

INI CET 2021 Answer Key PDF

- Q1. (b) High-flow nasal cannula oxygen therapy** .Since the SpO₂ remains suboptimal despite 10 L/min oxygen via a reservoir mask, transitioning to high-flow nasal cannula can provide higher FiO₂ and better oxygen delivery.
- Q2. (c) High inguinal orchiectomy** .A markedly elevated AFP and firm testicular mass is indicative of a malignant germ cell tumor. FNAC is contraindicated as it may lead to tumor seeding; hence, high inguinal orchiectomy is the appropriate next step.
- Q3. (c) Postoperative nausea and vomiting** .Postoperative nausea and vomiting are the most common causes of unexpected hospital admission following daycare surgery due to prolonged recovery and inability to tolerate oral intake.
- Q4. (c) 2, 3, 4, 5, 6** .The anterior division of the internal iliac artery gives rise to the inferior gluteal, superior vesical, middle rectal, inferior vesical, and vaginal arteries.
- Q5. (d) Wait for the bladder to fill and urge to urinate** .Blood at the meatus indicates a potential urethral injury. Immediate catheterization should be avoided to prevent further injury; a suprapubic approach or waiting for bladder filling is recommended.
- Q6. (d) 50 Hz** .Tetanic stimulation at 50 Hz is used to assess neuromuscular block and recovery, as it is the standard frequency to test for sustained muscle contraction.
- Q7. (c) 10 L/min** .Conventional oxygen masks typically allow a flow rate of up to 10 L/min. Higher flow rates may require specialized high-flow systems.
- Q8. (a) Phycomycosis** .Phycomycosis (mucormycosis) is characterized by PAS-positive and silver stain-positive fungal elements, often seen in immunocompromised or trauma patients.
- Q9. (c) 18** .The 18-gauge cannula is commonly used for intravenous access in trauma and surgical patients as it provides a good balance between flow rate and ease of insertion.
- Q10. (a) MRCP** .MRCP is the preferred non-invasive imaging technique to assess biliary obstruction or choledocholithiasis in the setting of elevated CBD diameter and liver enzymes.
- Q11. (d) Positive fungal culture** .Positive fungal culture is not considered a major diagnostic criterion for allergic fungal sinusitis; rather, it is based on clinical, radiological, and histopathological findings.
- Q12. (b) Knockdown** .RNA interference (RNAi) leads to the degradation of specific mRNA molecules, resulting in the reduction of gene expression, hence termed as "knockdown."
- Q13. (a) Inverted papilloma** .Inverted papilloma often presents as unilateral nasal obstruction and occasional epistaxis. It has a characteristic cauliflower-like appearance and is considered a locally aggressive tumor.
- Q14. (c) Methane** .Methane does not inhibit cytochrome oxidase. Cyanide, carbon monoxide, and hydrogen sulfide inhibit the enzyme, blocking cellular respiration.
- Q15. (b) Repair with great saphenous vein graft** .For large arterial tears, autologous vein grafts such as the great saphenous vein are preferred due to their better compatibility and lower infection risk.
- Q16. (d) Hormone-sensitive lipase** .Insulin inhibits hormone-sensitive lipase, which is responsible for the breakdown of stored triglycerides into free fatty acids in adipose tissue.

