usually absent or mild
- Nausea, vomiting, constipation, tachycardia, hypertension, mental symptoms, pain in the limbs, head, neck, or chest;
- Muscle weakness, sensory loss, dysuria, and urinary retention are characteris
- Tachycardia, hypertension, restlessness, tremors, and excess sweating are due to sympathetic overactivity.

Investigation-

- The diagnosis can be confirmed by demonstrating an increased amount of porphobilinogen in the urine, ALA, Uroporphyrin.

104. Child Pugh A criteria for clinical severity of cirrhosis includes:

a) Bilirubin < 2.0 mg/dL

b) Prothrombin time >70 (% of control)

c) Serum albumin 2.0-3.0 g/dl

d) Presence of encephalopathy

e) Absence of ascites

Correct Answer - A:B:E

Answer- (A) Bilirubin < 2.0 mg/dL (B) Prothrombin time >70 (% of control) (E) Absence of ascites

Parameter	**Assign 1 point**	**Assign 2 points**	**Assign 3 points**
Ascitis	Absent	Slight	Mpderate
Bilirubin (mg/dL)	<2	2-3	>3
Albumin (g/dL)	>3.5	2.8-3.5	<2.8
Prothrombin time (second over control) or INR	<4 <1.7	4-6 1.7-2.3	>6 >2.3
Encephalopathy	None	Grade 1-2 (Mild to moderate	Grade 3-4 (Severe)

105. All are true about Abdominal aneurysm except:

a) Atherosclerosis is the commonest cause

b) Most commonly arises from above the level of renal artery

c) For asymptomatic aneurysms, repair is indicated if the diameter is >5.5 cm

d) Endovascular placement of an aortic stent is use for repair

e) Mostly asymptomatic

Correct Answer - B

Answer- B. Most commonly arises from above the level of renal artery

- 90% of abdominal aortic aneurysm (AAA) of size > 4cm in diameter is due to atherosclerosis.
- Male are more frequently affected than female.
- The aneurysm most commonly arises below the level of renal artery.

106. A patient diagnosed with cushing's syndrome. Dexamatha¬sone suppression test showed decrease in cortisol levels and corticotrophin-releasing hormone (CRH) administration causes increased cortisol levels.Treatment option(s) for this patient is/are:

a) Adrenalectomy

b) Pituitary irradiation

c) Adrenal gland removal

d) Stereotactic pituitary radiosurgery

e) Surgical removal of ectopic tissue producing ACTH in different organs

Correct Answer - A:B:C:D

Answer- (A) Adrenalectomy (B) Pituitary irradiation (C) Adrenal gland removal (D) Stereotactic pituitary radiosurgery

- Treatment of choice- removal of pituritary corticotrope tumour (transphenoidal approach)
- Pituitary irradiation
- Metyrapone and ketoconazole
- Adrenocortical carcinoma-mitotane

107. In which of the following vasculitis lung involvement does not occur:

a) Eosoniphilic granulomatosis with vasculitis

b) Polyarteritis nodosa (PAN)

c) Microscopic polyangitis

d) Granulomatosis with polyangitis

e) Bechet syndrome

Correct Answer - B

Answer- B. Polyarteritis nodosa (PAN)

- Microscopic polyangiitis (microscopic polyarteritis, hypersensitivity, or leukocytoclastic vasculitis): This type of necrotizing vasculitis generally affects arterioles, capillaries, and venule.
- Wegener granulomatosis (Granulomatosis with polyangitis)- is a necrotizing vasculitis characterized by th e triad of

1. acute necrotizing granulomas
2. necrotizing or granulomatous vasculitis
3. renal disease in the form of focal necrotizing often crescentic, glomerulitis

- "Churg- Strauss syndrome(allergic granulumatosis and angiitis) is a multisystem diseases with cutaneous involvement gastrointestinal tract bleeding, and renal disease.

108. Drug causing scleroderma is/are:

a) Bleomycin

b) Pentazocin

c) Polyinyl chloride

d) Steroid

e) Tetracycline

Correct Answer - A:B:C

Answer- (A) Bleomycin (B) Pentazocin (C) Polyinyl chloride

- Vinyl chloride, bleomycin, pentazocin, organic solvents, carbidopa, tryptophan, rapeseed oil.

109. Which of the following statement(s) is/are regarding American Heart Association(AHA) Guideline-2015 for cardiopulmonary resuscitation(CPR) & Emergency cardiovascular care(ECC):

a) Chest compression: ventilation Compression ventilation ratio without advanced airway – rate 30:2 irrespective of rescuer & age of patient

b) Compression rate- at least 100/min

c) Failure to achieve an ETCO2 of 10 mm Hg by waveform capnography after 20 minutes of resuscitation has been associated with an extremely poor chance of return of spontaneous circulation(ROSC)

d) Limit interruptions in chest compressions to less than 10 seconds

e) None

Correct Answer - C:D

Answer- C,Failure to achieve an ETCO2 of 10 mm Hg by waveform capnography after 20 minutes of resuscitation has been associated with an extremely poor chance of return of spontaneous circulation(ROSC) D,Limit interruptions in chest compressions to less than 10 seconds

- Compression rate is modified to a range of l00 to 120/min.
- Compression ventilation ratio without advanced airway- 1 or 2 rescuers 30: 2

- Failure to achieve an ETCO2 of I0 mm Hg by waveform capnography after 20 minutes of resuscitation has been associated with an extremely poor chance of ROSC and survival.
- The clarified recommendatio-n for cfrest compression depth for adults is atleast 2 inches (S cm) but not greater than 2.4 inches (6 cm) .

110. A patient of asthma was on inhaled short acting 13-agonist. But there was no significant relief. After that he added low dose of inhaled steroid from last 5 day by MDI, but still not responding. What you will advise him for next line of treatment:

