



General Instructions

- (i) **Duration:** The total duration of the examination is 3 hours 30 minutes.
- (ii) **Total Marks:** The complete paper carries a maximum of 720 marks.
- (iii) **Compulsory Questions:** All 180 questions are compulsory.
- (iv) Each question has four options. Only **one** option is correct.
- (v) **Right Answer:** +4 marks.
- (vi) **Incorrect Answer:** -1 marks.
- (vii) **Unanswered/Marked for Review:** 0 marks.

1. Atomic Energy Regulatory Board (AERB) clearance or registration is NOT required for which of the following diagnostic modalities?

- (A) X-ray radiography
- (B) Computed Tomography (CT scan)
- (C) Ultrasonography (USG)
- (D) Portable radiography

2. A 42-year-old female presents with symptomatic uterine fibroids and heavy menstrual bleeding. She is advised a hysterectomy but strongly wishes to preserve her uterus. Which of the following is the most appropriate first-line non-surgical management option?

- (A) Levonorgestrel-releasing Intrauterine System (LNG-IUS)

- (B) Danazol
 - (C) Oral Estrogen
 - (D) Copper Intrauterine Device (Cu-T)
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3. A 48-year-old woman presents with progressive deepening of her voice and persistent hoarseness for several months. She has a heavy smoking history. Laryngoscopy reveals diffuse, symmetric, polypoid, bilateral gelatinous fluid accumulation in the superficial layer of the lamina propria of both true vocal cords. What is the most likely diagnosis?

- (A) Post cricoid malignancy
 - (B) Sulcus vocalis
 - (C) Reinke's edema
 - (D) Laryngeal papillomatosis
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4. A patient presents with unilateral high-pitched tinnitus and progressive sensorineural hearing loss (SNHL). A retrocochlear lesion involving the cerebellopontine angle / posterior aspect of the temporal bone is suspected. What is the gold standard investigation of choice?

- (A) Echocardiography
 - (B) HRCT of the temporal bone
 - (C) Carotid angiography
 - (D) Gadolinium-enhanced MRI of the cerebellopontine angle
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5. A 15-year-old male with Juvenile Nasopharyngeal Angiofibroma (JNA) presents with an expanding nasopharyngeal mass and severe, recurrent, profuse epistaxis. What is the primary pathophysiological basis for the severe, torrential bleeding characteristic of JNA?

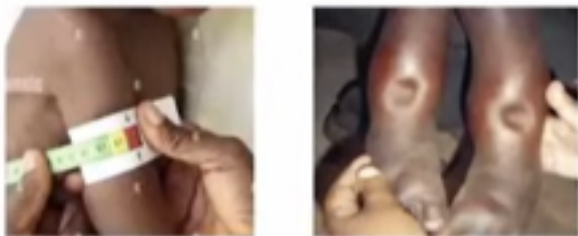
- (A) Vascular invasion into adjacent soft tissues
- (B) Lack of smooth muscle contractile elements (tunica media) in the vessel walls
- (C) Extensive dual arterial blood supply

(D) Markedly increased microvascular endothelial permeability

6. A 25-year-old female presents with bilateral progressive hearing loss. Pure Tone Audiometry (PTA) demonstrates an air-bone gap along with a characteristic notch in bone conduction thresholds at 2000 Hz. What is the most likely diagnosis?

- (A) Carhart's notch – Otosclerosis
 - (B) Mid-frequency (“cookie-bite”) sensorineural hearing loss
 - (C) Boilermaker's notch – Noise-induced hearing loss
 - (D) Presbycusis – High-frequency sensorineural hearing loss
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7. A 2-year-old child weighing 8.2 kg is brought for a routine pediatric evaluation. Examination reveals bilateral pitting pedal edema, and Shakir tape measurement falls in the red zone (< 11.5 cm). What is the definitive diagnosis and appropriate management strategy?