- Q17. (c) 3, 2, 4, 1** .Iron toxicity typically presents initially with gastrointestinal bleeding, followed by an asymptomatic phase, then liver failure and hypoglycemia, and finally, pyloric stricture as a late complication.
- Q18. (b) Glucose** .Red blood cells (RBCs) lack mitochondria, so they rely exclusively on glucose for energy production even during fasting.
- Q19. (b) Chest tube insertion** .In cases of suspected diaphragmatic rupture or thoracic injury, chest tube insertion may worsen the condition and is contraindicated.
- Q20. (c) Hog tie** .The "hog tie" position involves binding the hands and feet behind the back, which can cause positional asphyxia if left in this position for an extended period.
- Q21. (a) 1 only** .Beta glucocerebrosidase is associated with Gaucher disease, not Von Gierke disease, making this pair incorrect.
- Q22. (c) 103 ml/min** .The maximum flow rate for a large-bore IV cannula, such as an 18-gauge, is approximately 103 ml/min, making it suitable for rapid fluid resuscitation.
- Q23. (a) Posterior urethral valve** .Posterior urethral valves are the most common cause of bladder outlet obstruction in male infants and young boys.
- Q24. (a) Proteins** .Protein metabolism and assimilation require the highest energy compared to carbohydrates and fats due to the complex processes of deamination and urea formation.
- Q25. (d) 1, 2, 3 and 4 only** .All the statements are correct: Colon cancer shows anatomical variation, can be hereditary, metformin may reduce risk, and liver metastasis is common.
- Q26. (b) A-4, B-1, C-2, D-3** .The medial end of the clavicle fuses at 21-25 years, the sacrum fuses as a single bone by 50 years, the crista scapulae at 45 years, and the lambdoid suture around 21-25 years.
- Q27. (d) To confirm definitive diagnosis immediately in all cases** .While frozen section can assess lymph node involvement, margin status, and metastasis, it is not definitive for diagnosing all cases as some tumor types may require more detailed pathological analysis.
- Q28. (a) Ion-exchange chromatography** .Ion-exchange chromatography is considered the gold standard for HbA1c detection as it provides accurate quantification and is recommended by most guidelines.
- Q29. (a) 1, 2, 3, 4** .Reynold's pentad consists of fever, jaundice, hypotension, altered sensorium, and abdominal pain, indicating severe cholangitis and sepsis.
- Q30. (a) Scurvy** .Scurvy is caused by vitamin C deficiency, which is crucial for collagen synthesis and maturation.
- Q31. (b) Closed** .A closed drain system, like a Jackson-Pratt or Hemovac, is commonly used after mastectomy to prevent seroma and hematoma formation.
- Q32. (c) 1, 3, 4** .TACE is used for multinodular HCC, the incidence of HCC is rising globally, and NASH/NAFLD are established risk factors. Lenvatinib is not used specifically for lesions less than 3 cm.
- Q33. (a) Magnetic resonance imaging** .MRI is highly sensitive for detecting biliary obstruction and can provide detailed visualization of the biliary anatomy without invasive procedures.

Q34. (d) RTPCR followed by real-time PCR .Quantitative analysis of RNA is best achieved by using RT-PCR followed by real-time PCR to accurately measure gene expression.

Q35. (d) Incontinence during intercourse .Incontinence during intercourse is not typically classified as a lower urinary tract symptom.

Q36. (c) Only 5 .A male pelvis is characterized by a large, robust acetabulum, which is designed to support a heavier body structure and withstand more stress.

Q37. (b) 1 and 2 .Mitochondrial DNA has a higher mutation rate due to its proximity to reactive oxygen species and is a double-stranded circular DNA with approximately 16,000 base pairs.

Q38. (b) Pyruvate dehydrogenase .Thiamine is a cofactor for pyruvate dehydrogenase, and its deficiency leads to the accumulation of pyruvate, which is converted to lactate, causing lactic acidosis.

Q39. (d) Oculomotor nerve palsy .Oculomotor nerve palsy results in ptosis, pupil dilation, and eye deviation due to loss of medial rectus, superior rectus, inferior rectus, and inferior oblique muscle function.

Q40. (a) 1-e, 2-c, 3-b, 4-a, 5-d .The given pairs correctly match the conditions with specific fingerprint changes, such as radiation causing ridge atrophy and scleroderma leading to altered ridges.

Q41. (c) Pleomorphic adenoma .Pleomorphic adenoma is the most common benign tumor of the lacrimal gland, typically presenting as a painless, slowly growing mass.

Q42. (a) Tzanck cells .Tzanck cells are multinucleated giant cells seen in conditions like herpes simplex and varicella-zoster infections.

Q43. (b) Susceptibility weighted image .Susceptibility-weighted imaging is a type of MRI sequence that highlights differences in magnetic susceptibility, making it useful for detecting microbleeds, iron deposition, and vascular abnormalities.

