

WBHRB Pharmacist Sample Paper

Q1. In the context of surgical asepsis, which of the following represents the most critical initial step immediately prior to beginning a formal scrub routine for OT entry?

- (a) Application of antiseptic solution to the forearms
- (b) Donning of surgical mask and cap
- (c) Subungual cleaning with sterile nail pick
- (d) Performing a timed scrub for both hands and forearms

Ans.(c)

Sol. Subungual cleaning with a sterile nail pick is the first step to eliminate microbial reservoirs beneath the nails, which standard scrubbing may not fully remove. It ensures maximal aseptic preparation before initiating the scrubbing protocol.

Explanation of options:

- (a) ✗ Applying antiseptic comes after initial debris removal, not before.
- (b) ✗ Wearing a mask and cap is done before entering the scrub area, not as part of the handwashing sequence.
- (c) ✓ This is the correct step and ensures the dirtiest areas (nail beds) are cleansed before scrubbing.
- (d) ✗ Timed scrubbing is the next procedural step, not the first in the sequence.

Q2. Which solution is isotonic?

- (a) 0.9% NaCl
- (b) 5% dextrose in water
- (c) 3% NaCl
- (d) 0.45% NaCl

Ans.(a)

Sol. 0.9% Sodium Chloride (NaCl), commonly known as normal saline, is an isotonic solution, meaning it has an osmolarity (~308 mOsm/L) approximately equal to that of human plasma (275–295 mOsm/L). This makes it suitable for fluid resuscitation, electrolyte replacement, and as a vehicle for IV medications. It does not cause significant movement of fluid into or out of cells, making it ideal for maintaining vascular volume.

Explanation of options:

- (a) 0.9% NaCl:

Correct. It is isotonic with blood and widely used for IV fluid replacement.

- (b) 5% dextrose in water (D5W):

Initially isotonic in the bag, but once infused, glucose is rapidly metabolized, leaving free water, which behaves as a hypotonic solution.

- (c) 3% NaCl:

A hypertonic solution, used in special conditions like hyponatremia or cerebral edema.

- (d) 0.45% NaCl:

A hypotonic solution, used to treat cellular dehydration, not suitable for volume resuscitation.

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Q3. What is true about schizophrenia?

- (a) Affects 1 in 1,000 people
- (b) Most commonly affects ages 25–35
- (c) Equally affects males and females
- (d) Catatonic type has a good prognosis

Ans.(c)

Sol. (c) Equally affects males and females

Explanation:

Schizophrenia is a **chronic mental disorder** characterized by **distorted thinking, perception, emotions, and behavior**. It is one of the most debilitating psychiatric illnesses.

Why Schizophrenia Equally Affects Males and Females:

Research shows that **schizophrenia affects males and females equally in terms of prevalence**.

However, there are differences in the **age of onset**:

Males: Onset is typically **earlier** (late teens to early 20s).

Females: Onset is typically **later** (late 20s to early 30s).

Severity: Males often have a **more severe disease course**, while females may respond better to treatment.

Why Not the Other Options?

1. **(a) Affects 1 in 1,000 people:**

Incorrect.

The prevalence of schizophrenia is approximately **1 in 100 people (1%)**.

This makes it **10 times more common** than stated.

2. **(b) Most commonly affects ages 25–35:**

Incorrect.

The **average age of onset** differs between genders:

Males: 18–25 years

Females: 25–35 years

Overall, **males have an earlier onset** than females.

3. **(d) Catatonic type has a good prognosis:**

Incorrect.

Catatonic schizophrenia is characterized by **motor disturbances**, including immobility, waxy flexibility, or excessive motor activity.

Historically, **catatonic type** was associated with a **poor prognosis** due to severe functional impairment.

However, with **modern treatments**, prognosis has improved slightly.

Prognosis Factors in Schizophrenia:

Good Prognosis: Acute onset, later age of onset, female gender, good pre-morbid functioning, positive symptoms (e.g., hallucinations).