a) Continue inhaled short acting P-agonist

b) Add inhaled long acting 13-agonist

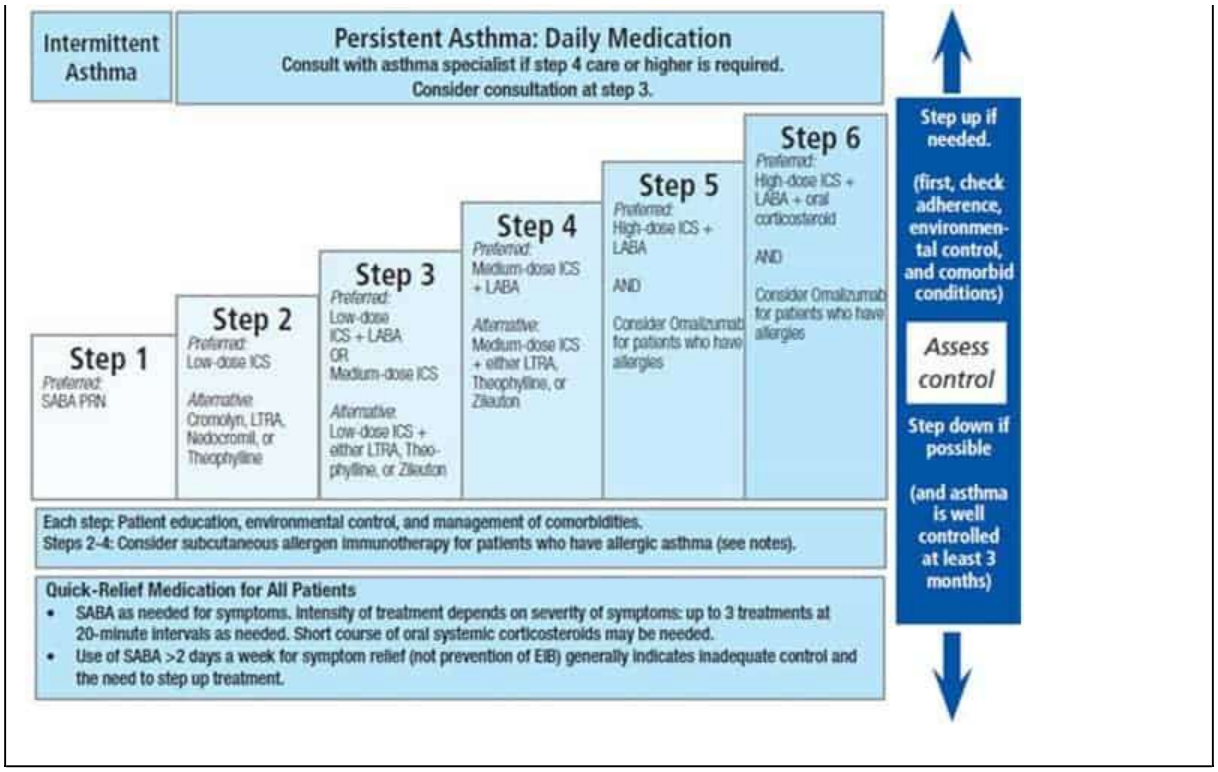
c) Increase dose of inhaled corticosteroid

d) Start oral corticosteroid

e) Start parenteral corticosteroid

Correct Answer - A:B:C

Answer- (A) Continue inhaled short acting P-agonist (B) Add inhaled long acting 13-agonist (C) Increase dose of inhaled corticosteroid



111. Which of the following clinical criteria belongs to HIV stage I :

a) Asymptomatic patient

b) Persistent generalised lymphadenopathy

c) Unexplained chronic diarrhoea for > 1 mth

d) Unexplained persistent fever (> 37.5°C for > 1 mth)

e) Neutropenia

Correct Answer - A:B

Answer- (A) Asymptomatic patient (B) Persistent generalised lymphadenopathy

- World Health Organization (WHO) clinical stage-
- Asymptomatic
- Persistent generalised lymphadenopathy

112. Full form of SCIWORA is:

a) Spinal cord injury with radiographic abnormality

b) Spinal cord injury with radiographic aberration

c) Spinal cord injury without radiographic aberration

d) Spinal cord injury without radiographic abnormality

e) Spinal cord injury with vertebral fracture with radiographic abnormality

Correct Answer - D

Answer- D. Spinal cord injury without radiographic abnormality

- SCIWORA (Spinal Cord Injury Without Radiographic Abnormality) was first developed and ,introduced by Pang and Wilberger who used it to define 'clinical smyptoms of traumatic myelopathy with no radiographic or computed tomographic featutes of spinal fracture or instability.

113. Which of the following is/are true about breast carcinoma in male except:

a) Often presented at advanced stage at the time of diagnosis

b) Associated with gynaecomastia

c) Staging is different than female

d) Tamoxifene is used in treatment

e) Associated with excess endogenous or exogenous oestrogen

Correct Answer - C

Answer- C. Staging is different than female

- The following conditions have been reported to be associated with an increased risk of breast cancer in men: chronic liver disorders, such as cirrhosis, chronic alcoholism, schistosomiasis; a history of mumps orchitis, undescended testes, or testicular injury; and feminization, genetically or by environmental exposure. In contrast, gynecomastia alone does not appear to be a risk factor

114. All are true about medullary thyroid carcinoma except:

a) Involves the parafollicular cell

b) Radiosensitive

c) Amyloid stroma is present

d) Elevated level of calcitonin

e) High level of carcinoembryonic antigen

Correct Answer - B

Answer- B. Radiosensitive

- These are tumours of the parafollicular (C cells) derived from the neural crest.
- There is a characteristic amyloid stroma.
- High levels of serum calcitonin and carcinoembryonic antigen are produced medullary tumours.
- Calcitonin levels fall efter resection and rise again with recurrence making it a valuable tumour marker in the follow up of patients with this disease.
- Diarrhoea due to 5-hydroxytrptamine or prostaglandins.
- Tumours are not TSH dependent and do not take up radioactive iodine.

115. True about Caroli's disease:

a) Intrahepatic bile duct dilation

b) Jaundice may be seen

c) 1st Serum alkaline phosphatase

d) Not associated with portal hypertension

e) Surgery is treatment of choice localized hepatic involvement

Correct Answer - A:B:C:E

Answer- A,Intrahepatic bile duct dilation B,Jaundice may be seen C,1st Serum alkaline phosphatase E,Surgery is treatment of choice localized hepatic involvement

- Congenital, multiple, irregular dilatations of intrahepatic ducts with stenotic segments in between
- Complications: intrahepatic stone formation, bililary sepsis
- Associated with congenital hepatic fibrosis and medullary sponge kidney
- Premalignant

Treatment:

- First line therapy: biliary drainage with ERCP and PTC
- Diffuse: Liver transplantation
- Localized: Segmental resection

116. True about esophageal varices:

a) Left gastric vein is portal vessel involved

b) Occur at mid esophagus level

c) Occur at pharyngeal level

d) Epigastric vein is systemic vein involved

e) Occur at lower end of esophagus

Correct Answer - A:E

Answer- A,Left gastric vein is portal vessel involved E,Occur at lower end of esophagus

- The pharynx extends from the base of the skull down to the inferior border of the cricoid cartilage (around the C6 vertebral level), where it becomes continuous with the esophagus.

117. Which of the following is/are feature of highly selective vagotomy in comparison to truncal vagotomy with drainage:

a) Better tolerated

b) Dumping is more common

c) Diarrhea is less

d) High recurrence rate

e) Operative mortality rate very less

Correct Answer - A:C:D:E

Answer- A,Better tolerated C,Diarrhea is less D,High recurrence rate E,Operative mortality rate very less

- Highly selective vagotomy (HSV), also called parietal cell vagotomy or proximal gastric vagotomy.
- It preserves the vagal innervation to the antrum and pylorus.
- Gastric emptying of solids is typically normal in patients after parietal cell vagotomy.
- The recurrence rate is higher with HSV than with vagotomy and antrectomy.
- The most popular drainage procedure is the Heineke- Mikulicz pyloroplasty.