Q44. (c) Gottron's papules .Gottron's papules, which are raised erythematous lesions over knuckles, are pathognomonic for juvenile dermatomyositis.

Q45. (c) Borderline leprosy .Borderline leprosy presents with well-demarcated, raised, and hypopigmented plaques, often with peripheral nerve involvement and sensory loss.

Q46. (c) Follicular conjunctivitis .Follicular conjunctivitis is the most common ocular manifestation of COVID-19, presenting as a mild, self-limiting condition with redness and irritation.

Q47. (a) Amitriptyline .Amitriptyline, a tricyclic antidepressant, has anticholinergic effects that can exacerbate angle-closure glaucoma by increasing intraocular pressure.

Q48. (a) Bullous pemphigoid .Bullous pemphigoid presents as tense, subepidermal bullae that can become flaccid after rupture. It is an autoimmune blistering disorder commonly seen in elderly patients.

Q49. (a) Optic chiasma .Bitemporal hemianopia is typically caused by a lesion at the optic chiasma, commonly due to a pituitary adenoma compressing the crossing nasal fibers.

Q50. (d) Post kala-azar dermal leishmaniasis .Post kala-azar dermal leishmaniasis presents as hypopigmented macules or nodules and is a common sequela of visceral leishmaniasis, particularly in endemic regions like Bihar, India.

Q51. (d) Indeterminate leprosy has more remission than tuberculoid .Indeterminate leprosy has a higher chance of spontaneous remission as it represents an early, less defined form of the disease.

Q52. (c) Uterocervical prolapse .Uterocervical prolapse presents as a protrusion of the cervix and uterus through the vaginal introitus, especially in multiparous women.

Q53. (c) A-3, B-4, C-2, D-1 .The correct matches align with the clinical presentation and stress-related factors in healthcare professionals.

Q54. (b) Follow up after 6 weeks .Simple ovarian cysts less than 7 cm in premenopausal women are typically followed up with repeat imaging to monitor for resolution.

Q55. (d) A-2, B-4, C-1, D-3 .The correct matches correspond to clinical psychiatric terms and their associated conditions.

Q56. (a) Inhibin B .The quadruple screen includes AFP, hCG, unconjugated estriol (E3), and Inhibin A. Inhibin B is not part of the test.

Q57. (a) Chlamydia trachomatis .Chlamydia trachomatis can cause neonatal conjunctivitis and pneumonia, typically 1-2 weeks after birth.

Q58. (d) Tissue crushed between weapon and underlying bone .A deep lacerated wound typically results from blunt force trauma causing the skin to be crushed against a hard surface like bone.

Q59. (d) 95% ethanol .Pap smears are fixed using 95% ethanol to preserve the cellular structure for cytological examination.

Q60. (c) Depression is a common comorbidity .OCD is often associated with major depressive disorder, occurring in approximately 60% of cases.

Q61. (c) 1, 2 only .Durham's rule and Curren's rule are recognized legal tests for insanity, assessing the defendant's mental state during the crime.

Q62. (a) Closed reduction and assessment of hip stability .Closed reduction is the first step in managing hip dislocations to restore joint congruity and prevent avascular necrosis.

Q63. (b) 4% .According to WHO criteria, a normal sperm morphology of $\geq 4\%$ is considered adequate for fertility.

Q64. (b) 1 and 4 .Tibia and phalanges are the most commonly involved bones in open fractures, and early debridement is essential to reduce infection risk.

Q65. (c) Positive predictive value depends on prevalence of disease .PPV is directly proportional to disease prevalence; as prevalence increases, PPV increases.

Q66. (a) A-1, B-3, C-2, D-4 .Correct fracture-site matches: Jones (5th metatarsal), Bennett's (1st metacarpal), March (2nd metatarsal), and Boxer (5th metacarpal).

Q67. (a) Flying missiles .Flying debris or shrapnel can cause multiple puncture wounds, as seen in blast injuries. These projectiles are known as secondary blast injuries.