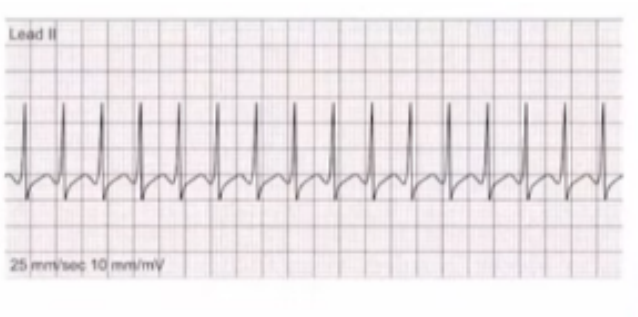


- (A) Moderate acute malnutrition; provide home-based supplementary feeding
 - (B) Severe Acute Malnutrition (SAM); inpatient admission and structured nutritional rehabilitation
 - (C) Isolated protein deficiency; outpatient protein supplementation
 - (D) Underlying nephrotic syndrome; initiate systemic corticosteroids
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8. A young child presents with progressive bowing of both lower extremities. His older brother exhibits identical skeletal deformities, whereas his sister and parents are unaffected. They consume an adequate diet. Investigations show normal serum calcium, normal 25(OH) vitamin D, low serum phosphate, and tubular maximum reabsorption of phosphate per GFR (TmP/GFR) < 80%. What is the most likely diagnosis?

- (A) Vitamin D dependent Rickets
 - (B) X-linked Hypophosphatemic Rickets
 - (C) Fanconi syndrome
 - (D) Type 1 Renal tubular acidosis
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9. A 6-year-old child presents to the emergency department with a heart rate of 260 beats/min. A 12-lead ECG confirms a regular, narrow-complex tachycardia without visible P waves. The patient is hemodynamically stable with normal blood pressure. What is the most appropriate initial pharmacologic therapy?



- (A) Synchronized DC cardioversion
 - (B) Intravenous Amiodarone infusion
 - (C) Rapid intravenous push of Adenosine
 - (D) Oral Propranolol
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10. A 4-year-old asymptomatic child whose growth was normal, was found to have a continuous murmur on complete physical examination. Further investigation showed a small PDA. What should be the next line of action?

- (A) Give Indomethacin
- (B) Reassurance
- (C) Closure only if symptoms
- (D) Treat by surgical closure

11. A 6-year-old child presented with hematuria and edema 2 weeks after an episode of sore throat. Light microscopy shows diffuse infiltration of the glomeruli by neutrophils. What is the most probable diagnosis?

- (A) Rapidly progressive glomerulonephritis
- (B) Minimal change disease
- (C) Membranoproliferative Glomerulonephritis
- (D) Acute Post Streptococcal Glomerulonephritis

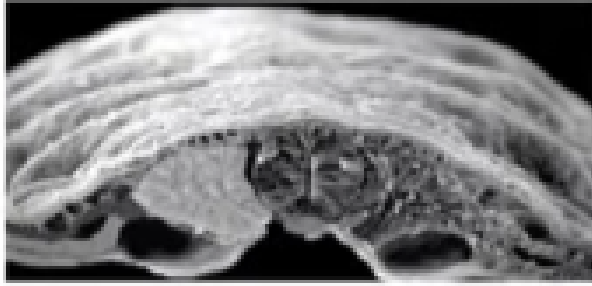
12. A 14-year-old boy developed seizures while on vacation. Serum calcium was 6.5 mg/dL and PTH was 218 pg/ml. What is the diagnosis?

- (A) Pseudo hypoparathyroidism
- (B) Hyperparathyroidism
- (C) Primary hypoparathyroidism
- (D) Pseudopseudo hypoparathyroidism

13. A patient underwent surgery in the posterior triangle of the neck 3 weeks ago. He now presents with difficulty elevating the arm above shoulder level and difficulty shrugging the shoulder. Which of the following nerve is most likely injured?