Poor Prognosis: Early onset, negative symptoms (e.g., flat affect, apathy), poor response to treatment, male gender.

Q4. During a mental health assessment, the nurse identifies a patient expressing hopelessness and frequent thoughts about death. What should the nurse do first?

- (a) Continue with routine mental status examination
- (b) Ask about a specific suicide plan and intent
- (c) Recommend religious counseling for spiritual support
- (d) Document the findings and proceed with physical assessment

Ans.(b)

Sol. Suicidal ideation, especially with expressions of hopelessness, requires immediate risk assessment. Evidence-based tools (e.g., Columbia Suicide Severity Rating Scale) recommend directly asking about plans, means, and intent. Contrary to myth, asking doesn't "plant" ideas but helps the nurse intervene appropriately, ensure safety, and involve psychiatric services.

Explanation of options: (a) ✗ Proceeding with routine assessments ignores the immediate psychological crisis, delaying life-saving action. (b) ✓ Timely inquiry enables the nurse to evaluate risk and engage the crisis response team or initiate a 1:1 watch. (c) ✗ Spiritual care may be useful later, but immediate safety assessment comes first in the hierarchy. (d) ✗ Documentation without action can be negligent in cases of active or imminent self-harm.

Q5. Kangaroo Mother Care (KMC) is beneficial for premature or low birth weight babies. Which of the following is NOT considered a key benefit of KMC?

- (a) Effective thermal control
- (b) Reduction in hospital stay
- (c) Increased respiratory infections
- (d) Enhanced breastfeeding

Ans.(c)

Sol. Ans. (c) Kangaroo Mother Care (KMC) is a method of caring for low birth weight (LBW) and premature babies by keeping them in continuous skin-to-skin contact with their mother or caregiver. This contact offers many benefits, such as:

Effective thermal control: KMC helps maintain the baby's body temperature, reducing the risk of hypothermia.

Reduction in hospital stay: KMC improves health outcomes, which often results in a shorter hospital stay for both mother and baby.

Enhanced breastfeeding: Skin-to-skin contact promotes more frequent breastfeeding, improving milk supply and leading to better nutrition for the infant.

Reduced infections: Contrary to the incorrect option (c), KMC actually reduces infections due to better immunity and less exposure to hospital-acquired infections.

Thus, the statement "increased respiratory infections" is not true. Instead, KMC helps to protect against infections, making it a highly recommended intervention for preterm and low birth weight babies.

Q6. Which team member assumes direct responsibility for establishing the sterile surgical setup, ensuring all instruments and drapes are arranged and accounted for before the incision?

- (a) Operating room technician
- (b) First assistant
- (c) Circulating nurse
- (d) Scrub nurse

Ans.(d)

Sol. The scrub nurse, trained in aseptic technique, sets up the sterile field and ensures that all instruments are correctly placed and sterile prior to surgery. Their role is vital for maintaining sterility and assisting the surgical team during the procedure.

Explanation of options:

- (a) ✗ OR techs may assist but do not manage the sterile field independently.
- (b) ✗ The first assistant is typically a surgical resident or another physician, not responsible for setup.
- (c) ✗ The circulating nurse manages non-sterile duties and assists the scrub nurse.
- (d) ✓ Scrub nurses handle sterile instruments and maintain surgical field sterility.

Q7. How is a Blalock-Taussig shunt performed?

- (a) Anastomosis of the ascending aorta and right pulmonary artery
- (b) Anastomosis of the upper descending aorta and left pulmonary artery
- (c) Anastomosis of the superior vena cava and left pulmonary artery
- (d) Anastomosis of the subclavian artery and right pulmonary artery

Ans.(d)

Sol. Ans. (d) Sol. The **Blalock-Taussig shunt** is a surgical procedure used in pediatric cardiology for the treatment of cyanotic congenital heart defects. It involves the **anastomosis (connection)** of the **subclavian artery** to the **right pulmonary artery**, helping to improve blood flow to the lungs.