118. Which of the following is/are true regarding parathyroid gland surgery in parathyroid adenoma/hyperplasia:

a) Superior parathyroid gland lies posterior to RLN

b) Gland can be differentiated from surrounding tissue due to its colour

c) The presence of a normal parathyroid gland at operation indicates that the tumor removed is an adenoma rather than parathyroid hyperplasia

d) Intraoperative PTH estimation is done to check status of gland removal

e) 6% person have 5 parathyroid gland

Correct Answer - A:B:C:D

Answer- A,Superior parathyroid gland lies posterior to RLN B,Gland can be differentiated from surrounding tissue due to its colour C,The presence of a normal parathyroid gland at operation indicates that the tumor removed is an adenoma rather than parathyroid hyperplasia D,Intraoperative PTH estimation is done to check status of gland removal

- There are usually four parathyroid glands, which lie on the posterior surface of the thyroid.
- Common sites for ectopic parathyroids are the thyrothymic ligament, superior thyroid poles, tracheoesophageal groove, retroesophageal space, and carotid sheath.

119. Video assisted thoracotomy is/are commonly used for:

a) Pneumonectomy

b) Lung biopsy

c) Hemothorax with active bleeding

d) Repair of large vessel tear in thorax

e) Diagnosis and staging of thoracic malignancies

Correct Answer - A:B:C:E

Answer- A,Pneumonectomy B,Lung biopsy C,Hemothorax with active bleeding E,Diagnosis and staging of thoracic malignancies

- Thoracoscopy or video-assisted thoracoscopic surgery:
- Pneumonectomy, lobectomy and empyema drainage are all possible.
- Lung biopsy and the treatment of-recurent pneumothorax are the, most frequent indications.
- Thotacotomy is required for management of injuries to the lungs, heart, pericardium, and great vessel.

120. Which of the following is included in management of traumatic brain injury:

a) Mannitol infusion

b) Decompressive craniectomy

c) CT scan

d) Pneumococcal vaccination

e) Antiepileptics

Correct Answer - A:B:C:D:E

Answer- A,Mannitol infusion B,Decompressive craniectomy C,CT scan D,Pneumococcal vaccination E,Antiepileptics

Initial-

- Head up
- Loosen collar
- Optimise ventilation
- Optimise electrolyte balance (hypertonic fluids if necessory), treat hyperglycemia
- Sedation
- Seizure control

Intermediate

- (Mannito/furosemide/hyperventilations temporising measures)
- Heavy sedation
- Paralysis
- CSF drainage by insertion of EVD
- Cooling

Final

- Induction of thiopentone coma
- Decompressive craniectoy

121. True regarding urethral injury:

a) Straddle injuries are often associated with posterior ure¬thral injuries

b) Pelvic injuries is frequently associated with anterior ure¬thral injuries

c) Problem in voiding

d) Initial management is insertion of a suprapubic catheter

e) Suspect if there is blood at the urethral meatus in case of pelvic fracture

Correct Answer - A:D:E

Answer- (A)Straddle injuries are often associated with posterior ure¬thral injuries (D)Initial management is insertion of a suprapubic catheter (E)Suspect if there is blood at the urethral meatus in case of pelvic fracture

- Urethral injuries are more common in cases of bilateral pelvic injuries.
- Diagnosis of urethral injury is made by a high index of suspicion in the presence of blood at the urethral meatus, inability to urinate.
- When blood ls present at the meatus, retrograde urethrography aids in the diagnosis of urethral injury.

Urethral injuries are-

1. posterior urethra (above the urogenital diaphragm)
2. anterior urethra (below the urogenital diaphragm)

- Stented Foley catheter- healing of the urethral injury.
- anterior urethra injuries are associated with straddle injuries.

122. Statement true about crush injury & syndrome:

a) Often seen during earthquake

b) Myoglobinuria occurs

c) Presents as glomerulonephritis

d) May cause compartment syndrome

e) May be associated with rhabdomyolysis

Correct Answer - A:B:D:E

Answer- (A)Often seen during earthquake (B)Myoglobinuria occurs (D)May cause compartment syndrome (E)May be associated with rhabdomyolysis

- A crush injury occurs when a body part is subjected to a high degree offorce or pressure, usually after being squeezed between two heavy or immobile objects.
- Crush injury includes lacerations, fractures, bleeding bruising compartment syndrome and crush syrdrome
- Association between crush injury rhabdomyolysis and acute renal failure seen in earthquake
- The myoglobinuria leads to renal failute from tubular obstruction.

123. Only simple cholecystectomy is adequate in which stage of gallbladder cancer

a) Stage IA

b) Stage IB

c) Stage III

d) Stage IV

e) None

Correct Answer - A

Answer- A. Stage IA

- According to TNM staging, Simple cholecystectomy is done for T1a which is included in stage-I.
- T1a- simple cholecystectomy
- T1b, II & III- Extended cholecystectomy
- IV- Palliative treatment

124. High imperforate anus is/are associated with:

a) Underdeveloped pelvic & gluteal musculature

b) Associated with maldeveloped urinary system

c) Associated with VACTERL syndrome

d) Fistula formation with bladder

e) Normal anal sphinter mechanism

Correct Answer - A:B:C:D

Answer- (A)Underdeveloped pelvic & gluteal musculature (B)Associated with maldeveloped urinary system (C)Associated with VACTERL syndrome (D)Fistula formation with bladder

- More commonly there is fistula to the urethra or bladder in the male or the upper vagina in the female.
- Patients with high imperforate anus often have deficient pelvic and gluteal innervation and musculature, a high incidence of sacral anomalies.
- Anomalies of the vertebrae and the urinary tract occur in two-third of all patients with high anomalies.
- Imperforate anus is associated with the VACTERL syndrome.

125. True about Mallory-Weiss tear :

a) Alcoholism is a predisposing factor

b) Tear involves up to muscularis mucosa

c) Tear involves gastric mucosa near gastro-esophageal junc-tion

d) Associated with hiatus hernia

e) Important cause of upper GI bleeding

Correct Answer - A:C:D:E

Answer- (A)Alcoholism is a predisposing factor (C)Tear involves gastric mucosa near gastro-esophageal junc-tion (D)Associated with hiatus hernia (E)Important cause of upper GI bleeding

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.

ETIOLOGY:

- Alcoholism
- Hiatus hernia
- NSAID abuse
- The tear involves the mucosa and submucosa but not the muscular layer

126. Which of the following is/are true about breast self examination:

a) Performed in different positions like standing, sitting, supine etc

b) T survival rate

c) Done about 2-3 day before menstrual cycle in premeno-pausal women

d) It should be start only after 35 year

e) Monthly breast self-examination (BSE) is recommended

Correct Answer - A

Answer- A. Performed in different positions like standing, sitting, supine etc

- Breast self-examination (BSE) has not been shown to improve survival
- The American Cancer Society no longer racommends monthly BSE beginning at age 20 years.
- Premenopausal women should perform the examination 7-8 days after the menstrual period.
- The breasts should be inspected initially while standing before a mirror with the hands at the sides, overhead, and pressed firmly on the hips to contract the pectoralis muscles.