- (A) Long thoracic nerve
- (B) Suprascapular nerve
- (C) Spinal Accessory nerve
- (D) Dorsal scapular nerve

14. Kidney develops from which of the following parts?



- (A) Paraxial mesoderm
 - (B) Intermediate mesoderm
 - (C) Yolk sac
 - (D) Allantois
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15. A 70-year-old male after his elective surgery of total hip replacement was found to be confused on 2nd post operative day. He was lucid on day 1. During conversations there is loss of attention, and he also tries to remove the I.V. line. Which of the following is the best assessment modality to be used in this patient?

- (A) MMSE
 - (B) CAM
 - (C) Mini-cog
 - (D) PHQ-9
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16. A known case of substance abuse is brought to the emergency with respiratory depression, bradycardia, pinpoint pupil and hypotension. Which of the following drug should be given?

- (A) Naltrexone
 - (B) Buprenorphine
 - (C) Methadone
 - (D) Naloxone
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17. A 24-year-old male patient with bipolar disorder was taking lithium 900 mg/ day and quetiapine 50mg/day. He started having tremors, dysarthria and ataxia. Which of the following is correct statement related to the patient?

- (A) Lithium induced at therapeutic dose
 - (B) Lithium induced toxicity
 - (C) Extrapyrarnidal symptoms
 - (D) Essential tremors
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18. A 25-year-old male is presents with long standing pattern of social withdrawal. He has odd and eccentric behavior and hold some peculiar beliefs. Which of the following personality traits are seen here?

- (A) Schizotypal
 - (B) Anxious/avoidant
 - (C) Schizoid
 - (D) Antisocial
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19. An adult male patient suffered head injury and during recovery, the patient was drinking 8liters of water per day, with intense thirst and make large dilute urine. There is no diabetes mellitus. Which hypothalamic nucleus and descending fibers are damaged?

- (A) Arcuate and ventero-medial nucleus
 - (B) Suprachiasmatic and supraoptic nucleus
 - (C) Posterior and dorsomedial nucleus
 - (D) Paraventricular and supraoptic nucleus
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20. An adult women is investigated for mild weakness, fatigue and occasional carpopedal spasm. Laboratory studies reveals, hypokalemia, metabolic alkalosis and high calcium in the urine. In which part of the nephron the defective channel is present?

- (A) Thick Ascending Limb of LOH
 - (B) Thin descending limb of LOH
 - (C) DCT
 - (D) PCT
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21. A 28-year-old man presents with a painless testicular mass. On gross examination, the tumor is well-circumscribed, homogeneous, and gray-white, with a soft, fleshy appearance and minimal hemorrhage or necrosis. Histological examination shows sheets and nests of uniform polygonal cells with abundant clear cytoplasm containing glycogen and prominent nucleoli, separated by delicate fibrous septa infiltrated by lymphocytes. Immunohistochemistry shows tumor cells that are positive for CD117 (c-KIT) and OCT3/4. What is the most likely diagnosis?

- (A) Seminoma
 - (B) Embryonal carcinoma
 - (C) Yolk sac tumor
 - (D) Choriocarcinoma
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22. A 65-year-old chronic smoker presents with cough, weight loss, and progressive dyspnea. Chest imaging reveals a centrally located hilar lung mass. Histological examination shows sheets of small round blue cells with scant cytoplasm, hyperchromatic nuclei, a high nuclear-to-cytoplasmic ratio, nuclear molding, frequent mitotic figures, and areas of necrosis. Immunohistochemistry shows tumor cells that are positive for synaptophysin. What is the most likely diagnosis?

- (A) Small cell carcinoma of the lung
 - (B) Squamous cell carcinoma of the lung
 - (C) Lung adenocarcinoma
 - (D) Large cell carcinoma
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23. A 45-year-old woman presents with a rapidly enlarging breast mass that is approximately twice the size of the opposite breast and has an irregular, nodular surface on gross examination. Histology shows a leaf-like pattern with increased stromal cellularity and stromal atypia. However, the mitotic index is low, with no significant stromal overgrowth or tumor necrosis. Which of the following is the most likely diagnosis?

