NEET PG 2022 Question Paper

130 recall questions with answers and explanations.

Recall honesty note: NBEMS does not release official papers, so these are memory-based recall questions, not official papers. Image-based questions are excluded for now because the bank's images are currently unavailable.

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Question 1. Which of the following components is involved in the baroreceptor reflex?

A. Positive feedback

B. Negative feedback

C. Feed forward

D. Adaptive control

Correct answer: B

The baroreceptor reflex is a crucial homeostatic mechanism for the short-term regulation of blood pressure. It operates on the principle of negative feedback. Baroreceptors are stretch receptors located in the walls of the aortic arch and the carotid sinuses. When blood pressure rises, these receptors are stretched, and they increase their firing rate to the cardiovascular centers in the brainstem. In response, the brainstem initiates a reflex that increases parasympathetic (vagal) activity and decreases sympathetic activity. This leads to a decrease in heart rate, cardiac contractility, and peripheral vascular resistance, which in turn lowers the blood pressure back towards its set point. Conversely, a drop in blood pressure reduces baroreceptor firing, triggering an increase in sympathetic activity to raise the pressure. This corrective action that opposes the initial stimulus is the definition of a negative feedback loop.

Question 2. Which of the following factors will reduce extracellular potassium levels?

A. Glucagon

B. Atropine

C. Lactic acid

D. Epinephrine

Correct answer: D

Epinephrine (adrenaline) and other beta-2 adrenergic agonists play a significant role in potassium homeostasis by promoting the shift of potassium from the extracellular fluid into the intracellular compartment. Epinephrine activates the Na+/K+-ATPase pump on the cell membrane, primarily in skeletal muscle cells. This activation increases the uptake of potassium into the cells, thereby lowering the concentration of potassium in the extracellular fluid (plasma). This mechanism is physiologically important for preventing dangerous hyperkalemia,

especially after exercise when potassium is released from contracting muscles. Insulin also has a similar effect of shifting potassium into cells. Glucagon (A) can cause a transient increase in extracellular potassium. Lactic acidosis (C) causes potassium to shift out of cells, leading to hyperkalemia. Atropine (B) does not have a direct effect on potassium distribution.

Question 3. A patient slept on his arm and developed numbness and weakness. Which of the following best explains this condition?

A. A fibres are more susceptible to pressure than C fibres

B. B fibres are more susceptible to pressure than A fibres

C. C fibres are more susceptible to hypoxia than A fibres

D. C fibres are more susceptible to pressure than A fibres

Correct answer: A

Different types of nerve fibers have varying sensitivities to pressure, hypoxia, and local anesthetics. This phenomenon is known as differential block. The patient's symptoms of numbness (loss of touch, proprioception) and paresis (muscle weakness) after prolonged pressure on the arm (Saturday night palsy) are

Question 4. A patient presents with rice-water stools. The toxin acts on which receptor in the intestine?

A. GM1 ganglioside

B. GM2 ganglioside

C. Sphingomyelin

D. None

Correct answer: A

The clinical presentation of profuse, voluminous rice-watery stools is the hallmark of cholera, an infection caused by Vibrio cholerae. The disease is mediated by the powerful cholera toxin. The cholera toxin is an A-B type toxin, composed of one A (active) subunit and five B (binding) subunits. The B subunits are responsible for binding the toxin to the surface of the intestinal epithelial cells (enterocytes). The specific receptor on the host cell membrane to which the B subunits bind is the GM1 ganglioside. Once bound, the A subunit is internalized into the cell. It then acts as an ADP-ribosyltransferase, permanently activating the Gs alpha subunit of the adenylate cyclase enzyme. This leads to a massive, unregulated increase in intracellular cyclic AMP (cAMP), which in turn causes the hypersecretion of chloride, sodium, and water into the intestinal lumen, resulting in severe secretory diarrhea.

Question 5. Hemiballismus is associated with a lesion of which nucleus?

A. Subthalamic

B. Globus pallidus

C. Caudate nucleus Click Here to Buy book on Amazon MEDINK CHAPTER 02_PHYSIOLOGY

D. Substantia nigra

Correct answer: A

Hemiballismus is a rare hyperkinetic movement disorder characterized by involuntary, violent, flinging movements of the limbs on one side of the body (contralateral to the lesion). The classic cause of hemiballismus is a lesion, most commonly a lacunar stroke or hemorrhage, affecting the subthalamic nucleus (STN). The STN is a key component of the basal ganglia's indirect pathway, which normally functions to inhibit unwanted movements. A lesion in the STN disrupts this pathway, leading to reduced inhibitory output from the basal ganglia to the thalamus. This disinhibition of the thalamocortical pathway results in the release of the uncontrolled, large-amplitude, ballistic movements that are characteristic of the disorder. While other basal ganglia nuclei are involved in motor control, the subthalamic nucleus is the specific anatomical structure most directly linked to hemiballismus.

Question 6. A young boy experiences difficulty breathing while running, is unable to rise from a squatting Click Here to Buy book on Amazon MEDINK CHAPTER 03_BIOCHEMISTRY position, and has splenomegaly. What is the most probable diagnosis?

A. Tay Sachs disease

B. Gaucher's disease

C. Fabry's disease

D. Krabbe's disease

Correct answer: B

The combination of splenomegaly, difficulty rising from a squatting position (suggesting muscle weakness or bone involvement), and difficulty breathing on exertion (which can be due to anemia or pulmonary infiltration) points towards a systemic storage disorder. Gaucher's disease is the most common lysosomal storage disorder and fits this clinical picture. It is caused by a deficiency of the enzyme glucocerebrosidase, leading to the accumulation of glucocerebroside in macrophages of the reticuloendothelial system. This results in massive hepatosplenomegaly, bone marrow infiltration causing anemia, thrombocytopenia, and bone pain/fractures (explaining the weakness), and sometimes pulmonary involvement. Tay-Sachs disease (A) is primarily a neurodegenerative disorder. Fabry's disease (C) involves pain crises, angiokeratomas, and renal failure. Krabbe's disease (D) is a rapidly progressive infantile neurodegenerative disorder.

Question 7. A child presents with anemia and thrombocytopenia, with hepatosplenomegaly on examination and complaints of bone pain. Light microscopy shows a crumpled tissue paper appearance. Which enzyme deficiency is responsible?

A. Alpha glucosidase

B. Alpha Galactosidase

C. Galactocerebrosidase

D. Glucocerebrosidase

Correct answer: D

This is a classic description of Gaucher disease. The clinical features of hepatosplenomegaly, bone marrow suppression (leading to anemia and thrombocytopenia), and bone pain are highly characteristic. The definitive diagnostic finding is the microscopic appearance of

Question 8. A patient with tuberculosis on isoniazid therapy for six months presents with tingling and paresthesia. Deficiency of which vitamin is the most likely cause?

A. Vitamin B6

B. Vitamin B3

C. Vitamin B12

D. Vitamin B7

Correct answer: A

A well-known side effect of the anti-tuberculosis drug isoniazid (INH) is a dose-dependent peripheral neuropathy, which presents with symptoms like tingling, numbness, and paresthesias in a glove and stocking distribution. This neurotoxicity occurs because isoniazid structurally resembles vitamin B6 (pyridoxine) and interferes with its metabolism. INH increases the excretion of vitamin B6 and inhibits the enzyme pyridoxine phosphokinase, which is necessary to convert pyridoxine into its active form, pyridoxal-5'-phosphate (PLP). PLP is an essential cofactor for numerous enzymatic reactions, including the synthesis of neurotransmitters. The resulting deficiency of active vitamin B6 leads to the development of peripheral neuropathy. To prevent this complication, it is standard practice to co-administer prophylactic pyridoxine supplementation to all patients receiving isoniazid therapy.

Question 9. Which of the following enzyme activities measured in red blood cells can be used to diagnose vitamin B_2 deficiency?

A. Glutathione reductase

B. Transketolase

C. Kynenurinase

D. Pyruvate dehydrogenase

Correct answer: A

The functional status of several vitamins can be assessed by measuring the activity of a vitamin-dependent enzyme in red blood cells (RBCs), both with and without the addition of the vitamin's active coenzyme form. For Vitamin B2 (riboflavin), the key enzyme is erythrocyte glutathione reductase (EGR). This enzyme is crucial for reducing oxidized glutathione (GSSG) to its reduced form (GSH), which is essential for protecting the cell against oxidative damage. EGR requires flavin adenine dinucleotide (FAD), the active coenzyme form of riboflavin, to function. In a riboflavin-deficient individual, the EGR enzyme will be undersaturated with FAD, and its

basal activity will be low. When FAD is added to the assay in vitro, the enzyme activity increases significantly. The extent of this stimulation (the EGR activity coefficient or EGRAC) is a sensitive and specific functional marker of riboflavin status. Transketolase (B) is used to assess thiamine (B1) status.

Question 10. A woman on antidepressant therapy presents with bleeding and reports bulky, greasy stools that stick to the toilet pan. Deficiency of which vitamin is most likely responsible for the bleeding in this condition?

A. Vitamin A

B. Vitamin D

C. Vitamin E

D. Vitamin K

Correct answer: D

The patient's history of bulky, fatty stools that stick to the pan is descriptive of steatorrhea, which is the malabsorption of fat. Several of the older antidepressants, particularly tricyclics, can have anticholinergic effects that reduce gut motility, potentially contributing to malabsorption. Steatorrhea impairs the

Question 11. A paint shopkeeper presents with anemia. Inhibition of which enzyme is responsible for this condition?

A. Uroporphyrinogen I synthase

B. Uroporphyrinogen III synthase

C. ALA synthase

D. ALA Dehydratase

Correct answer: D

Paint, especially older formulations, can be a source of lead exposure. Lead is a potent toxin that interferes with the heme synthesis pathway at multiple steps, leading to anemia. Two key enzymes are inhibited by lead :1. Aminolevulinic acid (ALA) dehydratase : This enzyme catalyzes an early step in the pathway, the conversion of two molecules of ALA to porphobilinogen. Inhibition of ALA dehydratase leads to the accumulation of ALA in the blood and urine, which is a sensitive marker of lead poisoning.2. Ferrochelatase : This is the final enzyme in the pathway, which incorporates ferrous iron (Fe2+) into protoporphyrin IX to form heme.Inhibition of both enzymes impairs heme synthesis, which is a necessary component of hemoglobin, resulting in a microcytic, hypochromic anemia. Between the choices given, ALA dehydratase is a primary target of lead toxicity.

Question 12. Primaquine can precipitate hemolytic anemia in individuals with a specific enzyme deficiency. This enzyme is associated with which metabolic pathway?

A. Gluconeogenesis

B. HMP shunt

C. Glycolysis

D. Rapport pathway

Correct answer: B

The antimalarial drug primaquine is an oxidizing agent. In individuals with a deficiency of the enzyme glucose-6-phosphate dehydrogenase (G6PD), administration of primaquine can trigger an acute hemolytic crisis. G6PD is the rate-limiting enzyme of the Hexose Monophosphate (HMP) shunt, also known as the pentose phosphate pathway. The primary function of the HMP shunt in red blood cells is to produce NADPH. NADPH is essential for maintaining a supply of reduced glutathione (GSH) via the enzyme glutathione reductase. Reduced glutathione is a critical antioxidant that protects the red blood cell from oxidative damage. In G6PD-deficient individuals, NADPH production is impaired. When exposed to an oxidizing drug like primaquine, the red cells cannot cope with the oxidative stress, leading to hemoglobin denaturation (Heinz bodies) and subsequent hemolysis.

Question 13. Which of the following proteins is involved in DNA packaging?

A. Histones

B. Chaperone

C. Cyclin

D. Albumin

Correct answer: A

In eukaryotic cells, the vast amount of DNA must be tightly and efficiently packaged to fit within the nucleus. This packaging is accomplished by a group of small, basic proteins known as histones. The fundamental unit of this packaging is the nucleosome, which consists of a segment of DNA wrapped around a core of eight histone proteins (an octamer containing two copies each of histones H2A, H2B, H3, and H4). Another histone, H1, acts as a linker, helping to coil the nucleosomes into a more compact structure called a chromatin fiber. This hierarchical coiling and folding allows for the extreme condensation of DNA into visible

Question 14. Identify the acid base disorder in a patient with the following values : pH - 7.2, pO2 - 90 mm of Hg, pCO2 - 80 mm of Hg, Bicarbonate - 35 meq/L.

A. Metabolic Acidosis

B. Metabolic Alkalosis

C. Respiratory Alkalosis

D. Respiratory acidosis

Correct answer: D

To interpret these arterial blood gas (ABG) values, we follow a systematic approach :1. Look at the pH : The pH is 7.2, which is lower than the normal range of 7.35-7.45. This indicates an

acidosis.2. Determine the primary cause : We look at the pCO2 (respiratory component) and the bicarbonate (HCO3, metabolic component) to see which one explains the acidosis. The

Question 15. Which of the following facilitates the transport of fatty acids across the inner mitochondrial membrane for their utilization within mitochondria?

A. Malate

B. LCAT

C. Carnitine

D. Acyl carrier protein

Correct answer: C

No explanation is available for this recall question yet.

Question 16. Which of the following acts as an inhibitor of Complex IV ?

A. Cyanide

B. Carbon dioxide

C. BAL

D. Antimycin

Correct answer: A

The mitochondrial electron transport chain consists of four main protein complexes. Complex IV, also known as cytochrome c oxidase, is the final enzyme in this chain. It is responsible for transferring electrons from cytochrome c to molecular oxygen, reducing it to water. This step is crucial for the entire process of oxidative phosphorylation. Cyanide is a potent and rapidly acting poison that specifically and irreversibly binds to the ferric iron () in the heme a3 component of cytochrome c oxidase. This binding completely blocks the transfer of electrons to oxygen, effectively halting the electron transport chain and cellular respiration. This leads to a rapid and catastrophic drop in ATP production, causing cytotoxic hypoxia and death. Antimycin (D) inhibits Complex III. Rotenone and barbiturates inhibit Complex I.

Question 17. What is the mechanism of action of botulinum toxin?

A. Inhibits NM receptor

B. Inhibits reuptake of Acetylcholine

C. Inhibits release of acetylcholine from lower motor neurons

D. Inhibits the synthesis of acetylcholine

Correct answer: C

Botulinum toxin, produced by the bacterium Clostridium botulinum, is one of the most potent neurotoxins known. Its mechanism of action is to produce a flaccid paralysis by acting at the presynaptic terminal of the neuromuscular junction. The toxin is a zinc endopeptidase that specifically cleaves proteins of the SNARE complex. These SNARE proteins (such as SNAP-25, synaptobrevin, and syntaxin) are essential for the docking and fusion of synaptic vesicles with

the presynaptic membrane. By destroying these proteins, the botulinum toxin prevents the release of acetylcholine from the axon terminals of lower motor neurons into the synaptic cleft. Without acetylcholine to bind to the nicotinic receptors on the muscle fiber, muscle contraction cannot occur, resulting in paralysis. It does not inhibit the receptor itself (A), affect reuptake (B), or inhibit synthesis (D).