127. Vitamin K dependent coagulation factor(s) in children is/ are:

a) Factor 2

b) Factor 7

c) Factor 8

d) Factor 9

e) Factor l0

Correct Answer - A:D:E

Ans. a. Factor 2; b. Factor 7; d. Factor 9; e. Factor l0

- Vit. K carboxylates glutamic acids of translation products of vitamin K-dependent proteins, to produce Ý-carboxyglutamate
- Factor II, VII, IX & X are procoagulant Proenzymes whereas proteins C & S are anticoagulant proenzymes

128. Child can Swaps object from one hand to other in:

a) 2-3 month

b) 5-6 month

c) 6-12Months

d) 12-18 Months

e) 20-24Months

Correct Answer - B

Ans. b. 5-6 month

- Child can transfer objects from one hand to other by 6-7 month
- Transfer objects hanil to hanil in 5'5 months

129. Congenital hyperbilirubinemia is/are seen in:

a) Prematurity

b) Hypoalbuminaemic state

c) Hepatitis

d) Sepsis

e) Polycythemia

Correct Answer - A:C:D:E

Ans. a. Prematurity; c. Hepatitis; d. Sepsis; e. Polycythemia

Albumin less than 3.0 mg/dl is risk for hyperbilirubinemia neurotoxicity

Two other groups of disorders are associated with hyperbilirubinemia:

(1) Unconjugated hyperbilirubinemia seen in,

- Breast milk jaundice
- Blood group incompatibility
- Lucey-Driscoll syndrome
- Congenital hypothyroidism
- Upper intestinal obstruction
- Gilbert disease
- Crigler-Najjar syndrome
- Hereditary spherocytosis
- Non-spherocytic hemolytic anemia
- Drug-induced hyperbilirubinemia

(2) Conjugated hyperbilirubinemia present in,

- Dubin-Johnson syndrome

- Rotor syndrome
- Biliary atresia
- Neonatal hepatitis

130. Common cause of distal small intestinal obstruction in infants /child:

a) Meconium ileus

b) Jejunal atresia

c) Ileal atresia

d) Meckel'sdiverticulum

e) Duodenal atresia

Correct Answer - A:B:C:D

Ans. a. Meconium ileu;s b. Jejunal atresia; c. Ileal atresia; d. Meckel'sdiverticulum

The primary etiologies of congenital small bowel obstruction involves:

- Abnormalities in anatomic development (jejunoileal stenosis & atresia)
- Mucus secretion (meconium ileus)
- Bowel wall innervation (long-segment Hirschsprung disease)
- Meckel diverticulum is the most common congenital anomaly of GI tract

131. Not an Intra-articular fracture:

a) Rolando fracture

b) March fracture

c) Bennett's fracture

d) Barton’s fracture

e) Hoffa fracture

Correct Answer - B

Ans. b. March fracture

- March fracture: Fatigue fracture of shaft of second or third metatarsal
- Rolando fracture is a three part or comminuted intraarticular fracture-dislocation of the base of thumb.
- Pilon fracture: It is a communicated intra-articular fracture of the distal end of the tibia
- Bennett's fracture: If is an oblique intra-articular fracture of the base of the first metacarpal with subluxation of the trapezoid' metacarpal joint"
- Barton's fracture (Marginal fracture): Intra-articular fractures through the distal articular surface of the radius, taking a margin, anterior or posterior, of the distal radius with the carpals, displaced anteriorly or posteriorly
- Hoffa fractures are intra-articular and are characterised by a fracture in the coronal plane

132. All are true about supracondylar fracture of humerus except:

a) Posterior shift of distal fragment

b) Median nerve is most common nerve damaged

c) Injury of brachial artery may occur

d) Common in elderly

e) Volkmann's ischemic contracture may occur

Correct Answer - D

Ans. d. Common in elderly

Supracondylar Fracture of the Humerus:

Complications :

- Immediate- injury to brachial artery & injury to nerve (median nerve-most common, radial nerve-sometime affected)
- Early- Volkmann's ischemia
- Late complication- Malunion(cubitus varus deformity), myositis ossificans & Volkmann\ ischemic contracture .
- Displacement: The distal fragment may be displaced in the following direction
- Posterior or backward shift
- Posterior or backward tilt
- Proximal shift
- Medial or lateral shift
- Medial tilt
- Internal rotation

133. All are true Volkmann ischemic contracture except

a) Ischemic muscle is replaced by fibrous

b) Ulnar nerve palsy may be present

c) Extension deformity of the wrist & fingers

d) Flexion at the metacarpophalangeal

e) Tendon transfer helps in restoring movements

Correct Answer - C

Ans. c. Extension deformity of the wrist & fingers

VOLKMANN'S ISCHEMIA

- **Early complication of supracondylar fracture.**
- Ischemic injury to the muscles and nerves of the **flexor compartment** of the fore arm.
- **D/t occlusion of brachial artery.**
- Tissue pressure readings **within 30 mm Hg of the patient's diastolic blood pressure**(perfusion pressure
- Muscles supplied by **anterior interosseus artery are most susceptible,** as it is an end artery.
- **Most commonly affected muscle: flexor pollicis longus** & medial half of **flexor digitorum profundus.**
- **Median nerve is most commonly involved.**
- Treatment: fasciotomy

134. True about Dupuytren's contracture;

a) Commonly affect ring & small finger

b) May involve penis

c) Involves metacarpo-phalangeal joint

d) Knee reflex diminished

e) Involves neck flexors

Correct Answer - A:B:C

Ans. a. Commonly affect ring & small finger ; b. May involve penis; c. Involves metacarpo-phalangeal joint

Clinical Features of Dupuytren's contracture:

- Thickened fibrous bands felt over the ulnar side of the palm.
- Thickening of plantar fascia or that of the penile fascia (Peyronie's disease).
- Tenderness over the involved area at the base of the digits.
- Flexion deformity at the MCP and PIP joints of involved fingers

135. True about complex regional pain syndrome:

a) Sudeck's atrophy is an example

b) Pain is out of proportion to precipitating cause

c) Hyperaesthesia of skin may be present

d) Adults are usual sufferer

e) Parasympathetic mediated enhancement of pain

Correct Answer - A:B:C:D

Ans. a. Sudeck's atrophy is an example ; b. Pain is out of proportion to precipitating cause; c. Hyperaesthesia of skin may be present; d. Adults are usual sufferer