Q68. (d) Male pseudohermaphroditism .5 alpha-reductase deficiency results in underdevelopment of male genitalia despite a male genetic makeup (XY), leading to ambiguous genitalia or feminization.

Q69. (c) 3, 2, 6, 5, 4 .The Thomas test sequence involves identifying lordosis, hip flexion, overcorrecting the normal side, ensuring tuberosity contact, and measuring deformity.

Q70. (c) Twin to twin transfusion syndrome .Twin to twin transfusion syndrome (TTTS) occurs in monochorionic twins due to vascular connections in the shared placenta, leading to unequal blood distribution.

Q71. (b) Alendronate .A T-score of -2.5 is indicative of osteoporosis. Alendronate, a bisphosphonate, is recommended to prevent further bone loss and reduce the risk of fractures.

Q72. (c) 1-C, 2-D, 3-B, 4-A .Secondary amenorrhea lab matches: Sheehan's (Low FSH/LH/E2), Premature failure (High FSH/LH), PCOS (High LH), and Asherman's (Normal hormones).

Q73. (c) Measure anterior compartment pressure .The signs are indicative of compartment syndrome, where increased pressure in the compartment compromises blood flow. Measurement of compartment pressure is essential for diagnosis.

Q74. (c) 1-a, 2-d, 3-b, 4-c .Oncology management: Osteosarcoma (Wide excision), simple cyst (steroids), GCT (Curettage), and Osteoid osteoma (Radiofrequency ablation).

Q75. (d) 2, 3 .Laparoscopy and HSG (Hysterosalpingography) are commonly used to diagnose congenital uterine anomalies, including a unicornuate uterus.

Q76. (b) A-4, B-1, C-3, D-2 .These STI kits are color-coded: lower abdominal pain (yellow), urethral discharge (grey), non-herpetic genital ulcer (green), and vaginal discharge (white).

Q77. (c) Start ATT and then ART after 2 weeks .Tuberculosis (TB) should be treated first to reduce the risk of immune reconstitution inflammatory syndrome (IRIS), followed by ART initiation after 2 weeks.

Q78. (b) E7 .HPV E7 protein binds and inactivates the retinoblastoma (RB) protein, leading to unregulated cell cycle progression.

Q79. (d) 2 > 1 > 4 > 3 .Pneumonia is the leading cause of death in this age group, followed by diarrhea, injuries, and malaria.

Q80. (a) Test for ANCA .ANCA (Anti-Neutrophil Cytoplasmic Antibody) is a marker for granulomatosis with polyangiitis (Wegener's), which presents with sinus, lung, and renal involvement.

Q81. (a) > 92 mg/dL .According to IADPSG, the fasting blood glucose cut-off for diagnosing gestational diabetes is ≥ 92 mg/dL.

Q82. (c) 1, 2, 4, 5 .The early phase of type 1 hypersensitivity involves the release of histamine, prostaglandins, leukotrienes, and mast cell degranulation.

Q83. (c) 2 and 3 correct .NOACs are contraindicated in patients with prosthetic valves. Anticoagulants are recommended in patients with AF who have had an ischemic stroke.

Q84. (d) Endometrial sampling .In post-menopausal women with bleeding, endometrial sampling is the investigation of choice to rule out endometrial carcinoma or hyperplasia.

Q85. (a) Onset of symptoms .In the natural history of disease, point C typically represents the clinical stage where symptoms manifest and the patient seeks medical attention.

Q86. (c) Focal epilepsy .Neuromyelitis optica spectrum disorder primarily involves optic neuritis, area postrema syndrome, and acute myelitis. Epilepsy is not a criterion.

Q87. (b) Manual perineal support and warm compresses .WHO recommends the use of manual perineal support and warm compresses to reduce perineal trauma during the second stage of labor.

Q88. (d) Huntington's chorea .Huntington's chorea is primarily a hyperkinetic disorder characterized by choreiform movements, not hypokinesia.

Q89. (a) Serum FSH levels .Elevated FSH suggests a testicular cause of azoospermia, while normal FSH indicates obstructive causes.