Question 18. Which of the following features is not observed in MEN type B?

A. Parathyroid Adenoma

B. Toxic megacolon

C. Mucosal Neuroma

D. Marfanoid habitus

Correct answer: A

Multiple Endocrine Neoplasia type 2B (MEN 2B) is a rare, autosomal dominant syndrome caused by a specific mutation in the RET proto-oncogene. It has a characteristic constellation of features. The three core components are :1. Medullary Thyroid Carcinoma (MTC) : Occurs in nearly 100% of cases and is more aggressive than in MEN 2A.2. Pheochromocytoma : Occurs in about 50% of cases.3. Distinctive physical features : These include multiple mucosal neuromas (C) on the lips, tongue, and eyelids; a tall, slender Marfanoid habitus (D); and intestinal ganglioneuromatosis, which can lead to complications like constipation or toxic megacolon (B).Parathyroid adenoma/hyperplasia (A), which causes primary hyperparathyroidism, is a hallmark feature of MEN 2A, but it is characteristically absent in MEN 2B. This is a key feature used to differentiate the two syndromes.

Question 19. What is a single-nucleotide change that results in the formation of a stop codon called?

A. Missense

B. Nonsense

C. Point mutation

D. Silent

Correct answer: B

A point mutation (C) is a general term for a change in a single nucleotide base within the DNA sequence. There are several types of point mutations based on their effect on the resulting protein. A nonsense mutation is a specific type of point mutation where the change in a single nucleotide results in the original amino acid-coding codon being converted into one of the three stop codons (UAA, UAG, or UGA). This causes the premature termination of translation, leading to the production of a truncated, and usually non-functional, protein. A missense mutation (A) results in a different amino acid being incorporated. A silent mutation (D) is a change in the nucleotide sequence that does not change the resulting amino acid, due to the redundancy of the genetic code.

Question 20. Warburg effect is used by cancer cells because-

A. Provides more energy available to cancer cells (ATP)

B. Reduced glucose uptake

C. Prevents apoptosis and makes them immortal

D. Provides elements required for cellular metabolism

Correct answer: D

The Warburg effect, or aerobic glycolysis, describes the phenomenon where cancer cells preferentially metabolize glucose through glycolysis, converting it to lactate, even in the presence of ample oxygen. This is metabolically inefficient for ATP production; oxidative phosphorylation yields far more ATP per molecule of glucose (so A is incorrect). However, this metabolic shift is advantageous for rapidly proliferating cells. The high rate of glycolysis, while yielding less ATP, shunts glucose-derived carbon intermediates into various anabolic pathways. These intermediates serve as essential building blocks (elements) for the synthesis of nucleotides (for DNA/RNA), lipids (for membranes), and amino acids, which are all required to build new cells. This redirection of metabolism from energy production to biosynthesis is crucial for supporting the high proliferative demands of cancer cells.

Question 21. All of the following statements regarding neutrophil extracellular traps (NETs) are true except which one?

A. Seen in sepsis

B. Seen with bacteria

C. Mitochondrial DNA is involved

D. Release antimicrobial products

Correct answer: C

Neutrophil Extracellular Traps (NETs) are web-like structures released by neutrophils as a defense mechanism against pathogens. These NETs are composed of a backbone of decondensed nuclear DNA, which is studded with various antimicrobial proteins from the neutrophil's granules, such as histones, elastase, and myeloperoxidase (so D is true). The primary function of NETs is to trap and kill extracellular pathogens like bacteria (B) and fungi, preventing their dissemination. This process, called NETosis, is a distinct form of cell death. NETs are prominently observed in various inflammatory and infectious conditions, including sepsis (A). The DNA that forms the scaffold of NETs is derived from the nucleus, not from the mitochondria (so C is the incorrect statement). Mitochondrial DNA may be released during other forms of cell death but is not the primary component of the NET scaffold.

Question 22. Which of the following is true for telomerase?

A. Telomerase level increases with aging

B. It reduces the length of telomere

C. It maintains the length of Chromosome

D. Found in all mature cells

Correct answer: C

Telomerase is a reverse transcriptase enzyme that is responsible for maintaining the length of telomeres. Telomeres are repetitive nucleotide sequences at the ends of linear chromosomes that protect them from degradation and from being recognized as DNA breaks. During each round of DNA replication, the telomeres shorten slightly (the end-replication problem). Telome rase counteracts this by adding telomeric repeat sequences back onto the ends of the chromosomes. This action effectively maintains the length of the chromosome ends (C). Its activity is high in embryonic stem cells and germ cells. Most mature somatic cells (D) have very low or undetectable telome rase activity,

Question 23. A patient presents to the outpatient department with fatigue. Routine complete blood count shows hemoglobin of g/dL, MCV of 0 fL, and an RBC count of . million/mm³. Peripheral smear reveals microcytic red blood cells. Which of the following should be the next investigation?

A. Ferritin

B. HbA2 levels

C. Serum folate

D. RDW

Correct answer: A

The patient has a microcytic anemia, as indicated by the low Mean Corpuscular Volume (MCV) of 60 fL (normal is 80-100 fL). The two most common causes of microcytic anemia are iron deficiency anemia (IDA) and thalassemia trait. The next step in the investigation is to differentiate between these two possibilities. The most specific and sensitive test to assess the body's iron stores is the serum ferritin level. A low serum ferritin is diagnostic of iron deficiency. If the ferritin level is normal or elevated in a patient with microcytic anemia, then the suspicion shifts towards thalassemia. In that case, the next investigation would be hemoglobin electrophoresis to measure HbA2 levels (B), which are typically elevated in beta-thalassemia trait. RDW (D) is part of the CBC and is usually high in IDA. Serum folate (C) is for macrocytic anemia.

Question 24. A 6-year-old man presents with dragging abdominal pain and is found to have a palpable spleen on examination. Peripheral smear reveals leukocytosis with increased basophils, myelocytes, and metamyelocytes. Which of the following findings is most likely to be seen in this patient?

A. T (1,22)

B. T (9,22)

C. T (8,22)

D. T (15, 17)

Correct answer: B

The clinical presentation of massive splenomegaly (dragging abdominal pain) and the peripheral smear findings of marked leukocytosis with a left shift (presence of immature granulocytes like myelocytes and metamyelocytes) and an increase in basophils are classic features of Chronic Myeloid Leukemia (CML). The pathognomonic genetic hallmark of CML is the Philadelphia chromosome, which results from a reciprocal translocation between chromosomes 9 and 22, denoted as t(9;22) (q34;q11). This translocation creates the BCR-ABL1 fusion gene, which codes for a constitutively active tyrosine kinase that drives the hyper proliferation of the myeloid cell line. Detection of this translocation or its gene product is essential for the diagnosis of CML. The translocation t(15;17) (D) is characteristic of Acute Promyelocytic Leukemia.

Question 25. Which is AR inheritance?

A. Cystic fibrosis

B. Huntington disease

C. Achondroplasia

D. Treacher Collins syndrome (TCS)

Correct answer: A

Autosomal recessive (AR) inheritance means that a person must inherit two copies of the mutated gene (one from each parent) to be affected by the disorder. Parents are typically asymptomatic carriers. Cystic fibrosis is a classic example of an autosomal recessive disease, caused by mutations in the CFTR gene. In contrast, the other options are autosomal dominant (AD) disorders. In AD inheritance, inheriting just one copy of the mutated gene from one parent is sufficient to cause the disease. Huntington disease (B), achondroplasia (C), and Treacher Collins syndrome (D) are all well-known examples of autosomal dominant conditions. They typically show vertical transmission in a pedigree (appearing in every generation), whereas AR disorders like cystic fibrosis often appear in siblings with unaffected parents (horizontal transmission).

Question 26. A 0-year-old woman presents with arthralgia, oral ulcers, arthritis, oliguria, hematuria, and skin rashes. Routine urine examination reveals red blood cells in the urine. What is the most likely diagnosis?

A. PSGN

B. Acute interstitial nephritis

C. Lupus Nephritis

D. Cystitis

Correct answer: C

The patient presents with a multi-systemic disease involving the joints (arthralgia, arthritis), mucous membranes (oral ulcers), skin (rashes), and kidneys (oliguria, hematuria). This constellation of symptoms is highly characteristic of Systemic Lupus Erythematosus (SLE).

Renal involvement is a common and serious complication of SLE and is known as Lupus Nephritis. It can present with a wide spectrum of findings, from asymptomatic proteinuria and hematuria to rapidly progressive glomerulonephritis and renal failure. The presence of red blood cells in the urine indicates glomerular inflammation (glomerulonephritis), which is a hallmark of active lupus nephritis. Post-streptococcal glomerulonephritis (PSGN) (A) would typically follow a throat infection and not have the other systemic features. Acute interstitial nephritis (B) is often drug-induced. Cystitis (D) is a bladder infection.

Question 27. What will increase life span?

A. Regular exercise (walking for 30 mins)

B. Reduced levels of antioxidants

C. Decrease calorie by 30%

D. More ROS

Correct answer: A

Regular physical activity is one of the most well-established factors associated with increased life expectancy and improved overall health. Moderate exercise such as walking for about 30 minutes daily helps maintain cardiovascular fitness, improves metabolism, and strengthens muscles and bones. It also reduces the risk of many chronic diseases including heart disease, hypertension, type-2 diabetes, obesity, and certain cancers. Additionally, regular exercise enhances immune function, improves mental health, reduces stress, and promotes better sleep, all of which contribute to longevity.Exercise also improves circulation and oxygen delivery to tissues, helping the body function more efficiently. It supports healthy

Question 28. A patient presents with edema and anasarca. What is the diagnosis associated with minimal change disease?

A. Responds well with steroid

B. Electron microscopy shows effacement of podocytes

C. Common in adults

D. Non selective proteinuria

Correct answer: A

Minimal Change Disease (MCD) is a kidney disorder that commonly presents with features of nephrotic syndrome, such as generalized edema, anasarca, heavy proteinuria, hypoalbuminemia, and hyperlipidemia. It is called “minimal change” because the glomeruli appear almost normal under light microscopy, showing very little structural change.One of the most important clinical characteristics of minimal change disease is its excellent response to corticosteroid therapy. Most patients, especially children, show rapid remission of proteinuria after treatment with steroids, making steroid responsiveness a hallmark feature of this condition.On electron microscopy, the typical finding is diffuse effacement (fusion) of podocyte foot processes, which leads to increased permeability of the glomerular filtration barrier and

results in protein loss in urine. However, this is a diagnostic microscopic feature rather than the main clinical association asked in the question.Minimal change disease is most common in children, not adults. Additionally, it usually

Question 29. A patient presents with night sweats, dry cough, and fever for two weeks. Chest X-ray reveals hilar lymphadenopathy, along with bilateral facial weakness and right eye pain. Histopathology shows mononuclear cell infiltration, and MRI of the brain is normal. What is the most likely diagnosis?

A. Sarcoidosis

B. Lymphoma

C. TB

D. IDA

Correct answer: A

This patient presents with a multi-systemic inflammatory disease. The combination of constitutional symptoms (fever, night sweats), pulmonary findings (bilateral hilar lymphadenopathy on X-ray), and extrapulmonary manifestations is classic for sarcoidosis. Sarcoidosis is a multisystem granulomatous disorder of unknown etiology. The specific extrapulmonary signs here are highly suggestive : bilateral facial nerve palsy (Heerfordt's syndrome, along with parotitis and uveitis) and eye pain, likely from uveitis. Histopathology showing a non-caseating granulomatous infiltrate with mononuclear cells is also consistent. Tuberculosis (C) can cause hilar lymphadenopathy but usually caseating granulomas and unilateral facial palsy is more common. Lymphoma (B) is in the differential but the combination of bilateral facial palsy and uveitis strongly favors sarcoidosis.

Question 30. A woman consults a gynecologist for hysterectomy and discusses with the doctor the advantages and disadvantages of the available procedures. What type of consent is this?

A. Silent

B. Blanket

C. Implied

D. Informed

Correct answer: D

The scenario describes the process of obtaining informed consent. Informed consent is not just a signature on a form; it is a fundamental ethical and legal principle based on a comprehensive communication process between a healthcare provider and a patient. The core elements involve the doctor providing the patient with all relevant information about their diagnosis, the nature of the proposed procedure (hysterectomy), the potential risks and benefits, the available alternative treatments with their own risks and benefits, and the prognosis with and without treatment. The patient must have the capacity to understand this information and must then

voluntarily make a decision. The discussion of advantages and disadvantages is a key part of this process, ensuring the patient's consent is truly informed. Implied consent (C) is for emergencies, and blanket consent (B) is

Question 31. A -year-old man presents with acute hair loss involving the scalp, lateral eyebrows, and eyelashes. His wife reports recent behavioral changes, and examination reveals white lines on the nails. What is the most likely diagnosis?

A. Arsenic

B. Lead

C. Thallium

D. Mercury

Correct answer: C

This combination of signs is highly characteristic of thallium poisoning. Thallium is a heavy metal that is highly toxic. A hallmark and often delayed sign of significant thallium exposure is severe, diffuse, and rapid alopecia (hair loss), which typically begins about 2-3 weeks after ingestion. The hair loss is extensive, often affecting the scalp, the lateral third of the eyebrows, eyelashes, and other body hair. Thallium also causes severe peripheral neuropathy and gastrointestinal symptoms. While white lines on the nails (Mees' lines) can be seen in both thallium and arsenic poisoning, the profound and rapid hair loss is the most distinguishing feature pointing towards thallium. Arsenic (A) causes Mees' lines but not typically such dramatic alopecia. Lead (B) and mercury (D) poisoning have different clinical presentations.

Question 32. Enzyme affected in case of lead poisoning is

A. Uroporphyrinogen 3

B. Uroporphyrinogen 1

C. ALA Dehydratase

D. Ferrochelatase

Correct answer: C

Lead poisoning (plumbism) disrupts the heme synthesis pathway by inhibiting several key enzymes, leading to anemia and the accumulation of precursors. Two of the most clinically significant enzymes inhibited by lead are :1. Aminolevulinic acid (ALA) dehydratase : This enzyme catalyzes an early step in the pathway. Its inhibition leads to an accumulation of ALA in the blood and urine, which is a sensitive marker of lead exposure.2. Ferrochelatase : This is the final enzyme in the pathway, responsible for inserting iron into the protoporphyrin IX ring to form heme. Its inhibition leads to an accumulation of protoporphyrin in red blood cells (erythrocyte protoporphyrin or zinc protoporphyrin).Both enzymes are critically affected. Given that ALA dehydratase is an option and its inhibition is a hallmark of lead toxicity, it is a correct answer. Ferrochelatase is also correct.