Complex Regional Pain Syndrome

- A number of clinical syndromes appear under this heading, including Sudeck's atrophy, reflex sympathetic dystrophy, algodystrophy, shoulder -hand syndrome & particularly after a nerve injury-causalgia.
- Precipitating causes are trauma(often trivial), operation or arthroscopy, a peripheral nerve lesion, myocardial infarction, stroke & hemiplegia
- Adults are the usual sufferers but the condition occasionally occur in children

136. Failure rate of <2/100 women years is/ are seen:

a) Male condom

b) Implanon

c) COC

d) Vaginal diaphragm

e) IUCD

Correct Answer - B:C:E

Ans.b. Implanon; c. COC; e. IUCD

Failure rate 2/100 women years is seen in:

- Lactational amenorrhoea <2
- CUT 380A <0.8
- LNG 20 (IUCD) <0.1
- Combined oral pills <0.1
- Progestin only pills 1
- DMPA & NET injectables< 0.3
- Norplant <0.05
- Implanon< 0.01
- Vasectomy<0.15
- Tubectomy<0.15

137. True about breech presentation:

a) More common in primi

b) Incidence is about 7% at term pregnancy

c) More common in postdated pregnancy

d) More in pelvic anomaly

e) External cephalic version decreases incidence of breech Presentation

Correct Answer - D:E

Ans. d. More in pelvic anomaly ; e. External cephalic version decreases incidence of breech Presentation

- Percentage of breech at term is 3 %

ETIOLOGY:

- Prematurity

Factors preventing spontaneous version:

- Breech with extended legs
- Twins
- Oligohydramnios
- Septate or bicornuate uterus
- Short cord, relative or absolute
- IUD of fetus.

Favourable adaptation:

- Hydrocephalus
- Placenta previa
- Contracted pelvis
- Cornu-fundal attachment of the placenta
  Undue mobility of the fetus
- Hydramnios,

- Multiparae with lax abdominal wall.
- Fetal abnormality: Trisomies 13, 18, 21, anencephaly and myotonic dystrophy

138. True about treatment ofbacterial vaginosis:

a) Metronidazole is the drug of choice

b) Metronidazole should take in dose of 500 mg, orally twice adayfor 7 day

c) Intravaginal clindamycin is used

d) Male partner is also treated in all cases

e) Clotrimazole 2% creamis used intravaginally

Correct Answer - B:C

Ans. a. Metronidazole is the drug of choice; b. Metronidazole should take in dose of 500 mg, orally twice adayfor 7 day; c. Intravaginal clindamycin is used

Medication—Treatment should include both partners.

- **Oral Metronidazole**—500 mg orally twice daily after meals for 7 days. Or 2 g stat.
- Advisable to defer treatment during first trimester of pregnancy.
- Intravaginal clindamycin is used

139. True about gestational hypertension:

a) Return to normal BP within 12 week of postpartum

b) BP > 140/90 mmHg

c) Develop beyond the 20th week of pregnancy

d) May continue even after l2week of delivery

e) Final diagnosis made only in postpartum

Correct Answer - A:B:C:E

Ans. a. Return to normal BP within 12 week of postpartum; b. BP > 140/90 mmHg; c. Develop beyond the 20th week of pregnancy; e. Final diagnosis made only in postpartum

Gestational hypertension

- A sustained rise of blood pressure to 140/90 mm Hg or more on atleast 2 occasions 4 or more hours apart beyond the 20thweeks of pregnancyor during the first 24 hours after delivery in a previously normotensive woman is called gestational hypertension.
- It is associated much higher incidence of essential hypertension in later life than pre eclampsia.
- The hypertensive effect is actually astressresponse.
- Perinatal mortality remains unaffected in a case of gestational hypertension.
- The patients with gestational hypertension are more likely to develop hypertensionwith the use of oral contraceptives or in sub sequent pregnancies.
- B.P. returns to normal within 6 weeks of delivery

140. True about stage Ib cervix carcinoma management:

a) Radiotherapyalone

b) Simple hysterectomy alone

c) Primarychemoradiation

d) Wertheim hysterectomy + pelvic lymphadenectomy

e) Simple hysterectomy + adjuvant chemotherapy

Correct Answer - C:D

Ans. c. Primarychemoradiation; d. Wertheim hysterectomy + pelvic lymphadenectomy

Stages IB and IIA Cervical Cancer

- Radiation therapy with chemotherapy given at the same time.
- Radical hysterectomy and removal of pelvic lymph nodes with or without radiation therapy to the pelvis, plus chemotherapy.
- Radical trachelectomy.
- Chemotherapy followed by surgery.
- Radiation therapy alone.

141. True about Mirena:

a) Effective life is 5-10 yr

b) Gives protection against HM STD

c) Contraindicated in suspected pregnancy

d) Contraindicated in breast carcinoma

e) Useful in controlling menorrhagia in fibroid

Correct Answer - A:C:D:E

Ans. a. Effective life is 5-10 yr; c. Contraindicated in suspected pregnancy ;d. Contraindicated in breast carcinoma; e. Useful in controlling menorrhagia in fibroid

The levonorgestrel-releasing IUS, Mirena, releases 20 mcg of levonorgestrel per day and is approved for contraception for up to 5 years. It achieves local progestin concentrations that are ~1000-fold higher than systemic levels.

Contraindications specific to the use of Mirena are:

- Acute liver disease or tumor
- Known or suspected carcinoma of the breast
- Hypersensitivity to any component of this product

Contraindications to Use of an Intrauterine Device:

- Pregnancy or suspicion of pregnancy
- Genital actinomycosis
- Acute pelvic inflammatory disease
- Genital bleeding of unknown etiology
- Woman or her partner having multiple sexual partners
- A previously inserted IUD that has not been removed
- Abnormalities of the uterus resulting in distortion of the uterine cavity
- Postpartum endometritis or infected abortion in the past 3 months

- Known or suspected uterine or cervical neoplasia, or unresolved abnormal cytological smear
- Untreated acute cervicitis or vaginitis, including bacterial vaginosis, until infection is controlled
- History of ectopic pregnancy or condition that would predispose to ectopic pregnancy

142. Intracytoplasmic sperm injection (ICSI) is/are useful in condition of -

a) Mullerian agenesis

b) Unexplained infertility

c) Hostile cervical mucus

d) Oligospermia

e) Presence ofsperm antibodies

Correct Answer - B:D:E

Ans. b. Unexplained infertility; d. Oligospermia; e. Presence ofsperm antibodies

Indications of ICSI in male infertility comprise:

- Sperm count less than 5 million/mL.
- Decreased or absent motility of sperms.
- Many abnormal sperms.
- Previous failed IVF.
- Unexplained infertility.
- Asthenopermia, teratospermia
- Presence of sperm antibodies
- Obstruction of efferent duct system (male)
- Congenital absence of vas (bilateral)
- Fertilisation of cryopreserved oocytes