Explanation of each option:

- (a) Anastomosis of the ascending aorta and right pulmonary artery** – Incorrect. This is not part of the Blalock-Taussig shunt procedure.
- (b) Anastomosis of the upper descending aorta and left pulmonary artery** – Incorrect. This is not associated with the Blalock-Taussig shunt.
- (c) Anastomosis of the superior vena cava and left pulmonary artery** – Incorrect. This is not part of the Blalock-Taussig shunt procedure.
- (d) Anastomosis of the subclavian artery and right pulmonary artery** – Correct. The Blalock-Taussig shunt creates a direct connection between the subclavian artery and the right pulmonary artery to increase pulmonary blood

Q8. Who coined the term "schizophrenia"?

- (a) Eugene Bleuler
- (b) William Tuke
- (c) Karl Menninger
- (d) John Watson

Ans.(a)

Sol. Answer: (a) Eugene Bleuler

Explanation:

Eugene Bleuler is credited with coining the term "schizophrenia" in 1908. He used it to describe a group of disorders characterized by a "splitting of the mind," referring to the dissociation of thought, emotion, and perception.

William Tuke was a pioneer in mental health reform, advocating for humane treatment of individuals with mental illness.

Karl Menninger was a prominent psychiatrist and psychoanalyst who contributed significantly to the field of mental health.

John Watson was a psychologist known for his work in behaviorism.

Therefore, Eugene Bleuler is the correct answer for coining the term "schizophrenia."

Q9. Which epidermal layer acts as the primary barrier against environmental toxins and pathogens in fully keratinized skin?

- (a) Stratum spinosum
- (b) Stratum lucidum
- (c) Stratum corneum
- (d) Stratum basale

Ans.(c)

Sol. The stratum corneum is the outermost layer of the skin, consisting of dead, keratin-filled cells. It acts as the main defense against pathogens, chemicals, and dehydration. It is especially thick in areas of friction such as palms and soles.

Option-wise explanation:

- (a) ✗ Stratum spinosum lies deeper and provides structural support but not direct protection from the environment.
- (b) ✗ Stratum lucidum is only found in thick skin and contributes minimally to the skin's barrier function.
- (c) ✓ Stratum corneum is the outermost and most keratinized layer, offering key barrier protection.
- (d) ✗ Stratum basale is the bottom-most epidermal layer, primarily responsible for cell regeneration, not barrier defense.

Q10. Which one of the following babies is eligible for Kangaroo Mother Care (KMC)?

- (a) Baby weighing 1000 grams cared in incubator
- (b) Baby with a birth weight of 2.6 kg
- (c) Term/academically stable low birth weight baby
- (d) Baby who is sick and cared under radiant warmer

Ans.(a)

Sol. Ans. (a) Sol. Kangaroo Mother Care (KMC) is a method of care for preterm and low birth weight babies, which involves early, continuous, and prolonged skin-to-skin contact with the mother. Babies weighing 1000 grams and cared in an incubator are eligible for KMC as it has been shown to improve survival rates and promote physical growth.

- (b) Babies with a birth weight of 2.6 kg generally don't require KMC, as they are considered normal weight.
- (c) Term babies with low birth weight may not need KMC if their birth weight is stable or within normal limits.
- (d) Babies who are sick or in need of intensive care should not be the primary candidates for KMC unless they are stable.

Q11. Which part of the nephron is primarily responsible for glucose reabsorption?