Question 33. A woman presents to the emergency department with nausea, vomiting, and abdominal pain after ingesting paracetamol (acetaminophen) tablets. Which medication should be initiated for her treatment?

A. N-acetylcysteine

B. Naloxone

C. Naltrexone

D. Chlorpromazine

Correct answer: A

The patient has taken a toxic dose of paracetamol (acetaminophen). Paracetamol overdose is a major cause of acute liver failure. In the liver, a small fraction of paracetamol is metabolized by the cytochrome P450 system into a highly toxic intermediate called N-acetyl-p-benzoquinone imine (NAPQI). Normally, NAPQI is detoxified

Question 34. A child is brought to the emergency department after ingesting a large quantity of iron tablets. The child presents with severe abdominal pain, profuse gastrointestinal bleeding, lethargy, and coma. What is the preferred treatment in this situation?

A. Deferoxamine mesylate

B. Penicillamine

C. BAL

D. Activated charcoal

Correct answer: A

The patient is presenting with severe, systemic iron toxicity. The specific antidote and preferred treatment for significant iron poisoning is the chelating agent deferoxamine mesylate (also spelled desferrioxamine). Deferoxamine has a high affinity for ferric iron (), binding with it to form a stable, non-toxic, water-soluble complex called ferrioxamine. This complex is then excreted by the kidneys, giving the urine a characteristic reddish-brown vin rosé color. Intravenous deferoxamine is indicated in patients with signs of systemic toxicity, such as shock, coma, severe acidosis, or very high serum iron levels. It is crucial for removing the toxic free iron from the circulation and preventing further cellular damage. Activated charcoal (D) is not effective as it does not bind well to iron.

Question 35. A patient on antidepressant therapy presents with bleeding and passes fatty stools that stick to the toilet pan. Deficiency of which vitamin can cause this condition?

A. A

B. D

C. E

D. K

Correct answer: D

The patient's history describes steatorrhea (fatty stools), which indicates fat malabsorption. This can be a side effect of certain medications or an independent issue. Steatorrhea compromises the absorption of the fat-soluble vitamins : A, D, E, and K. The clinical sign of bleeding points specifically to a deficiency of Vitamin K. Vitamin K is a crucial cofactor for the post-translational gamma-carboxylation of several clotting factors synthesized in the liver (Factors II, VII, IX, and X, as well as proteins C and S). Without adequate Vitamin K, these factors are non-functional, leading to a coagulopathy (prolonged PT/INR) and an increased risk of bleeding. Therefore, the combination of fat malabsorption and bleeding is a classic presentation of Vitamin K deficiency.

Question 36. Primaquine, an antimalarial drug, precipitates hemolysis in individuals with a specific enzyme deficiency. This enzyme is associated with which metabolic cycle?

A. HMP Shunt

B. Luebering-Rapoport shunt

C. Glycolysis

D. Gluconeogenesis

Correct answer: A

The enzyme deficiency in question is Glucose-6-Phosphate Dehydrogenase (G6PD) deficiency. G6PD is the rate-limiting enzyme of the Hexose Monophosphate (HMP) Shunt, also known as the pentose phosphate pathway. The primary role of the HMP shunt in red blood cells (RBCs) is to produce NADPH. NADPH is essential for regenerating reduced glutathione (GSH) from its oxidized state. GSH is a vital antioxidant that protects RBCs from damage by reactive oxygen species. Oxidizing drugs, like the antimalarial agent primaquine, increase oxidative stress on RBCs. In G6PD-deficient individuals, the lack of NADPH and GSH leaves the cells vulnerable to this oxidative damage, leading to hemoglobin denaturation, Heinz body formation, and acute intravascular hemolysis. Glycolysis (C) is the main energy pathway in RBCs. The Luebering-Rapoport shunt (B) is involved in 2,3-DPG synthesis.

Question 37. A 5-year-old man presents with rigidity, tremor, bradykinesia, and masked facies. Which of the following agents is most appropriate for treatment?

A. Donepezil

B. Selegiline

C. Thioridazine

D. Haloperidol

Correct answer: B

The patient's clinical presentation with the cardinal motor symptoms of resting tremor, rigidity, bradykinesia (slowness of movement), and a masked facial expression is classic for Parkinson's

disease. This neurodegenerative disorder is caused by the loss of dopaminergic neurons in the substantia nigra. Treatment is aimed at restoring dopaminergic activity. Selegiline is a selective, irreversible inhibitor of the enzyme monoamine oxidase B (MAO-B). MAO-B is responsible for the breakdown of dopamine in the brain. By inhibiting this enzyme, selegiline reduces the degradation of dopamine, thereby increasing its availability in

Question 38. Which of the following drug resistance leads to MDR TB?

A. Isoniazid & Rifampicin

B. Isoniazid & fluoroquinolones

C. Isoniazid, rifampicin & pyrazinamide

D. Isoniazid, rifampicin & kanamycin

Correct answer: A

Multidrug-resistant tuberculosis (MDR-TB) is defined as infection with Mycobacterium tuberculosis that shows resistance to both isoniazid and rifampicin, which are the two most potent first-line anti-tubercular drugs.Isoniazid acts by inhibiting mycolic acid synthesis, which is essential for the bacterial cell wall, while rifampicin works by inhibiting DNA-dependent RNA polymerase, preventing bacterial RNA synthesis. When Mycobacterium tuberculosis becomes resistant to both of these

Question 39. A 5-year-old patient with asthma on theophylline therapy presents with frequent and increased urination. What is the most likely mechanism by which theophylline causes diuresis?

A. Adenosine A1 antagonism

B. Histone deacetylation

C. Na+K+2Cl- blocking activity at LOH

D. Na+Cl- blocking activity at DCT

Correct answer: A

Theophylline is a methylxanthine used as a bronchodilator in asthma and COPD. Besides its effects on the airways, it also has a mild diuretic effect. The primary mechanism for this diuresis is its action as a non-selective antagonist of adenosine receptors. Specifically, antagonism of the A1 adenosine receptor in the kidney has two main effects that promote diuresis. First, it causes afferent arteriolar vasodilation, which increases the glomerular filtration rate (GFR). Second, it inhibits sodium reabsorption in the proximal convoluted tubule. The combination of an increased GFR and reduced proximal sodium reabsorption leads to an increased delivery of fluid and solute to the distal parts of the nephron, resulting in diuresis. The Na+K+2Cl- blocker (C) is the mechanism of loop diuretics, and the Na+Cl- blocker (D) is the mechanism of thiazide diuretics.

Question 40. A 2-year-old woman presents with galactorrhea along with headaches

and visual disturbances for several months. A urine pregnancy test is negative, and physical examination is unremarkable. MRI of the brain shows a large pituitary tumor, and the patient declines surgical management. Which medication is the most appropriate treatment option in this case?

A. Bromocriptine

B. Leuprolide

C. Degarelix

D. Cetrorelix

Correct answer: A

The patient's symptoms of galactorrhea (milky nipple discharge), amenorrhea (implied), headaches, and visual disturbances, along with an MRI showing a pituitary tumor, are classic for a prolactinoma. This is a benign tumor of the

Question 41. A patient receiving cisplatin therapy presents with multiple episodes of vomiting. After administration of an antiemetic, he develops Parkinsonian features. Which antiemetic drug is most likely responsible for these symptoms?

A. Metoclopramide

B. Domperidone

C. Ondansetron

D. Promethazine

Correct answer: A

The development of Parkinson's-like features, also known as extrapyramidal symptoms (EPS) such as dystonia, akathisia, and pseudoparkinsonism, is a well-known side effect of drugs that block dopamine D2 receptors in the central nervous system. Metoclopramide is an antiemetic that acts as a central and peripheral D2 receptor antagonist. Because it readily crosses the blood-brain barrier, it can block D2 receptors in the basal ganglia, disrupting the normal balance of dopamine and acetylcholine and leading to these movement disorders. Cisplatin is a highly emetogenic chemotherapy agent, and metoclopramide is an effective antiemetic, but this side effect limits its use. Domperidone (B) is also a D2 antagonist but does not cross the blood-brain barrier as readily, so it has a much lower risk of causing EPS. Ondansetron (C) is a 5-HT3 antagonist and does not cause EPS.

Question 42. A 4-year-old HIV-positive patient presents with a fungal infection. The isolated organism shows dimorphism, appearing as yeast at 7°C and as mold at 7°C, and produces red pigmentation around its growth in culture. What is the most likely causative organism, and which drug is recommended for its treatment?

A. Blastomyces & Amphotericin B

B. Talaromyces & Amphotericin B

C. Aspergillus & Voriconazole

D. P. Jiroveci & Cotrimoxazole

Correct answer: B

This question describes the classic microbiological features of Talaromyces marneffei (formerly Penicillium marneffei). This fungus is a significant opportunistic pathogen in immuno compromised individuals, particularly HIV-positive patients in Southeast Asia. It is thermally dimorphic, growing as a mold at room temperature (25-27°C) and converting to a yeast-like form at body temperature (37°C). The most distinctive feature is that the mold form produces a characteristic, water-soluble red pigment that diffuses into the culture medium. The standard treatment for severe, disseminated talaromycosis, especially in an HIV-positive patient, is initial therapy with intravenous Amphotericin B, often followed by a long course of oral itraconazole for maintenance. Blastomyces (A) is dimorphic but doesn't produce a red pigment. Aspergillus (C) is a mold, not dimorphic. P. jirovecii (D) is a fungus that cannot be cultured.

Question 43. Which of the following drugs has the least adverse effects on the pleura?

A. Bromocriptine

B. Metformin

C. Methotrexate

D. Methysergide

Correct answer: B

No explanation is available for this recall question yet.

Question 44. Which of the following hypolipidemic drugs works by inhibiting PCSK-?

A. Atorvastatin

B. Evolocumab

C. Ezetimibe

D. Fenofibrate

Correct answer: B

Evolocumab is a monoclonal antibody and a member of the drug class known as PCSK9 inhibitors. PCSK9 (Proprotein convertase subtilisin/kexin type 9) is a protein that binds to LDL receptors on the surface of liver cells. This binding promotes the degradation of the LDL receptors inside the cell, which reduces the number of receptors available to clear LDL cholesterol from the blood. By binding to and inhibiting PCSK9, evolocumab prevents it from destroying LDL receptors. This leads to a significant increase in the number of LDL receptors on the hepatocyte surface, which in turn enhances the clearance of LDL cholesterol from the circulation, dramatically lowering LDL-C levels. Atorvastatin (A) is a statin that inhibits HMG-CoA reductase. Ezetimibe (C) inhibits cholesterol absorption at the brush border of the small intestine. Fenofibrate (D) is a fibrate that primarily works by activating PPAR-alpha.

Question 45. Which of the following agents acts as a growth hormone receptor antagonist?

A. Pegvisomant

B. Mecasermin

C. Tesamorelin

D. Bromocriptine

Correct answer: A

Pegvisomant is a unique medication used in the treatment of acromegaly, a condition of excess growth hormone (GH). Its mechanism of action is as a growth hormone receptor antagonist. It is a pegylated, genetically engineered variant of human GH that binds to the GH receptor on cell surfaces but does not activate it. By competitively blocking the binding of endogenous GH to its receptors, pegvisomant prevents the synthesis and secretion of Insulin-like Growth Factor 1 (IGF-1), which is the primary mediator of GH's growth-promoting and metabolic effects. This leads to a reduction in IGF-1 levels and an improvement in the clinical signs and symptoms of acromegaly. Mecasermin (B) is recombinant IGF-1. Tesamorelin (C) is a GHRH analogue. Bromocriptine (D) is a dopamine agonist that can sometimes lower GH levels but is not a receptor antagonist.

Question 46. A pregnant woman with a urinary tract infection was treated with antimicrobial drugs. Her baby later developed tendon rupture and arthropathy. What is the likely mechanism of action of the antimicrobial agent taken during pregnancy?

A. Folic acid synthesis inhibitor

B. Mycolic acid synthesis inhibitor

C. DNA gyrase inhibitor

D. Protein synthesis inhibitor

Correct answer: C

The adverse effects of tendon damage (including tendon rupture) and arthropathy (cartilage damage) in a neonate or child are specifically associated with the use of fluoroquinolone antibiotics by the mother during pregnancy or by the child directly. Fluoroquinolones (e.g., ciprofloxacin, levofloxacin) are a class of antibiotics that exert their bactericidal effect by inhibiting two key bacterial enzymes involved in DNA replication : DNA gyrase (also

Question 47. A patient is receiving highly active antiretroviral therapy (HAART). Which of the following is the most appropriate method to monitor the effectiveness of this treatment?

A. Monitoring viral load

B. Measuring CD4 count

C. p24 antigen levels

D. Regular liver function tests

Correct answer: A

The primary goal of Highly Active Antiretroviral Therapy (HAART) is to suppress the replication of the Human Immunodeficiency Virus (HIV) as much as possible. Therefore, the most important and direct measure of the effectiveness of HAART is the HIV viral load, which is the quantity of HIV RNA in the blood. A successful ART regimen should lead to a rapid and sustained decrease in the viral

Question 48. A patient on Directly Observed Treatment Short-course (DOTS) for tuberculosis completes both the intensive and continuation phases of therapy, and the sputum test is negative for acid-fast bacilli at the end of treatment. What does this indicate?

A. Cured

B. Treatment completed

C. Default

D. Loss to follow up

Correct answer: B

According to the definitions used in national tuberculosis control programs, the treatment outcome is categorized based on specific criteria. A patient who has completed the prescribed course of treatment as per the protocol but does not have a sputum smear microscopy result at the end of treatment (or for whom bacteriological results are unavailable) is classified as Treatment Completed. To be classified as Cured (A), a patient must have a negative sputum smear result at the end of treatment and on at least one previous occasion during the continuation phase. Since the question only states that the sputum was negative at the end of treatment without mentioning a previous negative result, the most precise programmatic outcome is Treatment Completed. Default (C) or Loss to follow up (D) would apply if the patient interrupted treatment for a specified period.

Question 49. A child presents with fever, a rash that starts behind the ears, conjunctivitis, coryza, cough, and Koplik spots. Based on these clinical features, which description best characterizes the causative pathogen?

A. Single-stranded enveloped RNA virus MEDINK CHAPTER 07_MICROBIOLOGY

Correct answer: A

Caused by both bacteria and fungiThe clinical presentation of a chronic, suppurative infection with draining sinus tracts that discharge granules is known as mycetoma. The image shows a sulfur granule, which is a macroscopic colony of the causative organism. The key fact about mycetoma is that it can be caused by two distinct groups of organisms :1. Actinomycetoma : Caused by filamentous bacteria (aerobic and anaerobic actinomycetes) like Nocardia, Actinomadura, and Actinomyces.2. Eumycetoma : Caused by true fungi like Madurella mycetomatis.Therefore, the statement that the condition is caused by both bacteria and fungi is

true. The infection is a chronic, localized subcutaneous infection that spreads by direct extension to contiguous deep tissues like fascia and bone (so C is false); it does not typically spread hematogenously (so B is false).