Q90. (b) Liddle syndrome .Liddle syndrome presents with hypokalemia, metabolic alkalosis, and hypertension due to sodium reabsorption and potassium excretion.

Q91. (d) Diphtheria, Tetanus, HBV, Haemophilus influenza B, Pertussis .The pentavalent vaccine is a combination vaccine that protects against these five specific diseases.

Q92. (d) Clot activator .Clot activator tubes are typically red or gold-topped and are used for serum collection by promoting blood clotting.

Q93. (c) Hypoventilation .Hypoventilation leads to hypoxemia with a normal A-a gradient because the alveoli are intact, but ventilation is inadequate.

Q94. (b) Vitamin B6 .Sideroblastic anemia is often due to a deficiency in pyridoxine (Vitamin B6), which is a cofactor for heme synthesis.

Q95. (b) Hamartomatous polyp .Hamartomatous polyps are common in juvenile polyposis syndrome and can present with intussusception, especially in young patients.

Q96. (a) Equal to 0.6 .In a homogeneous sample, the correlation coefficient remains constant across groups; thus, the overall correlation coefficient will be the same.

Q97. (c) 4 doses of 6 mg given 12 hours apart .The recommended dose for fetal lung maturity is 6 mg of dexamethasone administered every 12 hours for a total of 4 doses.

Q98. (a) Rotavirus vaccine .Rotavirus vaccination has been associated with a small increased risk of intussusception, especially within the first week after the first dose.

Q99. (d) Levonorgestrel 1.5 mg .Levonorgestrel 1.5 mg is widely used as a single-dose emergency contraceptive in India, effective within 72 hours of unprotected intercourse.

Q100. (a) Pemphigus vulgaris .Pemphigus vulgaris is an autoimmune blistering disorder characterized by flaccid bullae and intraepidermal acantholysis.

Q101. (a) Death rate of a population adjusted to a standard age distribution .Standardized age mortality ratio accounts for differences in age distribution across populations by adjusting death rates.

Q102. (b) Sudden cardiac death due to arrhythmia .Sudden cardiac death in young athletes is often due to fatal arrhythmias, even in structurally normal hearts.

Q103. (c) Generalizability .External validity refers to how well the results of a test can be generalized to other settings or populations.

Q104. (a) Mullerian agenesis .Mullerian agenesis (MRKH syndrome) presents with normal secondary sexual characteristics and absent uterus/vagina.

Q105. (b) 1 & 2 are correct .G6PD deficiency leads to decreased NADPH and reduced glutathione, increasing oxidative stress in RBCs.

Q106. (d) Secular .A secular trend indicates a long-term increase or decrease in disease incidence over years.

Q107. (b) 1-C, 2-A, 3-B, 4-D .Matches: Yolk sac (AFP), Dysgerminoma (LDH), Choriocarcinoma (hCG), and Epithelial cell tumor (CA-125).

Q108. (b) A .SARS-CoV-2 primarily affects the alveolar epithelium (layer A), causing damage and inflammation leading to ARDS.

Q109. (d) Bone marrow biopsy .Bone marrow biopsy confirms leukemia diagnosis and extent of infiltration in cases with chloroma (granulocytic sarcoma).

Q110. (b) Early discharge, skin-to-skin contact, exclusive breastfeeding .Kangaroo mother care promotes thermal regulation, bonding, and nutrition via these three components.

Q111. (b) Cohort study .Cohort studies prospectively follow exposed and unexposed groups over time to establish a temporal relationship.

Q112. (a) Aschoff body; Rheumatic heart disease .Aschoff bodies are pathognomonic granulomatous lesions seen in rheumatic heart disease affecting mitral valve.

Q113. (a) 1 > 2 > 4 > 3 .The order from maximum to least: Prematurity/low birth weight, birth injuries/asphyxia, sepsis, and congenital anomalies.

Q114. (c) Non-Hodgkin lymphoma .Non-Hodgkin lymphoma can cause systemic and CNS symptoms including scrotal swelling and neurological signs.

Q115. (c) Randomization .Meta-analysis pools data from selected studies but does not involve randomization of participants.