- (a) Distal convoluted tubule
- (b) Loop of Henle
- (c) Proximal convoluted tubule
- (d) Collecting duct

Ans.(c)

Sol. The proximal convoluted tubule (PCT) is the primary site where nutrients like glucose, amino acids, and bicarbonate are reabsorbed from the filtrate. Glucose is reabsorbed via sodium-glucose cotransporters (SGLTs). If the blood glucose level is too high, as in diabetes, it exceeds the renal threshold and glucose appears in urine. Explanation of options: (a) Distal convoluted tubule – Mostly responsible for selective ion reabsorption and pH balance, not glucose. (b) Loop of Henle – Plays a role in concentrating urine and handling sodium, chloride, and water, but not glucose. (c) Proximal convoluted tubule – Correct answer. The main site of glucose and other essential nutrient reabsorption. (d) Collecting duct – Regulates final urine composition under hormonal control but not glucose reabsorption.

Q12. What is the most common cause of postpartum hemorrhage?

- (a) Cervical laceration
- (b) Uterine atony
- (c) Retained placenta
- (d) Uterine rupture

Ans.(b)

Sol. Ans: (b) Sol. Uterine atony (failure of uterus to contract) is the most common cause of postpartum hemorrhage.

Q13. A 65-year-old diabetic patient reports tingling in both feet during a health assessment. What should the nurse do next as per best clinical judgment?

- (a) Document the sensation and monitor at the next visit
- (b) Immediately administer Vitamin B12 supplements
- (c) Perform a focused neurological examination on the lower extremities
- (d) Advise the patient to increase sugar intake to combat nerve weakness

Ans.(c)

Sol. Tingling in the feet, especially in diabetic patients, may indicate peripheral neuropathy—a complication that, if left unmonitored, can lead to ulcers or amputations. A focused neurological assessment includes checking for sensation, deep tendon reflexes, proprioception, and motor strength. It enables early detection of neuropathy, allowing timely interventions like glycemic control, foot care, and pain management.

Explanation of options: (a) ✗ Monitoring without assessment delays diagnosis and potential treatment. Symptoms may progress silently, increasing risk. (b) ✗ While B12 deficiency causes neuropathy, empiric supplementation without diagnostic evidence is inappropriate and may delay correct management. (c) ✓ This targeted assessment helps confirm the presence and extent of neuropathy, guiding appropriate referral or management. (d) ✗ High sugar intake worsens glycemic control, increasing nerve damage risk. This advice is medically inaccurate and harmful.

Q14. When should bathing be avoided for a sick baby with Low Birth Weight (LBW)?

- (a) Until the baby is 3 days old
- (b) Until the umbilical cord falls off or weight reaches 2.5 kg
- (c) Until 1 week after delivery
- (d) Until the baby starts breastfeeding

Ans.(b)

Sol. For a Low Birth Weight (LBW) baby, bathing should be avoided until the umbilical cord falls off or the baby's weight reaches 2.5 kg. This precaution prevents heat loss, reduces the risk of infections, and ensures the baby can regulate body temperature effectively. LBW babies are more vulnerable to hypothermia and infections.

Explanation of Options:

- (a) Until the baby is 3 days old: Avoiding bathing for only 3 days may not be sufficient for an LBW baby, as their weight and umbilical cord condition may still pose risks.
- (b) Until the umbilical cord falls off or weight reaches 2.5 kg: Bathing is avoided until these milestones are achieved to ensure better immunity and temperature regulation.
- (c) Until 1 week after delivery: While waiting a week might reduce some risks, it does not address the critical milestones of umbilical cord healing and weight gain.
- (d) Until the baby starts breastfeeding: Breastfeeding is essential for nourishment, but it does not directly relate to the baby's readiness for a bath.

Q15. What comes under category 1 of the biomedical waste segregation?

- (a) Microbiological and biotechnical waste
- (b) Animal waste
- (c) Human anatomical waste
- (d) Discarded medicines

Ans.(c)

Sol. Human anatomical waste comes under category 1 of biomedical waste segregation. Category 1 waste includes body parts, organs, or any tissue from the human body that must be disposed of in accordance with guidelines to prevent contamination and health risks.