Question 50. A 30-year-old military jawan presents with fever, vomiting, and myalgia, and similar symptoms are observed in other soldiers. All are found to have lice infestation. What is the causative agent of this condition?

A. Rickettsia conorii

B. Rickettsia Akari

C. Rickettsia Prowazeki

D. Rickettsia typhi

Correct answer: C

This scenario describes an outbreak of a febrile illness in a crowded environment (military barracks) associated with a louse infestation. This is the classic epidemiology of epidemic typhus. Epidemic typhus is caused by the bacterium Rickettsia prowazekii and is transmitted from person to person by the human body louse, Pediculus humanus corporis. The lice become infected by feeding on a bacteremic person and then excrete the rickettsiae in their feces. Humans are infected when they scratch the louse bites, inoculating the contaminated feces into their skin. The disease is characterized by an abrupt onset of high fever, headache, and myalgia, followed by a maculopapular rash. Outbreaks are common during times of war,

Question 51. Red pigment producing pencil shaped macroconidia.

A. Trichophyton rubrum

B. Trichophyton violaceum

C. Trichophyton tonsurans

D. Trichophyton schoenleinii

Correct answer: A

This question describes the classic microscopic and macroscopic features of Trichophyton rubrum, the most common dermatophyte causing superficial fungal infections (tinea) in humans. When grown on certain culture media like potato dextrose agar, T. rubrum characteristically produces a deep red to purplish pigment on the reverse side of the colony. Microscopically, it is known for producing numerous, slender, clavate or pencil-shaped macroconidia with thin, smooth walls, typically containing 3-8 cells. It may also produce teardrop-shaped microconidia. The combination of the red reverse pigment and the pencil-shaped macroconidia is a key feature used to identify T. rubrum in the mycology laboratory. The other species listed have different colonial and microscopic morphologies.

Question 52. A microfilaria with a surrounding sheath and two large nuclei at the tip of its tail is observed. Identify the organism.

A. Wuchereria bancrofti

B. Brugya malayi

C. Loa Loa

D. Mansonella

Correct answer: B

The microscopic description of the microfilaria is key to differentiating the species of filarial worms that cause human disease. The features described are :1. Sheathed : The microfilaria is enclosed in an outer membrane (the retained eggshell).

Question 53. A person returning from Africa develops an infection, and Torres' bodies are identified in the specimen. Which strain of the organism is used in the vaccine for prevention of this disease?

A. 17D strain

B. Jeryl lynn

C. Nakayama strain

D. Danish 1331 strain

Correct answer: A

The clinical history of an infection after travel to Africa and the histopathological finding of Torres bodies are suggestive of Yellow Fever. Torres bodies are eosinophilic, apoptotic bodies found in the cytoplasm of hepatocytes in patients with yellow fever, representing a type of councilman body. Yellow fever is an acute viral hemorrhagic disease caused by a flavivirus. Prevention is achieved through vaccination with a highly effective live-attenuated vaccine. The vaccine was developed by Max Theiler by serially passaging the wild Asibi strain of the virus in tissue culture, resulting in an attenuated strain. This specific live-attenuated vaccine strain is known as the 17D strain, and it is the basis for all currently used yellow fever vaccines. Jeryl Lynn (B) is a mumps vaccine strain.

Question 54. A 4-month-old infant born to an HIV-positive mother presents with diarrhea. What should be the next step in management?

A. HIV antibody detection

B. PCR Dry spot

C. Start ART

D. p24 antigen

Correct answer: B

Diagnosing HIV in an infant born to an HIV-positive mother is different from diagnosing it in an adult. Maternal IgG antibodies against HIV cross the placenta and can persist in the infant's circulation for up to 18 months. Therefore, a standard HIV antibody test (A) on the infant would be positive due to these maternal antibodies, and it cannot distinguish between a truly infected infant and one who is just exposed. For this reason, early infant diagnosis relies on virological

tests that directly detect the virus itself. The recommended test is a Polymerase Chain Reaction (PCR) test for HIV DNA or RNA. This test can be performed on a small sample of blood collected on a filter paper, known as a Dried Blood Spot (DBS) or Dry spot, which is stable and easy to transport. This allows for early and definitive diagnosis, which is crucial for initiating timely antiretroviral therapy (ART).

Question 55. A 28 year old lady with HBsAg positive, IgM HBc positive, IgG HBs and IgG HBe negative, Anti HCV negative. What is the diagnosis?

A. Acute HBV infection

B. Chronic HBV infection

C. Acute HCV infection

D. Chronic HCV infection

Correct answer: A

Let's interpret the hepatitis B serology panel :1. HBsAg (Hepatitis B surface antigen) positive : This indicates that the person is currently infected with the hepatitis B virus (HBV).2. IgM HBc (IgM antibody to hepatitis B core antigen) positive : This is the key marker for an acute infection. The IgM antibody is the first antibody to appear after infection and typically persists for about 6 months. Its presence signifies a recent or new infection.3. IgG HBs (Antibody to HBsAg) negative : This means the patient has not recovered from the infection and has not developed protective immunity.4. IgG HBe (Antibody to HBeAg) negative : This indicates the infection is likely in the active replicative phase.5. The combination of a positive HBsAg and a positive IgM anti-HBc is diagnostic of acute HBV infection. In chronic HBV infection (B), IgM anti-HBc would be negative, and IgG anti-HBc would be positive.

Question 56. A woodcutter sustains an injury while cutting wood in the forest. The sample shows sclerotic bodies with a copper-penny appearance on staining. What is the diagnosis?

A. Phaeohyphomycosis

B. Chromoblastomycosis

C. Sporothrix schenckii

D. Mycetoma

Correct answer: B

The history describes a traumatic inoculation injury in a person with occupational exposure to soil and plant material. The key diagnostic finding is the microscopic appearance of sclerotic bodies, also known as Medlar bodies or copper pennies. These are thick-walled, round, brownish, multicellular structures that divide by internal septation (sclerosis) rather than budding. The presence of sclerotic bodies in tissue is the pathognomonic hallmark of chromoblastomycosis. This is a chronic, localized fungal infection of the skin and subcutaneous tissue caused by several different pigmented (dematiaceous) fungi. Clinically, it presents as

slow-growing, verrucous (wart-like), crusted nodules or plaques. Phaeohyphomycosis (A) is another infection by pigmented fungi, but it is characterized by the presence of yeast-like cells or hyphae in tissue, not sclerotic bodies. Sporotrichosis (C) forms asteroid bodies, and mycetoma (D) forms granules.

Question 57. A patient presents with a history of penetrating ocular trauma and is diagnosed with sympathetic ophthalmitis. Which of the following findings is most likely to be seen?

A. Acute Anterior Uveitis

B. Chronic Anterior Uveitis

C. Pars planitis

D. Pan uveitis

Correct answer: D

Sympathetic ophthalmia is a rare, bilateral, diffuse granulomatous inflammation that occurs after a penetrating injury or intraocular surgery to one eye (the exciting eye). A few weeks to many years after the initial trauma, an autoimmune response is triggered against exposed retinal antigens (like melanin-associated proteins), leading to inflammation in both the injured eye and the previously healthy, uninjured sympathizing eye. The inflammation characteristically affects the entire uveal tract—the iris, ciliary body, and choroid. Inflammation of all parts of the uveal tract is known as panuveitis. Clinically, this presents with signs of both anterior uveitis (pain, photophobia, keratic precipitates) and posterior uveitis (vitritis, choroidal lesions like Dalen-Fuchs nodules, and optic disc edema). It is a severe, sight-threatening condition requiring aggressive immunosuppressive therapy.

Question 58. A diabetic patient presents with preretinal hemorrhage and neovascularization at the optic disc. What is the appropriate treatment for this patient?

A. Panretinal photocoagulation (PRP)

B. Grid laser photo coagulation

C. Focal laser photo coagulation

D. Scleral buckling

Correct answer: A

No explanation is available for this recall question yet.

Question 59. A patient presents with photophobia, excessive tearing, drooling of saliva, and periorbital pain accompanied by headache. Which nerve supply is most likely affected?

A. Optic Nerve

B. Oculomotor Nerve

C. Trigeminal Nerve

D. Facial Nerve

Correct answer: C

The patient's symptoms of periorbital pain, headache, and photophobia are all sensory modalities mediated by the trigeminal nerve (CN V), specifically its first (ophthalmic) division, which provides sensory innervation to the eye, orbit, and forehead. The trigeminal nerve is the principal sensory nerve for the face and head. The tearing and drooling are likely reflex actions secondary to the severe pain and irritation. For example, corneal irritation, sensed by the ophthalmic division of CN V, can trigger a reflex arc leading to increased lacrimation (tearing) via parasympathetic fibers that travel with the facial nerve (CN VII). However, the primary afferent limb for the pain and light sensitivity is the trigeminal nerve. The optic nerve (A) is for vision. The oculomotor nerve (B) controls

Question 60. A known case of chronic liver disease with ascites presents with abdominal pain and tenderness. Ascitic fluid analysis reveals 600 polymorphonuclear (PMN) cells per cubic millimeter. Which of the following is the most likely etiology?

A. Tubercular ascites

B. Malignant ascites

C. Spontaneous bacterial peritonitis

D. Chylous ascites

Correct answer: C

The patient, a known case of chronic liver disease (CLD) with ascites, is presenting with symptoms of peritonitis (abdominal pain and tenderness). The ascitic fluid analysis is the key to diagnosis. The presence of an elevated ascitic fluid polymorphonuclear (PMN) leukocyte count of ≥250 cells/mm^3 is the diagnostic criterion for Spontaneous Bacterial Peritonitis (SBP). The patient's count of 600 PMN cells/mm^3 is well above this threshold. SBP is a common and life-threatening infection of the ascitic fluid that occurs in patients with advanced cirrhosis, typically without an evident intra-abdominal source of infection. The most common causative organisms are gram-

Question 61. An adult patient presents with palpitations and an irregularly irregular pulse. Examination reveals a pulse deficit of 20, a heart rate of 120/min, and blood pressure of 110/70 mmHg. Which of the following findings is most likely in this patient?

A. Absent a wave

B. Canon a wave

C. Absent y

D. Prominent v wave

Correct answer: A

The presence of an irregularly irregular pulse is the clinical hallmark of atrial fibrillation (AF). The pulse deficit (the difference between the apical heart rate and the palpated peripheral pulse rate) occurs because many of the rapid, chaotic ventricular contractions are too weak to generate a palpable pulse wave. The jugular venous pressure (JVP) waveform reflects pressure changes in the right atrium. The 'a' wave of the JVP is caused by atrial contraction. In atrial fibrillation, the atria do not contract in a coordinated fashion; they merely fibrillate. As a result, there is no atrial systole, and consequently, the 'a' wave is absent from the JVP tracing. Instead, the baseline may show fine, chaotic fibrillatory ('f') waves. Cannon 'a' waves (B) are seen in AV dissociation when the atrium contracts against a closed tricuspid valve.

Question 62. A patient presents with digoxin toxicity, with a pulse rate of 54/min and ECG evidence of third-degree heart block. What is the best treatment for this condition?

A. Digoxin Immune Fab

B. Lidocaine

C. DC Shock

D. Phenytoin

Correct answer: A

The patient is exhibiting signs of life-threatening digoxin toxicity, specifically severe bradycardia (54/min) and a high-degree atrioventricular block (3rd degree heart block). Digoxin toxicity can cause a wide range of arrhythmias, but severe bradyarrhythmias and conduction blocks

Question 63. A 25-year-old patient with dental caries is scheduled for dental extraction. Which of the following conditions does not require prophylaxis for infective endocarditis?

A. Previous h/o endocarditis

B. Artificial heart valve

C. Untreated cyanotic heart disease

D. ASD

Correct answer: D

Antibiotic prophylaxis for infective endocarditis (IE) is recommended for certain dental procedures only in patients with the highest risk of adverse outcomes from IE. According to current guidelines (AHA/ACC), the highest-risk cardiac conditions include :1. Prosthetic (artificial) cardiac valve or prosthetic material used for valve repair.2. A previous history of infective endocarditis.3. Certain types of congenital heart disease (CHD), including unrepaired cyanotic CHD, a completely repaired defect with prosthetic material for the first 6 months, or a repaired defect with residual defects.4. Cardiac transplantation recipients who develop valvulopathy.An isolated, uncomplicated, and unrepaired secundum atrial septal defect (ASD) is

not considered a high-risk lesion and therefore does not require antibiotic prophylaxis for dental procedures.

Question 64. A woman with known diabetes mellitus who is non-compliant with treatment presents to the emergency room with abdominal pain, repeated vomiting, and recent-onset confusion. On examination, she is dehydrated with a systolic blood pressure of 90 mmHg. Investigations reveal positive urine ketones and a random blood sugar of 598 mg/dL. What is the next best step in management?

A. Normal Saline + Long Acting Insulin

B. Regular Insulin + Oral Fluids

C. Normal Saline with regular insulin

D. Normal Saline Long-acting insulin

Correct answer: C

The patient is in Diabetic Ketoacidosis (DKA), a life-threatening medical emergency. This is evidenced by hyperglycemia (RBS-598), ketonuria, and clinical signs of dehydration, hypotension, and altered mental status. The cornerstone of DKA management involves three main components : fluid resuscitation, insulin therapy, and electrolyte correction. The immediate and most critical first step is aggressive intravenous fluid resuscitation with isotonic Normal Saline to correct the profound dehydration and hypovolemia. Simultaneously or shortly after starting fluids, an intravenous infusion of regular insulin (a short-acting insulin) should be initiated. Regular insulin is used because its IV infusion allows for precise, titratable control to gradually lower blood glucose and switch off ketone production. Long-acting insulins (A, D) have no role in the acute management of DKA. Oral fluids (B) are not appropriate for a confused, vomiting patient.

Question 65. A patient presents with widening of the teeth gap, frontal bone thickening, and enlargement of the hands and feet. What is the first-line treatment for this condition?

A. Pegvisomant

B. Octreotide

C. Leuprolide

D. Bromocriptine

Correct answer: B

The patient's clinical features—widening of teeth gaps (diastema), frontal bossing, and enlargement of hands and feet—are classic signs of acromegaly, a disorder caused by excessive growth hormone (GH) secretion from a pituitary

Question 66. A female patient presents with loosening of a tooth and hemifacial pain. She has a history of COVID-19 infection treated about four months ago. Which

of the following investigations should be performed on a priority basis?