143. Indication of artificial insemination is/are:

a) Male factor infertility

b) Unexplained infertility

c) PCOD

d) Tubal factor infertility

e) Hostile cervical mucus

Correct Answer - A:B:E

Ans. a. Male factor infertility ;b. Unexplained infertility ;e. Hostile cervical mucus

Indication of artificial insemination:

- Hostile cervical mucus
- Cervical stenosis
- Oligospermia or asthenospermia
- Immunefactor (male andfemale)
- Male factor- impotency or anatomical defect (hypospadias) but normal ejaculate cab be obtained
- Unexplained infertility
- Chronic medical disorder
- HlV-positive male or female

144. True about Ectopic Pregnancy:

a) OCP use increase risk

b) IUCD failure increase chance of ectopic pregnancy

c) ßhCG rise is not parallel to normal pregnancy

d) Trans vaginal USG is 100% diagnostic

e) More common in Primi

Correct Answer - B:C

Ans. b. IUCD failure increase chance of ectopic pregnancy; c. ßhCG rise is not parallel to normal pregnancy

RISK FACTORS:

- History of PID
- History of tubal ligation
- Contraception failure
- Previous ectopic pregnancy
- Tubal reconstructive surgery
- History of infertility
- Calendar method
- ART particularly if the tubes are patent but damaged
- IUD (Progestasert)use
- Previous induced abortion
- Tubal endometriosis

DIAGNOSIS:

Blood examination:

- Hemoglobin
- ABO and Rh grouping
- TLC & DLC
- ESR

- Culdocentesis
- Estimation of ↑β-hCG

Sonography:

- Transvaginal USG(Most sensitive)
- Absence of intrauterine pregnancy with a positive pregnancy test.
- Fluid (echogenic) in pouch of Douglas
- Adnexal mass
- Rarely cardiac motion

Color Doppler Sonography:

- Ring-of-fire pattern
- Enhanced blood flow pattern
- Laparoscopy
- D & C
- Serum progesterone
- Laparotomy

145. Medical treatment of myoma includes:

a) Tamoxifen

b) Mifepristone

c) LNG-IUD

d) GnRH agonist

e) GnRH antagonist

Correct Answer - B:C:D:E

Ans. b. Mifepristone; c. LNG-IUD; d. GnRH agonist; e. GnRH antagonist

Medical treatment of Myoma:

- Mifepristone (RU-486) 10-25 mg daily for 3 month causes amenorrhoea & shrinkage of the tumor by 50%
- Antiprogesterones(Mifepristone)
- Danazol
- GnRH anologs- Agonists(e,ggoserelin,luporelin) &antagonists(e.g ganirelix &cetrorelix)
- LNG-IUS
- Progesterone synthetase inhbitors

146. True about Medical Termination of Pregnancy in India:

a) Can be done in any hospital by a trained obstetrician

b) Only women consent is needed, husband consent not mandatory

c) Opinion of two doctors are needed if carried after 20 weeks

d) Opinion of one doctors is needed if carried before 20 weeks

e) Both surgical & medical method for termination are available

Correct Answer - B:E

Ans. b. Only women consent is needed, husband consent not mandatory; e. Both surgical & medical method for termination are available

Medical Termination of Pregnancy:

- The Indian act permits the wilful termination of pregnancy before the age of fetal viability(20 weeks gestation) for well-defined indication
- To be performed by recognized medical practitioners in recognized place approved by competent authority under act.
- The identity of person k treated as a statutory Personal matter
- Document to be maintained: Form I, Form II & admission register
- Written consent of woman is needed.
- Husband consent is not required.
- In case of minor girl or lunatic or mentally retarded woman, written consent of her parents or legal guardian I to be taken
- Both medical & surgical methods are used.
- Surgical methods include-manual vaccum aspiration, suction evacuation, dilation & evacuation & dilation & curettage .

- Medical method includes-Mifepristone alone, Mifepristone & misoprostol methotrexate & misoprostol, Tamoxifen & misoprostol, misoprostol alone etc.

147. True about emergency contraceptive:

a) Available as over the counter (OTC)

b) LNG alone, 0.75 initially followed by another 0.75mg 12 hours apart is emergency contraceptive method of choice

c) Ethinyl estradiol (EE) should be taken within 72 hours

d) Copper IUD is used within 5 days of unprotected sex

e) LNG-IUS is one of best method

Correct Answer - A:B:C:D

Ans. a. Available as over the counter (OTC) ; b. LNG alone, 0.75 initially followed by another 0.75mg 12 hours apart is emergency contraceptive method of choice; c. Ethinyl estradiol (EE) should be taken within 72 hours; d. Copper IUD is used within 5 days of unprotected sex

Postcoital (emergency) pills:

- Levonorgestrel 0.5 mg + ethinyl estradiol 0.1 mg —> within 72 hours of unprotected intercourse and repeated after 12 hours - *Yuzpe method.*
- Levonorgestrel alone 0.75 mg taken twice with 12 hour gap within 72 hours of unprotected intercourse —> *method of choice for emergency contraception.*
- Mifepristone 600 mg single dose within 72 hours of unprotected intercourse.
- Other methods:- progesterone only pill (mini pills), IUD insertion, High dose estrogens.

148. Which of the following is true about changes during Pregnancy:

a) ↑ Minute ventilation

b) ↓ Tidal volume

c) ↑Minimum alveolar concentration (MAC) of anaesthetic gases

d) ↑ Blood volume & RBC volume

e) ↑Respiratory rate

Correct Answer - A:B:D

Ans. a. ↑ Minute ventilation; b. ↓ Tidal volume; d. ↑ Blood volume & RBC volume

RESPIRATORY CHANGES:

PARAMETERS	**CHANGES**
Respiration rate/min	Unaffected
Vital capacity (mL)	Unaltered
Tidal volume(ml)	↑ by 40%
Residual volume (mL)	↓ by 20%
Inspiratory capacity (IC)	↑ by 10%
Minute ventilation	↑ by 40%
Total lung capacity (mL)	↓ by 5%

149. Contraindication of combined oral contraceptive (COC) include(s)-

a) Severe hypertension

b) Ischemic heart disease

c) Pre-menstrual tension

d) Active liver disease

e) All

Correct Answer - A:B:C:D

Aps. is'a' i.e., Severe hypertensiorr;'b' i.e., Ischemic heart disease; &'d' i.c', Active liver disease

Contraindications of OCPs (WHO guidelines)

Absolute :

- Thromboembolism event, cerebrovascular accident, coronary artery disease,
- Breast cancer,
- DM (> 20 years duration)
- Impending major surgery
- Hyperlipidaemia
- Pregnancy
- Lactation (< 6 weeks post partum)
- Active liver disease, hepatoma
- Uncontrolled hypertension or with vascular diseases
- > 35 years old and heavy smoker (> 20 cigarettes/day)
- Migraine with aura
- Diabetic nephropathy/neuropathy/ retinopathy
- Structural heart disease with pulmonary hypertension, AF or SABE.