Let's break down the other options:

- (a) Microbiological and biotechnical waste: This falls under category 2, which includes waste like cultures, stocks, and biologicals that could be hazardous.
- (b) Animal waste: This is categorized under category 3, which includes waste such as animal carcasses, body parts, and other tissues from animals.
- (d) Discarded medicines: This comes under category 4, which covers expired, unused, or contaminated medicines.

Hence, the correct answer is (c) Human anatomical waste.

Q16. The most reliable sign of pregnancy is:

- (a) Nausea
- (b) Amenorrhea
- (c) Fetal heartbeat
- (d) Breast tenderness

Ans.(c)

Sol. The detection of fetal heart sounds is a positive sign of pregnancy.

Q17. Palpation of an olive-shaped mass in the epigastrium is an indication of:

- (a) appendicitis
- (b) ulcerative colitis
- (c) malabsorption syndrome
- (d) hypertrophic pyloric stenosis

Ans.(d)

Sol. Ans. (d) Sol. Hypertrophic pyloric stenosis is characterized by the palpable olive-shaped mass in the epigastrium. It is a condition in infants where the pyloric muscle thickens, blocking the passage from the stomach to the small intestine, causing vomiting and dehydration.

Explanation of each option:

(a) appendicitis – Incorrect. Appendicitis generally causes pain in the lower right abdomen and is not associated with an olive-shaped mass in the epigastrium.

(b) ulcerative colitis – Incorrect. Ulcerative colitis affects the colon and does not present with an olive-shaped mass in the epigastrium.

(c) malabsorption syndrome – Incorrect. Malabsorption syndrome involves difficulty in absorbing nutrients from food but does not lead to an olive-shaped mass in the epigastrium.

(d) hypertrophic pyloric stenosis – Correct. This condition presents with an olive-shaped mass felt in the upper abdomen, often associated with projectile vomiting in infants.

Q18. Which electrolyte imbalance is associated with diarrhea?

- (a) Hypernatremia
- (b) Hyperkalemia
- (c) Hyponatremia
- (d) Hypokalemia

Ans.(d)

Sol. Diarrhea leads to the loss of fluids and electrolytes, especially potassium (K^+) through the gastrointestinal tract. The colon secretes potassium, and in prolonged or severe diarrhea, large amounts of potassium are lost, resulting in hypokalemia.

Symptoms of hypokalemia may include:

- Muscle weakness
- Fatigue
- Constipation
- Irregular heart rhythms (arrhythmias)

Hence, hypokalemia is the most common electrolyte disturbance associated with diarrhea.

Explanation of Each Option:

- (a) Hypernatremia –

Hypernatremia is caused by excessive water loss without sodium loss, such as in dehydration, not specifically due to diarrhea alone unless water loss greatly exceeds sodium loss.

- (b) Hyperkalemia –

In diarrhea, potassium is lost, not retained, so hyperkalemia is not typical. It's more associated with kidney failure or cell lysis.

- (c) Hyponatremia –

Although mild hyponatremia may occur if sodium is lost in large amounts, potassium loss is more significant and prominent in diarrhea.

- (d) Hypokalemia –

Correct. Diarrhea leads to excessive potassium loss, making hypokalemia the most common electrolyte imbalance in this condition.

Q19. In maintaining a sterile surgical field, which of the following objects would be considered an immediate breach of sterility if introduced?

- (a) Sealed sterilized catheter pack
- (b) Sterile surgical towels
- (c) Patient's ward-issued blanket
- (d) Autoclaved instrument tray

Ans.(c)

Sol. Any object not sterilized through validated procedures—like a patient's ward blanket—is contaminated and introduces microbial risk. It should never be placed within or near the sterile field.

Explanation of options:

- (a) ✗ Sealed and intact packs are safe until opened properly.
- (b) ✗ These are used to create and maintain the sterile field.
- (c) ✓ A ward-issued blanket is considered contaminated and should not be near sterile areas.
- (d) ✗ Autoclaved trays are part of standard sterile setup.