A. HbA1c

B. Ferritin

C. Nasal swab for Mucor

D. MRI Head

Correct answer: B

A patient presenting with loosening of a tooth and hemifacial pain after a history of COVID-19 infection raises suspicion for post-COVID mucormycosis, also known as black fungus infection. This infection commonly affects the nose, sinuses, maxilla, orbit, and brain, producing symptoms such as facial pain, tooth mobility, sinus involvement, and facial swelling.During and after COVID-19, many patients develop elevated serum ferritin levels due to severe inflammation and cytokine release. Ferritin is an iron-storage protein, and high ferritin levels indicate increased iron availability in tissues. Mucor species require free iron for growth, and elevated iron levels create a favorable environment for the fungus to proliferate.Therefore, serum ferritin measurement becomes an important priority investigation in suspected post-COVID mucormycosis to assess iron overload and the inflammatory state that predisposes to fungal infection.Other investigations may also be performed later, such as nasal swab or biopsy for fungal

Question 67. A 50-year-old patient presents with recurrent pituitary tumor secreting excess growth hormone. Which medication is most appropriate for treatment?

A. Bromocriptine

B. Octreotide

C. Pegvisomant

D. Goserelin

Correct answer: B

The patient has recurrent acromegaly due to a GH-secreting pituitary tumor. The first-line medical treatment for acromegaly is a somatostatin analogue. Octreotide and lanreotide are synthetic analogues of somatostatin, the natural hormone that inhibits GH release from the pituitary gland. These drugs bind to somatostatin receptors (predominantly SSTR2) on the pituitary adenoma cells, leading to a potent suppression of GH secretion. This, in turn, lowers the levels of IGF-1 and helps to control the clinical symptoms of the disease. In many patients, these drugs can also cause a modest reduction in tumor size. Pegvisomant (C) is a GH receptor antagonist and is typically considered a second-line medical therapy if somatostatin analogues are not effective or tolerated. Bromocriptine (A) is a dopamine agonist and is less effective. Goserelin (D) is a GnRH analogue.

Question 68. A 45-year-old truck driver presents with sudden-onset breathlessness. He is hemodynamically stable and is found to be HIV-1 positive with pleural effusion.

Culture of the pleural fluid shows temperature-dependent dimorphic growth at 25 °C and 30 °C with red pigmentation. What is the most likely causative organism, and what is the appropriate treatment?

A. P. Jiroveci, cotrimoxazole

B. Candida, fluconazole

C. Talaromyces marneffei, Amphotericin B

D. Blastomyces, Voriconazole

Correct answer: C

No explanation is available for this recall question yet.

Question 69. Which of the following electrolyte imbalances is associated with ECG findings of ST-segment depression and prominent U waves?

A. Hyperkalemia

B. Hypokalemia

C. Hypocalcemia

D. Hypercalcemia

Correct answer: B

Low serum potassium levels, or hypokalemia, produce a characteristic sequence of changes on the electrocardiogram (ECG). As the potassium level falls, the primary findings are :1. Flattening or inversion of the T wave.2. ST-segment depression.3. The appearance of a prominent U wave, which is a small deflection that follows the T wave and is best seen in the mid-precordial leads (V2-V4).The prominent U wave can sometimes merge with the flattened T wave, giving the appearance of a prolonged QT interval (although the actual QT interval is normal, the Q-U interval is prolonged). This combination of ST depression, flat T waves, and prominent U waves is the classic ECG manifestation of hypokalemia. Hyperkalemia (A) causes peaked T waves and QRS widening. Calcium abnormalities (C, D) primarily affect the QT interval.

Question 70. A patient receiving antidepressant therapy presents with hyperthermia, dilated pupils, palpitations, and hypotension. ECG reveals broad QRS complex tachycardia with right axis deviation. Which of the following interventions should be performed immediately?

A. Administer intravenous sodium bicarbonate

B. Administer intravenous calcium gluconate

C. Administer intravenous magnesium sulfate

D. Perform immediate defibrillation

Correct answer: A

This clinical presentation is classic for a severe Tricyclic Antidepressant (TCA) overdose. TCAs have three major toxic effects : anticholinergic effects (hyperthermia, dilated pupils), cardiovascular toxicity, and CNS toxicity. The cardiovascular toxicity is the most life-threatening

and is caused by the blockade of

Question 71. A patient on antidepressant medication presents with increased body temperature, dilated pupils, palpitations, and hypotension. Electrocardiography shows a broad QRS complex tachycardia with right axis deviation. Which of the following interventions should be initiated immediately?

A. Administer intravenous sodium bicarbonate

B. Administer intravenous calcium gluconate

C. Administer intravenous magnesium sulfate

D. Perform immediate defibrillation

Correct answer: A

This clinical presentation is classic for a severe Tricyclic Antidepressant (TCA) overdose. TCAs have three major toxic effects : anticholinergic effects (hyperthermia, dilated pupils), cardiovascular toxicity, and CNS toxicity. The cardiovascular toxicity is the most life-threatening and is caused by the blockade of fast sodium channels in the cardiac myocytes. This effect slows conduction, leading to a prolonged QRS interval (\>100 ms), a right axis deviation of the terminal QRS (a prominent R wave in aVR), and ventricular arrhythmias like the wide complex tachycardia seen here. The immediate and life-saving intervention for TCA cardiotoxicity is the administration of intravenous sodium bicarbonate. Sodium bicarbonate works by increasing the extracellular sodium concentration, which helps to overcome the sodium channel blockade, and by increasing the serum pH, which decreases the binding of the TCA to the sodium channels.

Question 72. A 35-year-old patient presents with fever, severe calf pain, and fatigue. On examination, conjunctival suffusion is noted along with petechial eruptions and thrombocytopenia. Abdominal examination reveals tender hepatomegaly and icterus. Renal function tests are within normal limits, but urinalysis shows hematuria. Based on this clinical presentation, what is the most likely diagnosis?

A. Leptospirosis

B. Dengue Fever

C. Chikungunya

D. Hepatitis B

Correct answer: A

This clinical picture is highly suggestive of leptospirosis. The key features pointing to this diagnosis are the acute febrile illness with severe myalgia, particularly in the calves, and the pathognomonic sign of conjunctival suffusion (redness of the conjunctiva without discharge). The presence of icterus (jaundice), tender hepatomegaly, petechiae, and thrombocytopenia indicates a more severe form of the disease, often called Weil's disease, which involves hepatic and sometimes renal dysfunction (though KFTs are normal here, hematuria is present). While Dengue fever (B) can cause fever, petechiae, and thrombocytopenia, the severe calf pain and

conjunctival suffusion are much more characteristic of leptospirosis. Chikungunya

Question 73. A 6-month-old male infant presents with pain in the extremities and is admitted to the hospital. There is a history of a previous chest infection occurring two years ago. High-performance liquid chromatography (HPLC) analysis reveals increased levels of hemoglobin F (HbF) and hemoglobin S (HbS). Based on these clinical and laboratory findings, what is the most likely diagnosis?

A. Hereditary Spherocytosis

B. Hemophilia

C. Sickle cell anemia

D. Beta Thalassemia

Correct answer: C

The definitive diagnostic test result is the High-Performance Liquid Chromatography (HPLC), which analyzes the types of hemoglobin present. The results show the presence of Hemoglobin S (HbS), which is the abnormal hemoglobin that causes sickle cell anemia. In sickle cell disease (HbSS genotype), normal adult hemoglobin (HbA) is absent, and the primary hemoglobins are HbS and fetal hemoglobin (HbF). HbF levels are high at birth and gradually decline, but they often remain elevated in patients with sickle cell disease, which is somewhat protective. The clinical presentation of a 6-month-old with pain in the extremities (dactylitis or hand-foot syndrome) and a history of chest infection (acute chest syndrome) is also classic for the initial manifestations of sickle cell anemia, as this is the age when HbF levels have dropped sufficiently for sickling to become clinically significant.

Question 74. An 11-year-old child with rheumatic fever is started on secondary prophylaxis with intramuscular benzathine penicillin (0.6 million units). Which of the following statements regarding secondary prevention is correct?

A. Lifelong every 3 weekly

B. Only once single dose

C. Till 5 years 3 weekly

D. Till 10 years 3 weekly or till 25 years of age

Correct answer: D

After an episode of Acute Rheumatic Fever (ARF), secondary prophylaxis with penicillin is crucial to prevent recurrent Group A streptococcal infections, which could trigger further episodes of ARF and worsen cardiac damage (rheumatic heart disease). The duration of prophylaxis depends on the severity of the initial disease. For a patient with rheumatic fever with carditis but no residual heart disease, the standard recommendation (e.g., from the American Heart Association) is to continue prophylaxis for 10 years after the last episode or until age 21 (whichever is longer). Some guidelines, particularly in high-prevalence areas, may recommend continuing until age 25. Therefore, continuing prophylaxis for 10 years or until age

25 is the most appropriate option.

Question 75. A 25-year-old female presents to the clinic with a severe, throbbing headache localized to the left side of her head. She describes the pain as pulsating and reports that these headache episodes have been occurring intermittently over the past few months. Each episode is accompanied by significant nausea and occasional vomiting. Prior to the onset of the headache, she frequently experiences visual disturbances such as flashing lights and zigzag patterns, suggestive of an aura. She also notes increased sensitivity to light (photophobia) and sound (phonophobia) during these episodes, which interferes with her ability to perform daily activities. Given her symptoms and overall clinical presentation, what is the most appropriate treatment option for immediate relief of her migraine?

A. Sumatriptan

B. Propranolol

C. Topiramate

D. Flunarizine

Correct answer: A

The patient's presentation of a unilateral, throbbing headache accompanied by nausea, photophobia, phonophobia, and preceded by a visual aura is a classic description of migraine with aura. The question asks for treatment for immediate relief, which refers to abortive therapy. The first-line and most specific abortive medications for moderate to severe migraine attacks are the triptans. Sumatriptan is the prototypical drug in this class. Triptans are serotonin 5-HT1B/1D receptor agonists. They work by causing vasoconstriction of painfully dilated cranial blood vessels and by inhibiting the release of pro-inflammatory neuropeptides in the trigeminal nervous system, thereby aborting the headache attack. Propranolol (B), topiramate (C), and flunarizine (D) are all medications used for prophylaxis (prevention) of migraines and are not effective for treating an acute attack.

Question 76. Which of the following is not Found in MEN2B Syndrome?

A. Mucosal neuroma

B. Megacolon

C. Marfanoid habitus

D. Parathyroid adenoma

Correct answer: D

Multiple Endocrine Neoplasia type 2B (MEN 2B) is an autosomal dominant syndrome characterized by a specific triad of tumors and distinct physical features. Its components are :1. Aggressive medullary thyroid carcinoma (MTC).2. Pheochromocytoma.3. A unique phenotype that includes multiple mucosal neuromas (A) on the lips and tongue, a tall, slender Marfanoid habitus (C), and diffuse intestinal ganglioneuromatosis, which can lead to motility issues and

complications like megacolon (B).The feature that is notably absent in MEN 2B is parathyroid hyperplasia or adenoma, which causes primary hyperparathyroidism. Hyperparathyroidism is a key component of the closely related MEN 2A syndrome but not MEN 2B. This is a crucial distinction between the two subtypes.

Question 77. A 10-year-old child presents with abdominal pain and melena. On physical examination, palpable purpura is noted over the calves and buttocks. The child also has joint pain and swelling involving the knees and ankles, and the parents report recurrent episodes of crampy abdominal pain lasting for several days. Based on this clinical presentation, which medication should be used to manage the severe abdominal pain and gastrointestinal manifestations?

A. Azathioprine

B. Methotrexate

C. Corticosteroids

D. Cyclosporine

Correct answer: C

The clinical tetrad of palpable purpura (typically on the lower extremities and buttocks), arthralgia/arthritis, abdominal pain, and renal disease is the classic presentation of Henoch-

Question 78. Broken vaccine vial you will be throw in?

A. Yellow

B. Blue

C. Red

D. White with Puncture proof

Correct answer: B

According to the Bio-Medical Waste Management Rules in India, different types of waste must be segregated into color-coded bags or containers at the point of generation. Broken or discarded glassware, which includes broken vaccine vials, ampoules, and other glass items, should be disposed of in a blue color-coded, puncture-proof container or cardboard box. This ensures that the sharp glass items are handled safely and do not pose an injury risk to healthcare workers and waste handlers. The yellow bag (A) is for human anatomical waste,

Question 79. Which of the following statements is true regarding the norm requirements for an Urban Community Health Centre (CHC)?

A. Minimum 100 beds in metropolitan areas

B. Referral centre for 2-3 phc

C. No district/subdistrict hospital should be located in that area

D. Per 1 to 1.5 lac population

Correct answer: A

Under the National Urban Health Mission (NUHM), Community Health Centers (CHCs) are established to provide secondary care services. The norms for Urban-CHCs are different from those in rural areas. An Urban-CHC is established in cities with a population of more than 5 lakhs. A key norm is the bed strength. In non-metropolitan cities, an Urban-CHC should have a minimum of 30-50 beds. However, in large metropolitan cities, the bed strength is higher, with a requirement for a minimum of 100 beds. The U-CHC serves as a referral facility for Urban Primary Health Centers (U-PHCs), but the number is not fixed at 2-3 (B is a rural norm). The population norm is for every 2.5 lakh population in non-metro cities and up to 5 lakh in metro cities (D is incorrect).

Question 80. An ANM is scheduled to conduct a vaccination camp in a village and has received two opened vials of pentavalent vaccine and MR vaccine. What should be done next?

A. Use both

B. Discard both

C. Use penta discard MR

D. Use MR discard penta

Correct answer: C

This question relates to the Open Vial Policy of the Universal Immunization Programme. This policy states that certain multi-dose vaccine vials, once opened, can be used for up to 28 days,

Question 81. A woman residing in an urban area of Madhya Pradesh delivers her baby in a healthcare institution after counseling by an ASHA worker in 2018. What monetary benefits are the woman and the ASHA worker entitled to under the Janani Suraksha Yojana scheme?

A. 1400 to mother, 600 to ASHA

B. 700 to mother, 400 to ASHA

C. 600 to mother, 1400 to ASHA

D. 600 to mother, 400 to ASHA

Correct answer: C

Under the Janani Suraksha Yojana (JSY), financial incentives are provided to promote institutional deliveries, especially in states with low institutional delivery rates. Madhya Pradesh is classified as a Low Performing State (LPS) under this scheme.In urban areas of Low Performing States, the incentive distribution is structured differently between the mother and the Accredited Social Health Activist (ASHA) worker who motivates and assists the pregnant woman.According to JSY guidelines:1. The mother receives ₹600 as a cash incentive for delivering in a government or accredited health facility.2. The ASHA worker receives ₹1400, which includes compensation for identifying the pregnant woman, counseling her for institutional delivery, accompanying her to the health facility, and ensuring postnatal follow-up

care.The larger incentive for the ASHA worker reflects her key role in community mobilization, ensuring antenatal checkups, facilitating institutional delivery, and providing postnatal support.Therefore, for a woman living in an urban area of Madhya Pradesh who delivers in a healthcare institution after counseling by an ASHA worker, the entitlement is:Mother – ₹600ASHA – ₹1400Hence, the correct answer is (C) 600 to mother, 1400 to ASHA.