Relative :

- Lactation (6 weeks - 6 months)
- Controlled hypertension
- Undiagnosed vaginal bleeding
- Migraine without aura
- Gall bladder disease
- Age > 35 years and light smoker (< 20 cigarettes/day)
- DM with vascular complications.

150. Most common cause of primary post-partum hemorrhage is:

a) Uterine atony

b) Uterine inertia

c) Uterine inversion

d) Retained placenta

e) Traumatic

Correct Answer - A

Ans. a. Uterine atony

Primary Postpartum Hemorrhage:

- Atonic uterus: Uterine atony is most common(80% cases)
- Grand multipara
- Overdistension of the uterus as in multiple pregnancy, hydramnios & big baby
- Uterine fibroid
- Placenta: Morbidly adherent placenta(accrete, perceta)
- Antepartum haemorrhage(both placenta praevia & abruption)
- Prolong labour , Mismanaged 3rd stage labour

151. Screening tests for cervical cancer includes

a) HPV serology

b) Cervical biopsy

c) Colposcopy

d) Cytology

e) Conisation

Correct Answer - A:D
Ans. a. HPV serology; d. Cytology
Cervical Cancer Screening:

- Pap smear
- colposcopy to examine the cervix and surrounding structures
- A biopsy may be performed to remove tissue samples for examination in a laboratory.
- A DNA test may be ordered to see whether a high-risk form of HPV is present.
- Cytoplasmic vacuolization and nuclear enlargement of cells is seen as histologic features in HPV-related cervical intraepithelial neoplasia

152. True about endometriosis:

a) Laparoscopy is gold standard for diagnosis

b) COC is used to relieve mild Pain

c) GnRH antagonist is used to relieve severe pain

d) Can be managed expectantly in asymptomatic cases

e) None of the above

Correct Answer - A:B:D

Ans. (A)Laparoscopy is gold standard for diagnosis; (B). COC is used to relieve mild Pain; (D) Can be managed expectantly in asymptomatic cases

- Friends this is the most often asked question on endometriosis. It is worth while to know a few details on this topic.
- Empirical treatment : is for pain presumed to be due to endometriosis. (in absence of definitive diagnosis) and includes :—

1. Counselling
2. Analgesia
3. Nutritional therapy
4. Progestin or OCP's

- Analgesia : Studies have shown NSAID's except niflumic acid are more effective in chronic pain relief due to endometriosis or dysmenorrhea suspected to be due to endometriosis.

Hormonal medical treatment :

- Basis of management : Since estrogen is known to stimulate the growth of endometriosis, hormonal therapy has been designed to suppress estrogen synthesis, thereby inducing atrophy of ectopic endometrial implants or interrupting the cycle of stimulation and bleeding.

- Indication : — Mild pelvic endometriosis in young women.°
- Treatment of residual and recurrent disease following conservative surgery.

153. Kobner's phenomenon can occur in :

a) Lichen planus

b) Vitiligo

c) Psoriasis

d) Bullous pemphigoid

e) Dicoid lupus erythematosus

Correct Answer - A:B:C:E

Ans. (A) Lichen planus (B) Vitiligo (C) Psoriasis (E) Dicoid lupus erythematosus

[Ref: Neena Khanna 5th/45; Harrison 19th/i47,1269; Roxbutg 17th/130]

- Kobne/s phenomenon is characteristic of psoriasis but it is also seen in lichen planus & discoid lupus erythematosus.
- New lesion of original disease develops at sites of trauma(scratches, surgical incisions 6 injury)
- This phenomenon is seen in psoriasis, lichen planus & vitiligo
- Inactivates active disease

154. All are true about pompholyx except:

a) It is a form of hand/foot eczema

b) Also called as dyshidrotic eczema

c) Vesicle & blisters are present

d) Secondary bacterial infection are common

e) Steroids should not be used as it can exacerbate the condition

Correct Answer - E

Ans. E. Steroids should not be used as it can exacerbate the condition

[Ref Neena Khanna 5th/ 115 - 116; www. der mn etnz. org]

Pompholyx:

Aetiology

- Unknown.
- Some patients with pompholyx develop a Vesicular palmoplantar eruption on ingestion of minute amount of nickel

Clinical Features

- Summer aggravation
- Recurrent episodes of deep seated, bland (without inflammation) vesicles (sometimes blister). Each episode self-limiting but fresh crops of vesicles Develop successively, leaving patient symptomatic for long periods
- Lesions occasionally get secondarily infected.
- Fingers & palms & sometimes sola

Point for diagnosis: Based on

- Recurrent episode
- Presence of land vesicles
- Presence on fingers, palms & soles

Treatment

- Saline soaked followed by topical steroids
- Appropriate antibiotics, if bacterial infection present

155. Which of the following statement(s) is/are correct regarding management of malignant hyperthermia except:

a) Discontinue all anaesthetics immediately

b) Dantrolene is mainstay of therapy for **MH**

c) **Hyperventilation** with 100% oxygen is helpful

d) Sodium bicarbonate is given to correct alkalosis

e) Correct hyperkalemia by giving dextrose & insulin

Correct Answer - D

Ans. D. Sodium bicarbonate is given to correct alkalosis

Malignant Hyperthermia:

- Due to abnormality of type I Ryanodine receptor which is calcium release channel of sarcoplasmic reticulum.
- Genetic disease usually autosomal dominant but can be recessive also.
- Patient with normal CK levels should undergo muscle biopsy studies (where muscle is subjected to triggering factors (like halothane & suxamethonium).

Treatment of MH:

Dantrolene -

- Mainstay of therapy of MH.
- Directly binds to Ryanodine receptor inhibiting calcium release

156. Which of the following is/are true about pre-anaesthetic checkup (PAC):

a) Not necessary in children

b) Used to assess patient condition to tolerate anaesthesia & surgery

c) Can be performed by surgical faculty

d) Relieves anxiety of patient

e) Help in planning anaesthesia technique

Correct Answer - B:D:E

Ans. (B) Used to assess patient condition to tolerate anaesthesia & surgery (D) Relieves anxiety of patient (E) Help in planning anaesthesia technique

- PAC is equally necessary in infant & children (in fact, even more than adults).
- Infants are at a much greater risk of anesthetic morbidity & mortality than older children; risk is generally inversely proportional to age.

Pre-anaesthetic Checkup (PAC): Goals:

- To reduce anxiety & educate the patient about anaesthesia
- To obtain information about patient\ medical history
- To Perform Physical examination
- To determine which tests are required
- To plon anaesthetic technique.
- To obtain informed consent
- To give any preoperative instructions

157. Which of the following statement is/are true regarding intravenous fluid:

a) Ringer lactate is crystalloid of choice for blood loss replacement

b) Colloid is fluid of choice in severe shock

c) 5% Dextrose should be avoided in head injury

d) 0.45% saline contains 154 mEq/L Na+ & 154 mEq/L Ci?

e) Dextrose normal saline (DNS) is hypotonic

Correct Answer - A:B:C

Ans. (A) Ringer lactate is crystalloid of choice for blood loss replacement (B) Colloid is fluid of choice in severe shock (C) 5% Dextrose should be avoided in head injury

[Ref: Morgan Anaesthesia Sth/1163-66; Ajay yadav 5th/12-15; Lee Anaesthesia 1 3th/ 232 - 3 3 ; Miller 7 th/ 2799]

- Colloids are only reserved for severe shock.