Q20. A patient in the emergency room exhibits cold, clammy skin, hypotension, and altered mental status. During the health assessment, which approach is most appropriate?

- (a) Begin routine assessment starting with history
- (b) Prioritize ABCs and rapid systemic assessment
- (c) Defer all assessments until patient stabilizes
- (d) Ask the patient about medication allergies first

Ans.(b)

Sol. The patient shows signs of shock—possibly hypovolemic or septic. Following the Airway, Breathing, Circulation (ABCs) framework is critical in emergencies. A rapid systemic assessment helps identify immediate threats and guide intervention. Nurses play a pivotal role in early recognition, triage, and response, significantly impacting survival outcomes.

Explanation of options: (a) ✗ Routine assessments delay critical actions. Time-sensitive interventions like oxygen, fluids, or medication can't wait. (b) ✓ ABC prioritization ensures that life-threatening issues are addressed first. It is the cornerstone of emergency nursing. (c) ✗ Waiting for stabilization without assessment fails to identify the cause or initiate interventions. (d) ✗ Allergy history is vital but secondary when airway and perfusion are compromised.

Q21. All interventions prevent hypothermia in preterm babies except:

- (a) Use of polyethylene plastic wraps
- (b) Using double layered incubators
- (c) Using woolen caps to cover head
- (d) Keeping the delivery room temperature at 22 degrees Celsius

Ans.(d)

Sol. According to the **World Health Organization (WHO)**, the **recommended delivery room temperature** for **preterm and low birth weight newborns** should be **at least 25°C (77°F)**. Keeping the room at 22°C is **too cold** and may contribute to rapid heat loss, increasing the risk of **neonatal hypothermia**, which is a major cause of neonatal morbidity and mortality. Preterm infants are especially vulnerable due to their immature skin, low fat stores, and high surface area-to-weight ratio.

Explanation of each option:

- **(a) Use of polyethylene plastic wraps** – This method reduces **evaporative heat loss** immediately after birth, especially in preterm infants. It is endorsed by WHO as an effective intervention to maintain body temperature during the initial hours of life.
- **(b) Using double layered incubators** – Double-wall incubators help minimize **radiant and conductive heat loss**. They maintain a thermoneutral environment and reduce the frequency of temperature fluctuations, supporting thermal stability.
- **(c) Using woolen caps to cover head** – Newborns lose a significant amount of heat through their **head**, and covering it with a cap effectively reduces heat loss, particularly in preterm and low birth weight babies.
- **(d) Keeping the delivery room temperature at 22 degrees Celsius** – **Correct answer.** WHO recommends a **minimum of 25°C** in the delivery room for thermal protection of newborns. A temperature of 22°C is insufficient and increases the risk of hypothermia in preterm babies.

Q22. The sebaceous glands, associated with pilosebaceous units, secrete sebum through which mechanism and with what physiological significance?

- (a) Apocrine secretion for thermoregulation
- (b) Eccrine secretion for electrolyte balance
- (c) Holocrine secretion for maintaining skin hydration and microbial defense
- (d) Merocrine secretion for protein exocytosis

Ans.(c)

Sol. Sebaceous glands use the holocrine mode of secretion—where entire cells rupture to release sebum. Sebum lubricates the skin, reduces water loss, and provides mild antimicrobial defense.

Option-wise explanation:

- (a) ✗ Apocrine glands secrete sweat in certain areas (e.g., armpits), not oil or sebum.
- (b) ✗ Eccrine glands regulate temperature by secreting watery sweat, not oil.
- (c) ✓ Holocrine secretion is unique to sebaceous glands; it involves cell disintegration and sebum release.
- (d) ✗ Merocrine secretion involves exocytosis and is typical of eccrine glands, not sebaceous.