Question 82. Which of the following is not a part of WHO stepwise approach?

A. Therapeutic Measurement

B. Physical measurement

C. Psychological measurement

D. Behavioural measurement

Correct answer: A

The WHO STEPwise approach to surveillance (STEPS) is a standardized method developed by the World Health Organization for collecting, analyzing, and monitoring data related to non-communicable disease (NCD) risk factors. It is called “stepwise” because data are collected in three sequential steps, each adding more information.Step 1 : Behavioural Measurement This step involves collecting information through questionnaires about behavioral risk factors such as tobacco use, alcohol consumption, dietary habits, and physical activity.Step 2 : Physical Measurement : This step includes objective physical measurements such as height, weight, waist circumference, and blood pressure, which help assess conditions like obesity and hypertension.Step 3 : Biochemical Measurement This step involves laboratory investigations such as blood glucose, cholesterol, and other biochemical markers that indicate metabolic risk factors.The options behavioural measurement and physical measurement are part of the WHO STEPS approach. Psychological measurement is sometimes assessed in health surveys but is not a standard step in STEPS. However, therapeutic measurement is definitely not included in the WHO STEPwise surveillance framework.Therefore, the correct answer is (A) Therapeutic Measurement.

Question 83. Which of the following agencies is responsible for providing seeds and manure under the Applied Nutrition Programme?

A. CARE

B. UNICEF

C. WHO

D. UNDP

Correct answer: A

No explanation is available for this recall question yet.

Question 84. You are a PHC Officer posted at a Primary Health Centre in an earthquake-prone area. What are your responsibilities as an MO in disaster

management?

A. Giving instructions over phone or radio

B. Simulation of disaster & assessing response

C. Public health education

D. Preparedness at phc level by utilising resources

Correct answer: B

In disaster-prone areas such as regions vulnerable to earthquakes, the Medical Officer (MO) at a Primary Health Centre (PHC) plays a key role in disaster preparedness and response planning. One of the most important responsibilities is conducting simulation exercises (mock drills) to test how effectively the health system responds during emergencies.Simulation of disaster and assessing response involves organizing mock disaster drills, where healthcare staff practice emergency protocols such as triage, casualty management, referral, communication, and coordination with emergency services. These exercises help identify gaps in preparedness, staff training needs, resource shortages, and weaknesses in communication systems. After the simulation, the response is evaluated so that improvements can be made in disaster management plans.Although the other options are related to health administration, they are not the primary responsibility highlighted in disaster preparedness. Giving instructions over phone or radio is part of communication, public health

Question 85. A study was conducted to assess the relationship between green tea consumption and diabetes. The calculated risk ratio was 0.8. Which of the following statements is correct?

A. Green tea reduces the risk of DM

B. Green tea increases the risk of DM

C. No Effect

D. Nothing Significant

Correct answer: A

The Risk Ratio (RR), also known as the Relative Risk, compares the risk of an outcome (in this case, diabetes) in an exposed group (green tea drinkers) to the risk in an unexposed group.1. An RR of 1.0 means there is no difference in risk between the groups (No Effect).2. An RR greater than 1.0 means the exposure increases the risk (risk factor).3. An RR less than 1.0 means the exposure decreases the risk (protective factor).4. In this study, the RR is 0.8, which is less than 1.0. This indicates that the risk of developing diabetes in the group that drinks green tea is 0.8 times the risk in the group that does not. This can also be interpreted as a 20% reduction in risk (1.0 - 0.8 = 0.2). Therefore, the correct conclusion is that green tea reduces the risk of DM, or is a protective factor. The question of statistical significance (D) cannot be determined without a p-value or confidence interval.

Question 86. Most logical & effective approach of controlling rabies in urban

population.

A. Testing all the dogs for rabies

B. Removing stray dogs & vaccinating dog population

C. Building corporation b/w health workers

D. All of the above

Correct answer: B

No explanation is available for this recall question yet.

Question 87. A patient has damage to the basilar membrane leading to loss of high-frequency hearing. At which location are the hair cells most likely damaged?

A. Modiolus

B. Stria vascularis

C. Helicotrema

D. Oval window

Correct answer: D

The cochlea is tonotopically organized, meaning that different frequencies of sound are processed at different locations along the basilar membrane. The physical properties of the basilar membrane vary from its base to its apex. The base of the basilar membrane, located near the oval window, is narrow and stiff. This region is tuned to vibrate maximally in response to high-frequency sounds. The apex of the basilar membrane, near the helicotrema (C), is

Question 88. A 2-year-old child presents to the emergency department with respiratory distress. Chest X-ray shows hyperinflation of the right lung with a normal left lung. Which of the following statements is correct?

A. Decreased air entry on particular part of auscultation is suggestive of foreign body

B. Removal by flexible bronchoscopy is the TOC

C. Complete Airway obstruction

D. All of the above

Correct answer: A

The clinical history of sudden onset respiratory distress in a toddler, combined with the X-ray finding of unilateral hyperinflation, is highly suggestive of an inhaled foreign body in the bronchus. The foreign body can act as a ball-valve, allowing air to enter the lung during inspiration but trapping it during expiration, leading to air trapping and hyperinflation on the affected side. A key physical finding on auscultation would be focal wheezing or decreased air entry over the affected lung area (A). A complete airway obstruction (C) would lead to atelectasis (collapse), not hyperinflation. The treatment of choice (TOC) for removing a foreign body from the airway in a child is rigid bronchoscopy, not flexible bronchoscopy (B), as the rigid scope provides a better airway, superior optics, and larger channels for the retrieval instruments.

Question 89. A patient with nasal polyps and a history of generalized allergy presents to the ENT outpatient department and is diagnosed with Samter's triad. Which drug should be avoided in this patient?

A. Gentamicin

B. Aspirin

C. Cetirizine

D. All

Correct answer: B

Samter's triad, also known as Aspirin-Exacerbated Respiratory Disease (AERD), is a clinical syndrome defined by the presence of three conditions :1. Asthma2. Nasal polyposis3. Respiratory reactions upon ingestion of aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs).The underlying pathophysiology involves an abnormality in the arachidonic acid metabolism pathway, leading to an overproduction of pro-inflammatory leukotrienes upon inhibition of the COX enzyme by aspirin/NSAIDs. In these patients, ingestion of aspirin can precipitate a severe reaction, including acute bronchospasm (asthma attack), profuse rhinorrhea, and nasal congestion. Therefore, aspirin and all other NSAIDs must be strictly avoided. Gentamicin (A) is an antibiotic, and cetirizine (C) is an antihistamine; neither is contraindicated in this syndrome.

Question 90. A 5-year-old woman undergoes thyroidectomy and, on the third postoperative day, develops perioral numbness. Which further investigation should be performed in this case?

A. Free T3, T4

B. Calcium, phosphate and PTH levels

C. RAI scan

D. T3, T4, TSH

Correct answer: B

The patient's symptom of perioral numbness and tingling, occurring a few days after a total thyroidectomy, is the classic presentation of acute hypocalcemia. This is a common complication of thyroid surgery, caused by the inadvertent damage to, devascularization,

Question 91. Most common site for intraperitoneal abscess.

A. Subphrenic space

B. Paracolic gutter

C. Pouch of Morrison

D. Cave of Retzius

Correct answer: A

Intraperitoneal abscesses are localized collections of pus within the peritoneal cavity, usually occurring as a complication of abdominal surgery, trauma, or intraperitoneal infections like a

perforated appendix or diverticulitis. The location of these abscesses is determined by gravity and the anatomical gutters and recesses of the peritoneal cavity. While abscesses can form in any of these spaces, the subphrenic spaces (the spaces beneath the diaphragm, particularly the right subphrenic space) are among the most common sites. This is because infected fluid from many parts of the abdomen can track superiorly along the paracolic gutters and accumulate under the diaphragm when the patient is in a supine position. The right subphrenic space is most common due to the frequency of pathologies like appendicitis and cholecystitis. The hepatorenal recess (Pouch of Morrison) (C) is another common site.

Question 92. Route of metastasis of prostate cancer to lumbar vertebrae.

A. Transcoelomic spread

B. Lymphatics

C. Prostatic venous plexus

D. Inferior vesical vein

Correct answer: C

Prostate cancer has a strong predilection for metastasizing to the bones of the axial skeleton, particularly the lumbar vertebrae. The primary route for this metastasis is believed to be hematogenous (via the bloodstream). The prostatic venous plexus (plexus of Santorini)

Question 93. Following surgery for varicose veins, a patient develops numbness along the medial aspect of the leg. Which nerve is most commonly affected?

A. Superficial peroneal

B. Deep peroneal

C. Saphenous nerve

D. Sural nerve

Correct answer: C

Surgery for varicose veins often involves stripping or ablation of the great saphenous vein (GSV). The saphenous nerve is a pure sensory nerve that is the terminal branch of the femoral nerve. It runs in close proximity to the GSV along the medial aspect of the knee and leg. During vein stripping or other procedures on the GSV, the saphenous nerve is highly vulnerable to injury, either through direct trauma, stretching, or entrapment. Injury to the saphenous nerve results in numbness, tingling, or pain along its distribution, which is the medial aspect of the lower leg and foot. This is the most common neurological complication of varicose vein surgery. The sural nerve (D) runs with the small saphenous vein on the posterior aspect of the leg. The peroneal nerves (A, B) are on the lateral side.

Question 94. A 5-year-old woman presents with galactorrhea and has a negative urine pregnancy test. MRI of the brain reveals a large pituitary tumor, and the patient refuses surgical intervention. Which drug is the treatment of choice for this

patient?

A. Bromocriptine

B. Leuprolide

C. Degarelix

D. Cetrorelix

Correct answer: A

The clinical syndrome of galactorrhea and amenorrhea, in the presence of a pituitary tumor, is diagnostic of a prolactinoma. This is a benign adenoma of the pituitary gland that

Question 95. An 1-month-old infant presents with recurrent jerky movements of the limbs along with regression of developmental milestones. Electroencephalography reveals a hypsarrhythmia pattern. What is the antiepileptic drug of choice for this patient?

A. ACTH

B. Propranolol

C. Phenobarbitone

D. Phenytoin

Correct answer: A

The clinical triad of infantile spasms (the recurrent jerky movements), developmental regression, and an EEG pattern of hypsarrhythmia (a chaotic, high-voltage, disorganized pattern of spikes and slow waves) is diagnostic of West syndrome. This is a severe, age-specific epileptic encephalopathy of infancy. The first-line treatment and drug of choice for West syndrome is hormonal therapy with either adrenocorticotropic hormone (ACTH) or high-dose oral corticosteroids (prednisolone). Another first-line option, particularly in cases caused by tuberous sclerosis, is vigabatrin. Standard antiepileptic drugs like phenobarbital (C) and phenytoin (D) are generally ineffective for treating the spasms and do not alter the poor neurodevelopmental outcome associated with an untreated hypsarrhythmic pattern.

Question 96. A young child is brought by his mother with complaints of multiple episodes of loose stools along with drowsiness and lethargy. On examination, the skin pinch returns very slowly, and the child is unable to accept breast feeds. Based on these clinical features, what is the class of dehydration?

A. No Dehydration

B. Severe Dehydration

C. Mild Dehydration

D. Some Dehydration

Correct answer: B

According to the Integrated Management of Neonatal and Childhood Illness (IMNCI) guidelines from the WHO, the classification of dehydration is based on key clinical signs.

Question 97. A -year-old boy presents with palpable purpura over the lower limbs and buttocks. He also complains of arthralgia and abdominal pain and has a recent history of upper respiratory tract infection. What is the appropriate treatment option for this condition?

A. Glucocorticoids

B. Azathioprine

C. Methotrexate

D. Cyclosporine

Correct answer: A

This patient's clinical presentation is classic for Henoch-Schönlein Purpura (HSP), also known as IgA vasculitis. The key features are the tetrad of non-thrombocytopenic palpable purpura (most prominent on the lower limbs and buttocks), arthralgia or arthritis, colicky abdominal pain, and potential renal involvement. The disease is often preceded by an upper respiratory tract infection. For most cases of HSP, treatment is supportive with analgesics for joint pain. However, in patients with severe abdominal pain, significant gastrointestinal bleeding, or progressive nephritis, a course of systemic glucocorticoids (e.g., prednisolone) is indicated. Steroids are particularly effective in rapidly relieving the severe abdominal pain, which is caused by vasculitis of the bowel wall. More potent immunosuppressants (B, C, D)

Question 98. A child presents with exercise-induced fatigue and clinical features suggestive of McArdle disease. Deficiency of which enzyme is most likely responsible for this condition?

A. Glucose 6 phosphatase

B. Phosphorylase

C. Lysosomal glucosidase

D. Phosphofructokinase

Correct answer: B

McArdle disease is Glycogen Storage Disease Type V. It is a metabolic myopathy caused by a deficiency of the enzyme myophosphorylase, which is the muscle isoform of glycogen phosphorylase. This enzyme is responsible for the first step of glycogenolysis (the breakdown of glycogen) in skeletal muscle. In McArdle disease, the muscles are unable to break down their glycogen stores to produce glucose for energy. This leads to the classic symptoms of exercise intolerance, severe muscle fatigue, cramping, and pain that occur shortly after starting strenuous activity. Patients often experience a second wind phenomenon if they rest and allow blood-borne fuels like glucose and free fatty acids to reach the muscles. A failure of serum lactate to rise after ischemic forearm exercise is a characteristic diagnostic finding. Glucose-6-phosphatase (A) is deficient in Von Gierke disease. Lysosomal glucosidase (C) is deficient in Pompe disease.

Question 99. A mother of a newborn is concerned because her baby has not passed urine on the first postnatal day. What advice should be given to her?

A. Start formula milk

B. Continue breast feeding and observe

C. Start IV fluids

D. Admit in NICU and investigate

Correct answer: B

It is quite common for a healthy, full-term newborn not to pass urine for the first 12 to 24 hours of life. Approximately 99% of newborns will void within the first 48 hours. During the first few days, the mother produces colostrum, which is low in volume but rich in nutrients and antibodies. The infant's fluid intake is minimal until the mother's milk comes in around day 3-5. As long as the baby is otherwise well, feeding effectively, and has no other signs of illness or congenital anomalies (like posterior urethral valves), the failure to pass urine on Day 1 is not typically a cause for alarm. The appropriate advice is to reassure the mother, encourage her to continue breastfeeding on demand to ensure adequate hydration, and observe the infant. Intervention with formula (A), IV fluids (C), or NICU admission (D) is not indicated unless there are other concerning signs or the anuria persists beyond 48 hours.

Question 100. Most common complication of untreated radial head dislocation?