Q116. (a) Dark areas represent necrosis, white areas viable liver .Necrotic areas appear dark due to loss of viable tissue; white areas represent surviving hepatocytes in a cirrhotic liver.

Q117. (b) Aplastic anemia .Aplastic anemia features pancytopenia with hypocellular marrow, typically without splenomegaly.

Q118. (a) Increased indirect bilirubin, increased urobilinogen, absent bilirubin in urine .Physiological jaundice shows unconjugated hyperbilirubinemia with normal urobilinogen and no bilirubinuria.

Q119. (b) Ferritin translation decreased by binding IRP to IRE .Iron regulatory proteins bind IREs on ferritin mRNA, inhibiting translation and decreasing ferritin synthesis during iron deficiency.

Q120. (b) 2 .The most common GBS variant (AIDP) involves demyelination of peripheral nerves affecting the myelin sheath (area 2).

Q121. (c) Metolazone .Metolazone is effective even in advanced renal failure (eGFR <30), unlike other thiazides which lose efficacy at low GFR.

Q122. (a) Liraglutide .Liraglutide, a GLP-1 receptor agonist, is FDA-approved for long-term obesity management by reducing appetite.

Q123. (b) Treatment of Lennox-Gastaut syndrome .Topiramate is an antiepileptic used in Lennox-Gastaut syndrome and also in migraine prophylaxis.

Q124. (b) Pulmonary hypertension .Inhaled nitric oxide acts as a selective pulmonary vasodilator, approved for pulmonary hypertension management.

Q125. (a) Hypertonic saline .Hypertonic saline is not related to paradoxical bronchoconstriction caused by ipratropium; preservatives and receptor blockade contribute.

Q126. (c) 13.8 hours .Half-life ($t_{1/2}$) is calculated as 0.693 divided by the elimination rate constant (0.05), which equals 13.86 hours.

Q127. (a) Safety in pregnancy .FDA pregnancy categories classify drugs based on safety during pregnancy from A to X.

Q128. (a) 2-10 mcg/kg/min .Dopamine stimulates beta-1 receptors primarily at doses of 2-10 mcg/kg/min, increasing heart rate.

Q129. (a) Ritonavir .Ritonavir inhibits CYP3A4, the enzyme responsible for metabolizing saquinavir, thereby increasing its bioavailability.

Q130. (a) Inhibition of calcineurin .Cyclosporine inhibits calcineurin, preventing T-cell activation by blocking IL-2 transcription.

Q131. (d) Renal sympathetic system fibers .Renal autoregulation primarily involves intrinsic mechanisms; sympathetic fibers are extrinsic regulators.

Q132. (d) Haemophilus produces beta lactamase, hence resistant to ampicillin .Beta-lactamase production by Haemophilus influenzae makes it resistant to ampicillin.

Q133. (b) Non-cardiovascular death is more in HFrEF-30-40% compared to HFpEF-15% .This statement is incorrect; non-cardiovascular deaths tend to be higher in HFpEF than HFrEF.

Q134. (a) Zona occludens .Zona occludens (tight junctions) maintain the epithelial barrier; their damage leads to secretory rice-water stools.

Q135. (a) Varenicline .Varenicline is a partial nicotinic receptor agonist and is considered the most effective pharmacological aid for smoking cessation.

Q136. (d) 1, 3, 4 and 5 only .Diagnosis of Graves' disease involves thyroid scan, thyroid function tests, ultrasound, and anti-thyroid antibodies.

Q137. (b) Vilazodone .Vilazodone is a novel antidepressant acting as an SSRI and 5-HT_{1A} receptor partial agonist.

Q138. (c) Levopropoxyphene .Levopropoxyphene is an opioid derivative used as a centrally acting cough suppressant.

Q139. (c) Length-tension relationship .The Frank-Starling mechanism explains stroke volume increase as a function of cardiac muscle fiber length.

Q140. (c) Remote infection of hepatitis B .Presence of IgG anti-HBc without IgM and negative HBsAg indicates a past or resolved infection.