Q23. While conducting a respiratory assessment, the nurse observes asymmetric chest expansion and diminished breath sounds on the left side. What is the immediate implication?

- (a) Normal finding in elderly clients
- (b) Possible pleural effusion or pneumothorax
- (c) Sign of improved lung compliance
- (d) Result of recent upper respiratory infection

Ans.(b)

Sol. Uneven chest movement and diminished breath sounds suggest decreased ventilation in one lung area. In clinical settings, such signs are red flags for conditions like pleural effusion (fluid accumulation) or pneumothorax (air leak), both of which require urgent imaging and potentially life-saving intervention. Early identification by nurses can significantly improve outcomes.

Explanation of options: (a) ✗ While aging may reduce overall lung expansion, it does not typically cause asymmetry in movement unless pathology is present. (b) ✓ These are classic signs of pleural space abnormalities, which compromise lung expansion and oxygen exchange. (c) ✗ Improved compliance would manifest as better expansion bilaterally, not reduced motion or breath sounds. (d) ✗ URIs may cause congestion but rarely result in significant asymmetry or breath sound absence.

Q24. Up to what age does the term 'newborn' apply to babies?

- (a) Up to 1 year of birth
- (b) Up to 1 month after birth
- (c) Up to 7 days after birth
- (d) Up to 15 hours after birth

Ans.(b)

Sol. Ans. (b) Sol. A **newborn** is defined as an infant from birth **up to 28 days (1 month) of life**, which is a crucial period for survival and health monitoring.

Q25. Which of the following is a side effect of furosemide?

- (a) Hyperkalemia
- (b) Hypokalemia
- (c) Hyponatremia
- (d) Tachycardia

Ans.(b)

Sol. Ans: (b) Sol. Furosemide is a loop diuretic that can cause potassium loss, resulting in hypokalemia.

Q26. What is LBW?

- (a) Birth weight < 2.5 kg
- (b) Birth weight < 3 kg
- (c) Birth weight < 1.5 kg
- (d) Birth weight < 1 kg

Ans.(a)

Sol. LBW stands for Low Birth Weight, and according to WHO, it is defined as a birth weight less than 2.5 kg (2500 grams), regardless of gestational age. LBW is a major risk factor for neonatal morbidity and mortality and is associated with preterm birth, intrauterine growth restriction (IUGR), or both. LBW babies require special care to avoid hypothermia, infections, and feeding issues.

Explanation of each option:

(a) Birth weight < 2.5 kg – Correct. This is the standard definition of LBW by WHO and is used worldwide for classifying at-risk newborns.

- (b) Birth weight < 3 kg – Incorrect. Babies between 2.5 to 3 kg are considered normal weight and not classified as LBW.
- (c) Birth weight < 1.5 kg – Incorrect. This weight defines Very Low Birth Weight (VLBW), which is a more severe category.
- (d) Birth weight < 1 kg – Incorrect. This refers to Extremely Low Birth Weight (ELBW) babies, often seen in extreme prematurity.

Q27. What is the normal respiratory rate of a newborn?

- (a) 10–20 breaths/min
- (b) 20–30 breaths/min
- (c) 30–60 breaths/min
- (d) 60–80 breaths/min

Ans.(c)

Sol. Ans: (c)

Sol. A newborn's normal respiratory rate is 30–60 breaths per minute. Anything higher or lower requires evaluation for distress.

Q28. In CPR, the compression-to-ventilation ratio for adults is:

- (a) 15:2
- (b) 20:2
- (c) 30:2
- (d) 60:2

Ans.(c)

Sol. Ans: (c) Sol. Current guidelines recommend 30 chest compressions followed by 2 breaths for adults.

Q29. A nurse is conducting a health assessment on a post-stroke patient with expressive aphasia. What is the best way to gather accurate data?