A. Cubitus varus

B. Cubitus valgus

C. Damage to ulnar nerve

D. Myositis ossificans

Correct answer: B

An untreated or missed dislocation of the radial head in a child, especially when associated with a fracture of the ulna (a Monteggia fracture-dislocation), can lead to long-term deformity and functional impairment. The dislocation disrupts the normal mechanics of the elbow joint and can affect the growth of the radius. Over time, this disruption can lead to a progressive cubitus valgus deformity. This is a condition where the extended forearm is angled away from the body, resulting in an increased carrying angle. The valgus deformity develops due to relative overgrowth of the radius or undergrowth of the lateral humeral condyle. Cubitus varus (A), or a gunstock deformity, is typically a complication of a malunited supracondylar humerus fracture, not a radial head dislocation. Nerve damage and myositis ossificans are possible but cubitus valgus is the most characteristic late deformity.

Question 101. What is the ideal treatment for a fracture of the fibula?

A. Analgesic-Close reduction-cast

B. Neurological assessment-Analgesics

C. Neurological testing-Crif

D. Neurological assessment-Analgesics-Cast

Correct answer: D

The fibula is the thinner and non–weight-bearing bone of the leg. Most isolated fibular fractures are usually stable injuries and often do not require surgical fixation unless associated with ankle instability or other fractures.The ideal management begins with a neurological assessment. This is important because the common peroneal nerve runs close to the fibular neck and can be injured in fibular fractures. Therefore, checking motor function

Question 102. A patient presents to the emergency department with a Galeazzi fracture. X-ray shows sharp fracture ends at the fracture site along with soft tissue swelling around the wrist. What is the appropriate emergency management?

A. Check vascularity, Open Reduction, Pop Cast

B. Check vascularity, Close Reduction. External Fixation

C. Check vascularity, Close Reduction, Pop Cast

D. Check Vascularity, Open Reduction and Internal Fixation

Correct answer: B

A Galeazzi fracture is defined as a fracture of the distal third of the radius associated with dislocation or disruption of the distal radioulnar joint (DRUJ). It is considered an unstable forearm injury, especially in adults.In the emergency department, the first step in management is always to assess vascular status of the limb. This includes checking radial and ulnar pulses, capillary refill, skin temperature, and signs of distal ischemia, because trauma can compromise blood supply.After confirming vascular integrity, the next step is closed reduction of the fracture and the distal radioulnar joint to restore alignment and reduce pain. Because Galeazzi fractures are unstable injuries, simple casting alone is often inadequate to maintain reduction.Therefore, external fixation may be used in the emergency setting to stabilize the fracture temporarily, especially when there is significant soft tissue swelling or sharp fracture ends, as

Question 103. A 4-year-old G2P1 woman presents at 5 weeks of gestation with no complaints and reports regular fetal movements. Her obstetric history is significant for a previous classical cesarean section performed at 5 weeks due to eclampsia and severe fetal growth restriction. She is currently on low-dose aspirin and prenatal vitamins. On clinical examination, the symphysis–fundal height measures 8 cm, and the fetal heart rate is 40 beats per minute. Ultrasound examination reveals a single live fetus in breech presentation, a posteriorly located placenta, and normal amniotic fluid volume. The patient expresses a strong desire for vaginal delivery. Based on this history and current findings, what is the best management approach for this patient?

A. Review USG after 2 weeks

B. Schedule elective LSCS at 37 weeks

C. External Cephalic Version at 36 weeks

D. Await spontaneous labor & then do an Internal podalic version

Correct answer: B

The most critical piece of information in this patient's history is the previous classical cesarean section. A classical C-section involves a vertical incision in the upper, contractile portion of the uterus. This type of uterine scar carries a much higher risk of uterine rupture (4-9%) during a subsequent labor compared to a low transverse scar. A trial of labor after a classical cesarean (TOLAC) is therefore an absolute contraindication. Furthermore, procedures that can increase uterine stress, such as External Cephalic Version (ECV) (C) to turn the breech fetus, are also absolutely contraindicated due to the high risk of catastrophic uterine rupture. Therefore, a vaginal delivery is not a safe option for this patient. The safest and most appropriate management is to schedule a repeat elective Lower Segment Cesarean Section (LSCS), typically performed around 37-38 weeks of gestation to avoid the onset of spontaneous labor.

Question 104. A primigravida presents to the labor room at 0 weeks of gestation and has been in labor for hours. Which of the following findings would determine that she is in active labor?

A. 2 contractions each lasting 30 sec in 10 mins

B. Cervical dilation \>5cm

C. Head 5/5 palpable on abdominal examination

D. Rupture of Membranes

Correct answer: B

Labor is divided into a latent phase and an active phase. The latent phase is characterized by regular uterine contractions and slow, gradual cervical change (effacement and early dilation). The active phase of the first stage of labor is defined by an accelerated rate of cervical dilation. Historically, the threshold for the active phase was considered to be 4 cm. However, contemporary obstetric guidelines have been updated based on modern labor curves. The current definition for the start of the active phase of labor is a cervical dilation of 5-6 cm

Question 105. A 4 weeks primigravida presents with jaundice & BP of 40/6 mmHg. Her investigations revealed a serum bilirubin of . mg/dl, SGOT-50, SGPT-00. Her LDH is 00 & platelet count is 5000. Her KFT & coagulation profile were normal. What is her diagnosis?

A. Acute fatty liver of pregnancy

B. Viral hepatitis

C. Intrahepatic cholestasis of pregnancy

D. HELLP Syndrome

Correct answer: D

The patient's presentation with hypertension (BP \>140/90 mmHg) after 20 weeks of gestation indicates a hypertensive disorder of pregnancy, such as pre-eclampsia. The laboratory findings are the key to the specific diagnosis. The triad of Hemolysis, Elevated Liver enzymes, and Low Platelets defines HELLP syndrome, which is a severe variant of pre-eclampsia. This patient meets the criteria :1. Hemolysis : Indicated by the significantly elevated Lactate Dehydrogenase (LDH) of 700 U/L (a marker of red cell breakdown).2. Elevated Liver enzymes : SGOT (AST) of 150 U/L and SGPT (ALT) of 200 U/L are both markedly elevated.3. Low Platelets : The platelet count of 75,000/mm^3 is well below the threshold of 100,000/mm^3.4. Acute fatty liver of pregnancy (A) typically presents with more severe liver failure and hypoglycemia. ICP (C) presents with pruritus and elevated bile acids.

Question 106. A 9-year-old G2P1 woman presents at 8 weeks and days of gestation for a routine targeted fetal anomaly scan. Fetal anatomy is normal, but transvaginal ultrasound shows a cervical length of 5 mm. Although she is counseled that there is no clear proven benefit in her case, the patient insists on undergoing cervical cerclage. Which of the following conditions is an absolute (complete) contraindication to cervical cerclage?

A. Positive fetal fibronectin test

B. Membranes bulging into vagina

C. Ruptured membranes

D. Advanced Maternal age

Correct answer: C

A cervical cerclage is a stitch placed around the cervix to provide mechanical support and prevent preterm birth in women with cervical insufficiency. A short cervical length of 15 mm (\<25 mm) is an indication for considering a cerclage. However, there are several absolute contraindications to the procedure. Preterm premature rupture of membranes (PPROM), or ruptured membranes, is an absolute contraindication. Placing a cerclage in the presence of ruptured membranes would seal the uterine cavity, trapping any potential ascending bacteria and dramatically increasing the risk of chorioamnionitis, a severe intra-amniotic infection that is dangerous for both the mother and fetus. Other contraindications include active preterm labor, vaginal bleeding, and evidence of chorioamnionitis. Bulging membranes (B) make the procedure technically difficult and risky, but it is not an absolute contraindication in all cases, unlike confirmed rupture.

Question 107. A G3P2L2 woman presents at weeks of gestation seeking termination of pregnancy by medical methods. According to Comprehensive Abortion Care (CAC) guidelines, which of the following drugs is used for this purpose?

A. Mifepristone + Methergine

B. Mifepristone + Methotrexate

C. Mifepristone + Misoprostol

D. Mifepristone + Medroxyprogesterone acetate

Correct answer: C

Medical abortion (termination of pregnancy with medication) in the first trimester is a safe and effective procedure. The standard and most widely recommended regimen, approved by regulatory bodies worldwide, is a combination of two drugs : mifepristone and misoprostol. Mifepristone (also known as RU-486) is a progesterone receptor antagonist. By blocking progesterone, it causes the breakdown of the decidua, detaches the embryo, and softens the cervix. This is followed 24-48 hours later by misoprostol, a prostaglandin E1 analogue. Misoprostol induces strong uterine contractions, which then expel the products of conception. This combination regimen is highly effective (over 95%) for terminating pregnancies up to 9-10 weeks of gestation. Methotrexate (B) has been used in the past but is less effective and slower.

Question 108. A 2-year-old primigravida who is two weeks overdue presents to the outpatient department with complaints of vaginal bleeding and right-sided abdominal pain. On examination, her vital signs are stable, and abdominal examination reveals no significant findings. Bimanual pelvic examination shows a bulky, soft, non-tender uterus with no adnexal mass, and mild vaginal bleeding is present. Her serum beta-hCG level is 400 IU/L. Ultrasound examination demonstrates a trilaminar endometrium with normal-appearing adnexa. Based on these findings, what is the next best step in the management of this patient?

A. Repeat serum beta hCG after 48hours

B. Diagnostic Laparoscopy

C. Repeat USG after 3 days

D. Wait & watch for 7 days

Correct answer: A

Repeat serum beta hCG after 48 hoursThis patient presents with symptoms concerning for an ectopic pregnancy (pain and bleeding in early pregnancy). The transvaginal ultrasound (TVS) is inconclusive; it doesn't show an intrauterine pregnancy (IUP), but it also doesn't show a clear ectopic mass. The β-hCG level of 1400 IU/L is in the discriminatory zone, a level above which an IUP should typically be visible on TVS. Since no IUP is seen, the suspicion for an ectopic pregnancy is high. The next and most crucial step is to repeat the serum β-hCG level in 48 hours. In a normal, viable IUP, the β-hCG level should rise by at least 53-66% (approximately double) in 48 hours. In an ectopic or nonviable IUP, the rise is typically much slower, or the levels may plateau or decline. This trend is critical for differentiating between a very early IUP, a nonviable pregnancy, and an ectopic pregnancy, and will guide further management.

Question 109. A 2-week pregnant woman presents with profuse vaginal bleeding. On examination, her vital signs are stable, with normal blood pressure and blood sugar

levels. She has no abdominal pain, and the fetal heart rate is within normal limits. Ultrasonography reveals a normally developing fetus with no evidence of placental abruption. Based on these clinical findings, what is the most likely site of placental implantation?

A. Ovarian

B. Tubal

C. Internal Os

D. Abdominal

Correct answer: C

The clinical presentation of painless, profuse vaginal bleeding in the second or third trimester is the classic sign of placenta previa. Placenta previa is a condition where the placenta implants in the lower segment of the uterus, either partially or completely covering the internal cervical os. As the lower uterine segment begins to form and the cervix starts to efface or dilate later in pregnancy, the placental

Question 110. A multigravida woman has been in the second stage of labor for hours with strong uterine contractions. On abdominal examination, the fetal head is /th palpable, and the fetal heart rate is 40 beats per minute. Vaginal examination shows a fully dilated cervix with the fetal head at the level of the ischial spines in the right occipito-transverse (ROT) position, along with moderate caput and molding. What is the most appropriate management approach for delivery in this case?

A. Emergency LSCS

B. Mid cavity forceps

C. Await 1 more hour

D. Vacuum delivery

Correct answer: A

The patient is a multigravida who has been in the second stage of labor for 2 hours with strong contractions, which is considered a prolonged second stage. The critical finding is that the fetal head is at the level of the ischial spines (station 0) in a transverse position (ROT). This indicates a deep transverse arrest. The fetal head has descended into the mid-pelvis but has failed to rotate to the required occiput-anterior position to negotiate the pelvic curve. Attempts at an operative vaginal delivery (forceps or vacuum) from this high station with an unrotated head are considered mid-cavity deliveries. These are technically difficult and carry a high risk of significant maternal and fetal trauma. In modern obstetrics, a mid-cavity rotational forceps delivery (B) is rarely performed. The safest and most appropriate management for deep transverse arrest is an emergency Lower Segment Cesarean Section (LSCS).

Question 111. A 0-year-old previously healthy woman is in active labor at term when she suddenly collapses during delivery, developing severe hypotension and acute

respiratory distress. Soon afterward, she experiences profuse vaginal bleeding and features suggestive of disseminated intravascular coagulation (DIC), including extensive bruising and bleeding from intravenous sites. There is no prior history of preeclampsia, placental abruption, or any other underlying condition that could account for this presentation. What is the most likely cause of her sudden collapse and the subsequent complications?

A. Amniotic fluid embolism

B. Postpartum hemorrhage

C. Eclampsia

D. Peripartum cardiomyopathy

Correct answer: A

This clinical scenario describes the catastrophic and classic presentation of an amniotic fluid embolism (AFE), also known as anaphylactoid syndrome of pregnancy. AFE is a rare but often fatal complication of labor and delivery. It is characterized by the sudden onset of cardiopulmonary collapse (hypotension, respiratory distress, hypoxia) followed rapidly by the development of a severe coagulopathy (disseminated intravascular coagulation - DIC), which leads to profuse hemorrhage. It is thought to be caused by the entry of amniotic fluid and fetal debris into the maternal circulation, triggering a massive, anaphylactoid-like inflammatory response that leads to cardiovascular collapse and activation of the clotting cascade. While postpartum hemorrhage (B) is a consequence, the initial event of sudden collapse is the key. Eclampsia (C) would present with seizures and hypertension.

Question 112. In which of the following will you see long bone fractures in the fetus on antenatal ultrasound?

A. Marfan syndrome

B. Osteogenesis Imperfecta

C. Achondroplasia

D. Cretinism

Correct answer: B

Osteogenesis Imperfecta (OI), also known as brittle bone disease, is a group of genetic disorders of collagen type I synthesis. Defective type I collagen leads to extremely fragile bones that fracture with minimal or no trauma.

Question 113. A 8-year-old G2P1 woman presents at 8 weeks of gestation for a routine antenatal checkup. On clinical examination, the uterine size is smaller than expected, corresponding to 4 weeks of gestation. Ultrasonography demonstrates absence of amniotic fluid (anhydramnios). Based on these findings, what is the most likely cause of the absence of amniotic fluid in this patient?