Blood glucose control:

- Hyperglycaemia is known to exacerbate cerebral lactic acidosis and consequently aggravates cerebral ischaemia in head injury.
- Therefore glucose solutions should be avoided.

Dextrose:

- Aggregate ischemic neurologic injury
- Hyperglycemia may also constitute a hormonally mediated response to more severe injury.

Ringer lactate:

- Crystalloid of choice for blood loss replacement.

Normal Saline:

- 0.9% NaCl isotonic solution

Dextrose Normal Saline:

- Hypertonic

158. Which of the following is/are used in neuroendocrine tumor evaluation:

a) 68Ga-DOTA-TOC

b) MIBG

c) 68Ga-DOTA-NOC

d) F-18 Fluorodopa

e) 68Ga-DOTA-TATE

Correct Answer - A:B:C:D:E

Ans. (A) 68Ga-DOTA-TOC (B) MIBG (C) 68Ga-DOTA-NOC (D) F-18 Fluorodopa (E) 68Ga-DOTA-TATE

Gallium 68 DOTATOC/DOTANOC:

- For imaging of neuroendocrine tumors.
- Higher sensitivity for GI neuroendocrine tumors

F- 18 Fluorodopa: Dopamine analogue:

- The most specific & sensitive agent for imaging of neuroendocrine tumors especially pheochromocytoma (adrenal & extra-adrenal) & neuroblastoma

Scintigraphy of neuroendocrine Tumors:

- I - 131 Metaiodobenzylguanidine (MlBG) Sensitivity - 77 - 100%.
- I - 123 Metaiodobenzylguanidine (MIBG).
- Glucose Analogs2- (fluorine-r8) fluoro-2-deoxy-D-glucose (FDG)Uptake

159. USG is/are based on:

a) Piezoelectric effect

b) Diamagnetic effect

c) Paramagnetic effect

d) Ferromagnetic effect

e) Electromagnetic effect

Correct Answer - A
Ans. A. Piezoelectric effect
[Ref: Review Radiology by Sumer Sethi 6th/ 9-11]
Ultrasonography:

- Ultrasonic image(sonographic/echographic) is based on mechanical oscillations of the crystal excited by electrical pulses (Piezoelectric effect).

160. X-ray feature (s) of Left Atrial Hypertrophy:

a) Boot shaped heart

b) Widened carina

c) Straightened left border

d) Double atrial shadow

e) Money bag appearance

Correct Answer - B:C:D

Ans. (B) Widened carina (C) Straightened left border (D) Double atrial shadow

[Ref: PJM 20th/228; Dahnert Radiology manual 5th/ 57 5,636-637;Review radiology by Sumer Sethi 6th/76-77,80]

X-ray feature of left Atrial Hypertrophy:

- Double atrial shadow (Double density seen through right upper border)
- Straightened left border
- Left bronchus lifted up with widened carina
- Esophagus curving around the dilated Left atrium.
- Splaying of mainstem bronchi (i.e. Increased carinal angle)
- Small aorta (due to increase of furuard cardiac output)
- Normal/Undersized LV

161. Which of the following is/are common radiation induced cancers:

a) Breast cancer

b) Gonadal cancer

c) Leukaemia

d) Renal cell carcinoma

e) Prostate cancer

Correct Answer - A:B:C

Ans. (A) Breast cancer (B) Gonadal cancer (C) Leukaemia

[Ref: Dahnert Radiology manual 7th/ 574,154,408,313.]

- Most commonly occuring radiation-induced cancer is Leukemia.
- Cancer induction is the largest risk of radiation exposure encountered in radiology.
- Bone marrow, gastrointestinal tract & mucosa, breast tissue, gonads & lymphatic tissue are most susceptible to radiation induced malignancy.
- Cancer risk is higher for children than for adults

162. Neologism is characteristic of :

a) OCD

b) Mania

c) Bipolar disorder

d) Schizophrenia

e) Autism

Correct Answer - D
Ans. D. Schizophrenia
Neologisms:

- Refers to a new word or condensed combination of several words that is not a true word & is not readily understandable, although sometimes the intended meaning or partial meaning may be apparent.
- Feature of schizophrenia(thought & speech disorder)

163. Good prognosis in schizophrenia is/are seen in:

a) Negative symptoms

b) Early onset

c) Acute onset

d) Family history of schizophrenia

e) Insidious onset

Correct Answer - C

Ans. C. Acute onset

[Ref Neeraj Ahuja 7th/62; Kaplan & Sadock Synopsis of psychiatry 1|th/ 318]

Good Prognosis in Schizophrenia:

- Late onset (Onset >35 yr)
- Short duration (<6months)
- Obvious precipitating factors
- Acute onset/ Abrupt onset
- Good premorbid social, sexual and work histories
- Mood disorder symptoms
- (especially depressive disorders)
- Married
- Family history of mood disorders
- Good social support systems

Positive symptoms:

- Presence of precipitating stressor
- Catatonic subtype(paranoid- intermediate prognosis)
- First episode

- Pyknic (fat) body
- Female sex
- Presence of confusion, perplexity or disorientation in the acute phase
- Normal cranial CT
- Outpatient treatment - Proper treatment & good response to treatment

164. True about Alprazolam:

a) Antidepressant

b) Antipsychotic

c) Anti-anxiety

d) Hypnotic

e) Benzodiazepine

Correct Answer - C:D:E

Ans. (C) Anti-anxiety (D) Hypnotic (E) Benzodiazepine

[Ref Neeraj Ahuja 7th/ljL;KDT 7th/465 ;Kaplan & Sailock\ Synopsis of Psychiatry I 1th/949]

Alprazolam:

- Antianxiety Drug
- Hypnotic
- Anticonvulsant

165. Feature (s) of Delusion:

a) Shakeable

b) True belief

c) False belief

d) Bizarre

e) Non-bizarre

Correct Answer - C:D:E
Ans. (C) False belief (D) Bizarre (E) Non-bizarre
[Ref' Neeraj Ahuja 7th/83-84;Kaplan & Sadock\ Synopsis of Psychiatry 1lth/ 202,330-351]
Delusion:

- False unbelievable beliefs (false fixed beliefs not in keeping with the culture).
- Diagnosis of delusional disorder is made when a person exhibit Non Bizarre delusions of at least 1 month duration that cannot be attributed to other psychiatric disorders.

invalid question id