Q141. (c) K⁺ .The potassium ion in the thick ascending limb is essential for the function of the Na-K-2Cl co-transporter for divalent ion resorption.

- Q142. (d) Meissner's corpuscle** .Meissner's corpuscles are rapidly adapting receptors sensitive to light touch and tactile discrimination.
- Q143. (b) Scalp EEG may be helpful in localizing frontal lobe epilepsy** .This is false as frontal lobe seizures are often poorly localized on scalp EEG due to deep anatomy.
- Q144. (a) Red nucleus** .The red nucleus is involved in motor coordination and serves as a relay for rubrospinal tract nerve supply.
- Q145. (b) 1-b, 2-a, 3-d, 4-c** .Correct milestones: Transfer objects (6-7m), Social smile (1-2m), Pincer grasp (9-12m), Walks (12-15m).
- Q146. (b) C wave** .The C wave corresponds to bulging of the tricuspid valve into the right atrium during isovolumetric contraction.
- Q147. (b) 2** .Respiratory distress syndrome is caused by deficiency or damage to alveolar type II cells (structure 2).
- Q148. (a) Streptococcus agalactiae** .Group B streptococcus is the most common cause of neonatal meningitis.
- Q149. (c) -60 mV** .Using the Nernst equation, the equilibrium potential for chloride at these concentrations is approximately -60 mV.
- Q150. (c) Actinomyces israelii** .Actinomycosis causes chronic granulomatous infection with sulfur (yellow) granules and gram-positive filaments.
- Q151. (c) Sevoflurane** .Sevoflurane has a rapid onset and low airway irritation, making it ideal for induction and intubation.
- Q152. (a) Increased HbF** .Fetal hemoglobin (HbF) has a higher oxygen affinity, causing a left shift of the dissociation curve.
- Q153. (a) Local anesthesia toxicity** .20% intralipid is used as a lipid emulsion therapy specifically to treat local anesthetic systemic toxicity.
- Q154. (a) Parietal lobe** .The parietal lobe integrates sensory and spatial information critical for accurate hand-eye coordination.
- Q155. (a) Fasciola hepatica found in intrahepatic biliary radicles** .Fasciola hepatica adult flukes reside within the intrahepatic biliary ducts.
- Q156. (c) Salivary gland** .Salivary glands do not express the sodium iodide symporter; thyroid, placenta, and pituitary do.
- Q157. (a) rk 39 antigen test, Leishmaniasis** .rk39 is a highly sensitive and specific test for diagnosing visceral leishmaniasis.
- Q158. (a) Diffuse axonal injury** .A severe clinical GCS score with a normal initial CT scan is highly suggestive of diffuse axonal injury.
- Q159. (d) Sestamibi scan** .Sestamibi scan is the gold standard imaging modality for localizing parathyroid adenomas.
- Q160. (b) CORADS-5 is typical of COVID-19** .CORADS-5 indicates very high suspicion of COVID-19 based on specific CT imaging patterns.

Q161. (c) HTLV .HTLV causes oncogenesis via viral proteins but does not typically integrate into the host genome like HPV or HBV.

Q162. (a) S phase .The S phase (DNA synthesis) is the most radioresistant phase of the cell cycle.

Q163. (b) Crystal violet, Gram's iodine, Acetone, Safranin .This is the standard sequence for Gram staining used to identify pathogens like *C. diphtheriae*.

Q164. (c) C .Injury at site C causes the inability to flex DIP joints and results in a positive Froment's sign.

Q165. (a) Ulnar nerve .Ulnar nerve injury causes a characteristic claw hand deformity and impaired finger flexion.

Q166. (c) 3 .Area 3 represents the third pharyngeal pouch, which is defective in DiGeorge syndrome.

Q167. (c) Heterophile antibodies .The Paul-Bunnell test principle involves the detection of heterophile antibodies seen in EBV infection.

Q168. (a) Caudate lobe of liver .The caudate lobe of the liver forms the superior border of the lesser sac in the abdomen.

Q169. (c) Cladosporium .Cladosporium is a dematiaceous fungus characterized by its dark, pigmented hyphae.