A. Fetal Renal anomalies

B. Congenital Heart disease

C. Tracheoesophageal fistula

D. Hydrocephalus

Correct answer: A

In the second half of pregnancy, the primary source of amniotic fluid is fetal urine production. The fetus continuously swallows amniotic fluid, which is absorbed, processed by the fetal kidneys, and then excreted back into the amniotic sac as urine. Therefore, any condition that severely impairs or prevents fetal urine production will lead to a profound reduction in amniotic fluid (oligohydramnios) or its complete absence (anhydramnios). The most common causes of this are fetal renal anomalies, such as bilateral renal agenesis (absence of both kidneys), multicystic dysplastic kidneys, or a severe obstructive uropathy like posterior urethral valves. Tracheoesophageal fistula (C) is associated with polyhydramnios (excess fluid) because the fetus cannot swallow the fluid effectively.

Question 114. A primigravida at 2 weeks of gestation visits the antenatal outpatient department and inquires about the additional daily caloric requirement during pregnancy. What is the recommended increase in daily calorie intake for a pregnant woman?

A. 300kcal throughout the pregnancy

B. 400kcal in the 2nd trimester

C. 450kcal in the 3rd trimester

D. 200kcal in the 2nd trimester

Correct answer: C

During pregnancy, additional energy is required to support fetal growth, placental development, maternal tissue expansion, and increased metabolic demands. The caloric requirement does not increase significantly in the first trimester, but it rises during the second and third trimesters.According to nutritional recommendations (such as those from ICMR and WHO guidelines), the approximate additional calorie requirement is:1. First trimester : No significant additional calories required.2. Second trimester : About +340 kcal/day.3. Third trimester : About +450 kcal/day.The third trimester requires the highest energy intake because this is the phase of rapid fetal growth, increased maternal weight gain, and greater metabolic activity. Adequate caloric intake during this period helps support optimal fetal development, maternal health, and preparation for lactation.Option A (300 kcal throughout pregnancy) reflects older recommendations and is not trimester-specific. Options B (400 kcal in the 2nd trimester) and D (200 kcal in the 2nd trimester) are inaccurate according to current nutritional guidelines.Therefore, the correct recommendation among the given options is an additional 450 kcal per day in the 3rd trimester.

Question 115. A 4-year-old woman is advised to undergo an ultrasound Doppler

study along with a double marker test between 1 and 4 weeks of gestation. Doppler assessment of the umbilical artery helps in predicting which of the following conditions?

A. Late onset pre-eclampsia

B. Early onset Pre-eclampsia

C. Fetal growth restriction

D. Placenta accreta

Correct answer: B

During the first-trimester screening (11-14 weeks), the Doppler ultrasound assesses the uterine arteries (blood flow from mother to placenta), not the umbilical artery. The question likely refers to this standard practice.This uterine artery Doppler measures the pressure and resistance in the vessels supplying the placenta. High resistance at this early stage indicates that the placenta is not embedding properly into the uterine wall. This process, known as poor placentation, is the fundamental cause of early-onset pre-eclampsia—the more severe form of the condition that manifests before 34 weeks of gestation.While fetal growth restriction (C) is also linked to placental issues, it is typically evaluated later in pregnancy with an umbilical artery Doppler (flow from placenta to fetus). Late-onset pre-eclampsia (A) is thought to have a different underlying cause and is not predicted as effectively by this early screening. Placenta accreta (D) is a condition of abnormal placental attachment, identified differently.

Question 116. A 4-year-old woman develops preeclampsia at 8 weeks of gestation and is anxious to know the cause of her condition. You explain that preeclampsia is related to a problem in the development of maternal–fetal circulation during early pregnancy. What is the underlying pathophysiological cause of this complication?

A. Poor invasion by villous trophoblast of the spiral arterioles

B. Poor invasion by villous trophoblast of the radial arterioles

C. Poor invasion by extra villous trophoblast of the arcuate arteries

D. Poor invasion by extra villous trophoblast of the spiral arterioles

Correct answer: D

The underlying pathophysiology of pre-eclampsia is rooted in abnormal placentation

Question 117. What is the position of the uterus on the th day of postpartum?

A. Between bladder and rectum

B. 4 fingers below umbilicus

C. Anteverted

D. Retroflexed

Correct answer: B

4 fingers below the umbilicus.The position of the uterus after childbirth is tracked by a process called uterine involution, where the organ gradually shrinks and returns to its pre-pregnancy

size and location in the pelvis. This process is measured by the height of the uterine fundus (the top of the uterus) in relation to the umbilicus (belly button).Here's the typical time line : Immediately after delivery : The fundus is located at or just below the umbilicus.Rate of descent : The uterus then descends at a rate of approximately 1 centimeter (or one finger breadth) per day.Therefore, on the 5th day postpartum, the fundus would be expected to be about 4 to 5 finger breadths below the umbilicus, making option (B) the most accurate description of its involutional state.Why Other Options Are Incorrect(A) Between bladder and rectum : This describes the uterus's general anatomical location within the pelvis at all times,

Question 118. On the nd post natal day, where will the fundus of the uterus be?

A. 1F below the umbilicus

B. 2F below the umbilicus

C. 3F below the umbilicus

D. 4F below the umbilicus

Correct answer: B

After delivery, the uterus begins a rapid process of involution, returning to its non-pregnant size. Immediately after delivery, the uterine fundus is typically palpable at or just below the level of the umbilicus. In the subsequent days, the fundus descends into the pelvis at a predictable rate of approximately one fingerbreadth (about 1 cm) per day. Therefore, on the first postnatal day (24 hours after delivery), the fundus is expected to be about 1 fingerbreadth below the umbilicus. On the second postnatal day, it would have descended further and should be palpable approximately 2 fingerbreadths (2 cm) below the umbilicus. By about 10-14 days postpartum, the uterus has typically descended completely into the pelvis and is no longer palpable abdominally.

Question 119. Which hormone stimulates the male fetus to produce testosterone?

A. Inhibin from corpus leuteum

B. hCG from placenta

C. Maternal LH

D. Fetal GnRH

Correct answer: B

During the first trimester of pregnancy, the development of the male internal and external genitalia is dependent on the production of testosterone by the fetal testes (Leydig cells). The fetal pituitary-gonadal axis is not yet mature. The primary stimulus for this early fetal testosterone production is human chorionic gonadotropin (hCG), which is produced in large quantities by the syncytiotrophoblast of the placenta. The hCG molecule has a structure similar to Luteinizing Hormone (LH) and can bind to and activate the LH receptors on the fetal Leydig cells. This stimulation is crucial for initiating testosterone synthesis, which is essential for the virilization of the male fetus. Later in gestation, the fetal pituitary begins to produce its own LH,

which then takes over this role. Maternal LH (C) does not cross the placenta in significant amounts.

Question 120. You are preparing the discharge summary for a patient who has undergone surgical repair of a vesicovaginal fistula (VVF). For how long should she be advised to abstain from sexual intercourse and delay conception after the procedure?

A. 6 weeks abstinence & delay conception by 6 months

B. 6 months abstinence & delay conception by 6 years

C. 3 weeks abstinence & delay conception by 2 years

D. 3 months abstinence & delay conception by 1 year

Correct answer: A

After surgical repair of a vesicovaginal fistula (VVF), proper postoperative care is essential to allow adequate healing of the repaired tissues and to prevent recurrence of the fistula.Patients are usually advised to abstain from sexual intercourse for about 6 weeks after surgery. This period allows the vaginal tissues and the surgical repair site to heal completely,

Question 121. A woman presents with hair loss for the past one month and gives a history of COVID-9 infection eight weeks earlier. What is the most likely diagnosis?

A. Telogen Effluvium

B. Trichomania

C. Anagen Effluvium

D. Androgenic alopecia female pattern

Correct answer: A

The patient is experiencing diffuse hair shedding approximately 2-3 months after a significant physiological stressor (a COVID-19 infection). This is the classic history and timeline for telogen effluvium. A major stressor—such as a severe illness, high fever, surgery, or major

Question 122. What is the causative agent of anogenital wart?

A. HPV 2

B. HPV 11

C. HPV 5

D. HPV 18

Correct answer: B

Anogenital warts, also known as condylomata acuminata, are benign epithelial growths caused by infection with the Human Papillomavirus (HPV). HPVs are classified into high-risk (oncogenic) types and low-risk types. The vast majority (over 90%) of anogenital warts are caused by low-risk HPV types 6 and 11. Of these two, HPV 11 (B) is a very common cause. High-risk HPV types, such as HPV 16 and 18 (D), are the primary cause of cervical, anal, and other anogenital

cancers, but they do not typically cause visible warts. HPV 2 (A) is a common cause of cutaneous warts on the hands and feet (verruca vulgaris). HPV 5 (C) is a type associated with epidermodysplasia verruciformis.

Question 123. A patient receiving treatment for borderline tuberculoid leprosy presents with lesions involving the forehead, nose, and extending to both cheeks. Which nerve is most commonly affected in this condition?

A. Trochlear nerve

B. Abducent nerve

C. Ulnar nerve

D. Trigeminal nerve

Correct answer: D

Leprosy (Mycobacterium leprae infection) has a predilection for cooler areas of the body, including the skin and peripheral nerves. The patient's facial lesions suggest involvement of the nerves supplying the face. While the facial nerve (CN VII) is commonly affected, leading to motor weakness (lagophthalmos), sensory loss on the face is due to the involvement of the trigeminal nerve (CN V). The trigeminal nerve is a commonly affected cranial nerve in leprosy, leading to patches of anesthesia or hypoesthesia on the face. This sensory loss is particularly

Question 124. What percentage of oxygen is provided during mouth-to-mouth respiration?

A. 10%

B. 16%

C. 21%

D. 100%

Correct answer: C

Non re breathing face maskThe device shown is a non-re breathing face mask (NRM). Its key features are a face mask connected to an oxygen reservoir bag and a one-way valve system. A valve between the mask and the bag prevents the patient's exhaled air from entering the reservoir, while valves on the side ports of the mask allow exhaled gas to escape but prevent room air from being entrained during inhalation. This design allows the NRM to deliver a high concentration of oxygen (FiO2 of 60% to over 90%) to a spontaneously breathing patient. It was frequently used in the management of hypoxemic respiratory failure in COVID-19 patients who required more oxygen than could be delivered by a simple mask or nasal cannula, but before escalation to high-flow nasal cannula or mechanical ventilation. A Venturi mask (A) delivers a precise FiO2, and a simple/Hudson mask (B, D) delivers a lower, more variable FiO2.

Question 125. A -year-old child presents with sudden-onset breathing difficulty while playing, with no prior history of respiratory disease. Chest X-ray shows unilateral

hyperinflation with a normal left lung. Which of the following statements is true regarding this condition?

A. Acute laryngotracheitis

B. Focal area of decrease air entry confirms the diagnosis

C. Reactive Pulmonary secretions leads to complete obstruction

D. Prefer way of removing is flexible bronchoscopy

Correct answer: D

A 2-year-old child with sudden-onset breathing difficulty while playing strongly suggests foreign body aspiration, which is common in young children. The chest X-ray showing unilateral hyperinflation indicates air trapping caused by a partial obstruction of a bronchus, producing a ball-valve effect where air enters during inspiration but cannot escape easily during expiration.Clinically, children may present with sudden cough, wheezing, respiratory distress, and decreased breath sounds on the affected side. Imaging often shows unilateral hyperinflation, mediastinal shift, or localized atelectasis, depending on the degree of obstruction.

Question 126. Which of the following clinical findings is most likely to occur following rupture of a saccular (berry) aneurysm in the brain?

A. Subdural hemorrhage

B. Subarachnoid hemorrhage

C. Hydrocephalus

D. Intracerebral hemorrhage

Correct answer: B

Saccular (or berry) aneurysms are abnormal outpouchings that typically occur at the

Question 127. A 5-year-old patient is brought to the emergency department by paramedics after being found unresponsive at home. He has a known history of opioid use and, on arrival, shows signs of respiratory depression with a respiratory rate of breaths per minute, pinpoint pupils, and a decreased level of consciousness. His vital signs reveal a heart rate of 0 bpm, blood pressure of 00/0 mmHg, and an oxygen saturation of 5% on room air. Based on this clinical presentation, what is the next most appropriate step in the management of a suspected opioid overdose?

A. Naloxone

B. Naltrexone

C. Flumazenil

D. Buprenorphine

Correct answer: A

The patient is presenting with the classic clinical triad of an opioid overdose :1. Central nervous system depression (decreased level of consciousness).2. Respiratory depression (bradypnea,

RR of 6).3. Miosis (constricted or pinpoint pupils).This is a life-threatening emergency, and the immediate priority is to reverse the respiratory depression. The specific antidote for opioid overdose is naloxone. Naloxone is a pure, competitive antagonist at the mu, kappa, and delta opioid receptors. When administered (typically intravenously, intramuscularly, or intranasally), it rapidly displaces the opioid from its receptors, reversing all of its effects, including the life-threatening respiratory depression. Naltrexone (B) is a long-acting oral antagonist

Question 128. A patient with depression ingests a large quantity of tricyclic antidepressants (TCA). What is the drug of choice for the management of TCA poisoning?

A. NAHCO3

B. DC cardioversion

C. Start antiarrhythmic drug

D. Either B or C

Correct answer: A

NaHCO3Tricyclic antidepressant (TCA) overdose is a medical emergency, with cardiotoxicity being the most life-threatening complication. TCAs block fast sodium channels in the cardiac conduction system, which slows depolarization and leads to QRS widening on the ECG. This predisposes the patient to fatal ventricular arrhythmias like ventricular tachycardia or fibrillation. The cornerstone and drug of choice for treating TCA cardiotoxicity is intravenous sodium bicarbonate (NaHCO3). It works through two primary mechanisms :1. It increases the serum pH (alkalinization), which decreases the binding affinity of the TCA for the sodium channel.2. It provides a large sodium load, which increases the electrochemical gradient across the cardiac myocyte membrane, helping to overcome the sodium channel blockade.Administration of sodium bicarbonate can narrow the QRS complex, reverse hypotension, and terminate arrhythmias. Other antiarrhythmics are generally avoided.

Question 129. A woman presents on the third postpartum day with tearfulness, mood swings, and occasional insomnia. What is the most likely diagnosis?

A. Postpartum blue

B. Postpartum depression

C. Postpartum psychosis

D. Atypical depression

Correct answer: A

No explanation is available for this recall question yet.

Question 130. A 6-year-old girl has intense food cravings, eats large quantities of food, and then induces recurrent vomiting. She also has a history of using appetite-suppressing drugs. What is the most probable diagnosis?

A. Anorexia nervosa

B. Bulimia nervosa

C. Binge eating disorder

D. Anxiety disorder

Correct answer: B

This clinical vignette describes the core features of Bulimia Nervosa. The diagnostic criteria include :1. Recurrent episodes of binge eating, which is defined as eating an unusually large amount of food in a discrete period of time while feeling a lack of control.2. Recurrent inappropriate compensatory behaviors to prevent weight gain. The description of recurrent vomiting is a classic example of this purging behavior. Other behaviors can include misuse of laxatives, diuretics, or, as mentioned, anti-appetite drugs.3. The binge eating and compensatory behaviors occur, on average, at least once a week for 3 months.