- (A) Fibroadenoma
 - (B) Phyllodes tumor
 - (C) Invasive ductal carcinoma
 - (D) Fibrocystic change
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24. Calculate the GCS score of the patient speaking inappropriate words, doesn't open eyes to painful stimulus and there is withdrawal to pain:

- (A) 7
 - (B) 8
 - (C) 9
 - (D) 10
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25. An 65 old age man + Chronic Heart failure (HFrEF) + symptoms despite taking medication + now added Vericiguat + Mechanism by which Vericiguat acts?

- (A) PDE 5 inhibitor leading to raised cGMP
 - (B) Activate soluble guanylyl cyclase leading to raised cGMP
 - (C) Neprilysin inhibitor
 - (D) Block Angiotensin (AT₂) receptors
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26. A tumor cell does not express MHC class I molecules. Despite the presence of tumor-associated antigens, cytotoxic T lymphocytes are unable to recognize the tumor cell. What is the most likely mechanism by which the tumor escapes immune surveillance?

- (A) Production of antibodies against lymphocytes
 - (B) Excessive production of alternative receptor-mediated signals
 - (C) Failure of antigen presentation through MHC class I
 - (D) Increased production of complement proteins
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27. A 6-year-old male with history of anal sexual assault is brought to hospital. Child presents with pain on defecation. Anal area is found normal on examination. The most appropriate method of examining passive agent in anal intercourse case is

- (A) Lithotomy position
 - (B) Proctoscopic procedure
 - (C) Knee-chest position
 - (D) Examination of buttocks to look for relaxation of anus
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28. In Cholera diarrhoea, there is increased activity of which channel is primarily responsible for the increased watery intestinal secretion?

- (A) Sodium (Na^+)
 - (B) Chloride (Cl^-)
 - (C) Potassium (K^+)
 - (D) Calcium (Ca^{2+})
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29. A patient with overactive bladder is prescribed Merabagron suspended release tablet 25 mg OD. What is the mechanism of action of this drug?

- (A) M3 receptor agonist
- (B) M3 receptor antagonist
- (C) Beta 3 receptor agonist
- (D) Beta 3 receptor antagonist

30. A patient suffering from Giardia is resistant to Metronidazole therapy. What's the drug which can be used?

- (A) Nitfurimox
- (B) Nitazoxanide
- (C) Miltefosine
- (D) Paramomycin

31. Patient got 95% vitiligo he wants to have same colour through-out the skin. What is best management:

- (A) UVB therapy
- (B) Mono benzyl ether of hydroquinone
- (C) Oral Steroids
- (D) Hydroquinone

32. A patient with sepsis develops fever, a rapidly spreading purpuric rash, profound hypotension, hyponatremia, hyperkalemia and shock. Imaging demonstrates bilateral adrenal hemorrhage. What is the most likely diagnosis?

- (A) Waterhouse–Friderichsen syndrome
- (B) Cushing syndrome
- (C) Addisons disease
- (D) Primary hyperaldosteronism

33. Several students from the same school develop severe abdominal cramps and bloody diarrhea. Shiga toxin-producing Escherichia coli (STEC/EHEC) is suspected. Which reference

method is considered the gold standard for diagnosis?

- (A) Voges–Proskauer test
 - (B) Sorbitol MacConkey agar
 - (C) Shiga-toxin ELISA
 - (D) Vero-cell culture
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34. A patient presented with muscle cramps. ECG showed ST depression and QT prolongation. Serum Potassium 2.8 meq/L. IV Potassium chloride was given. But there was no improvement in serum potassium over time. What can explain this?

- (A) Hypocalcemia
 - (B) Hypomagnesemia
 - (C) Hyponatremia
 - (D) Hypermagnesemia
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35. A 40 yr old hypertensive was found to have hypokalemia and met alkalosis. He was evaluated for primary hyperaldosteronism and was found to have high aldosterone and low Renin. The aldosterone renin ratio is >210. Saline loading test positive. Which of the following in further management of this patient

- (A) CT abdomen with adrenal biopsy
 - (B) Adrenal Vein sampling
 - (C) MRI abdomen
 - (D) MIBG
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