Q170. (b) 2 .Lurching gait and foot drop are indicative of injury to structure 2, the common peroneal nerve.

Q171. (b) Metronidazole .Metronidazole is the treatment of choice for bacterial vaginosis and anaerobic vaginal infections.

Q172. (c) Anterior nucleus .Fibers from the mammillary bodies terminate in the anterior nucleus of the thalamus.

Q173. (c) Vulval cancer .Ulcerated or mass-like lesions on the vulva in older patients are highly suggestive of vulval cancer.

Q174. (a) Deep nuclei of cerebellum .Cerebellar Purkinje cells are inhibitory neurons that project to the deep cerebellar nuclei.

Q175. (b) Herpes simplex virus .Herpes simplex virus replication is characterized by nuclear replication and budding.

Q176. (a) 1 .Bone part 1 (coracoid process) is palpable in the infraclavicular fossa region.

Q177. (c) 1 .The Lipid A component (part 1) of lipopolysaccharide is responsible for triggering endotoxic shock.

Q178. (b) 4-lamina propria .This is an incorrect match; the lamina propria is connective tissue located beneath the epithelium.

Q179. (a) Arterial puncture .Arterial puncture is the most common complication during central line insertion in this region.

Q180. (d) Acute angle branching septate hyphae, Aspergillus .Aspergillus species are identified by septate hyphae branching at acute (45-degree) angles.

Q181. (a) Lightning strike .Ferning or Lichtenberg skin markings are pathognomonic clinical signs of a lightning strike.

Q182. (c) FEV1 <0.85 and FEV1/FVC <0.7 .An FEV1/FVC ratio below 0.7 is diagnostic of obstructive airway disease requiring further evaluation.

Q183. (d) Prevotella .Prevotella species are obligate anaerobes commonly found in the normal oral and gut flora.

Q184. (c) Fasting blood sugar >126 mg/dl and 2-hour post glucose load .These are the standard initial tests for screening and diagnosing diabetes at the primary care level.

Q185. (c) Michaelis-Menten kinetics .The hyperbolic velocity curve is characteristic of enzymes that follow Michaelis-Menten kinetics.

Q186. (a) Calcium oxalate .Calcium oxalate crystals are envelope-shaped and are a common finding in urine sediments.

Q187. (a) Presynaptic inhibitor of GABA and glycine release .Tetanospasmin causes spastic paralysis by blocking the release of inhibitory neurotransmitters.

Q188. (b) Only 3 .Ketone bodies (test 3) are found in urine during states of prolonged starvation.

Q189. (b) Schwannoma .Vestibular schwannoma is a benign tumor that typically presents with hearing loss and specific histology.

Q190. (a) 1 .Bone conduction hearing devices (Type 1) are used to bypass external auditory canal atresia.

Q191. (d) Ascaris lumbricoides .Ascaris lumbricoides is a large roundworm often found in stool or tissue samples.

Q192. (b) Ultrasonography and MRI .Ultrasound and MRI are the primary modalities used to diagnose and assess placenta accreta.

Q193. (d) 25 per second .The tetanizing frequency calculated from the provided twitch durations is approximately 25 Hz.

Q194. (b) Pregabalin, Carbamazepine, Gabapentin .These specific anti-epileptic drugs are effective in managing various types of neuropathic pain.

Q195. (a) Hess chart .The Hess chart is used to assess ocular motility and identify extraocular muscle imbalances.

Q196. (b) Pneumatized superior turbinate .Pneumatization of the superior turbinate is an anatomical variant clearly visible on CT imaging.

Q197. (c) RT-PCR .Reverse transcriptase PCR is the standard molecular method used for the detection of RNA.

Q198. (b) Frozen section .Oil red O stain is used on frozen sections to detect and visualize lipid content.

Q199. (d) Step 4 .Vancomycin acts on the final stage (Step 4) of bacterial cell wall synthesis by binding to D-Ala-D-Ala.

Q200. (a) Non-homologous end joining .Double-strand breaks induced by CRISPR-Cas9 are primarily repaired through non-homologous end joining (NHEJ).