- (a) Ask open-ended questions and wait for verbal response
- (b) Include family or caregivers in the interview process
- (c) Ignore verbal communication attempts and rely on medical history
- (d) Postpone the assessment until speech returns

Ans.(b)

Sol. Expressive aphasia limits verbal output, though comprehension may remain intact. Including caregivers helps gather behavioral, emotional, and functional insights that the patient cannot express. This holistic data aids in planning effective rehabilitation and meeting both medical and psychosocial needs, upholding person-centered care principles.

Explanation of options: (a) ✗ Open-ended questions assume verbal fluency and may frustrate the patient or lead to incomplete responses. (b) ✓ Caregivers can offer detailed history, symptom onset, and behavioral cues, enriching the nurse's assessment. (c) ✗ Ignoring the patient's input compromises dignity and may overlook non-verbal cues like gestures or expressions. (d) ✗ Delaying assessments postpones critical interventions like rehab or secondary stroke prevention.

Q30. What is the antidote for heparin overdose?

- (a) Vitamin K
- (b) Atropine
- (c) Protamine sulfate
- (d) Naloxone

Ans.(c)

Sol. Ans: (c)

Sol. Protamine sulfate neutralizes heparin and is administered in case of bleeding or overdose.

Q31. The dosage of vitamin-K to be administered to a preterm neonate immediately after birth is:

- (a) 0.5 mg
- (b) 1 mg
- (c) 1.5 mg
- (d) 2.5 mg

Ans.(a)

Sol. Ans. (a) Sol. The correct dose of **vitamin-K** to be administered to a **preterm neonate** immediately after birth is **0.5 mg**. This is to prevent vitamin-K deficiency bleeding (VKDB), which is more common in preterm infants.

Explanation of each option:

- (a) 0.5 mg** – Correct. Preterm neonates are typically administered **0.5 mg** of vitamin-K immediately after birth to prevent bleeding complications.
- (b) 1 mg** – Incorrect. The usual dose for full-term infants is 1 mg, but preterm infants typically receive 0.5 mg.
- (c) 1.5 mg** – Incorrect. This is a higher dose than what is typically recommended for preterm neonates.
- (d) 2.5 mg** – Incorrect. This is an unnecessarily high dose for a preterm neonate.

Q32. Identify the type of abortion where the changes progress to a state from where continuation of the pregnancy becomes impossible.

- (a) Threatened abortion
- (b) Inevitable abortion
- (c) Complete abortion
- (d) Missed abortion

Ans.(b)

Sol. Ans. (b) Sol. Inevitable abortion occurs when the pregnancy is progressing toward expulsion, and continuation of the pregnancy is impossible. This typically includes symptoms such as bleeding, dilation of the cervix, and rupture of membranes.

Explanation of each option:

- (a) Threatened abortion** – Incorrect. Threatened abortion refers to a condition where there is bleeding but the pregnancy may still continue.
- (b) Inevitable abortion** – Correct. This is the type of abortion where the progression leads to a state where the pregnancy cannot continue.

(c) Complete abortion – Incorrect. Complete abortion refers to the expulsion of all products of conception, but it is not the stage where continuation is impossible.

(d) Missed abortion – Incorrect. Missed abortion refers to a pregnancy loss without symptoms such as bleeding, but it does not fit the description provided in the question.

Q33. Which structural protein confers mechanical resilience and hydrophobicity to keratinized epithelia such as hair shafts and epidermis?

- (a) Tropomyosin
- (b) Keratin
- (c) Elastin
- (d) Laminin

Ans.(b)

Sol. Keratin is a fibrous, water-insoluble protein that strengthens epithelial tissues. It forms the key structural component of the skin, hair, and nails, providing durability and protection from dehydration and abrasion.

Option-wise explanation:

- (a) ✗ Tropomyosin is involved in muscle contraction and has no role in the integumentary system.
- (b) ✓ Keratin gives skin, hair, and nails their strength and protective quality.
- (c) ✗ Elastin provides elasticity but lacks the toughness and waterproof nature of keratin.
- (d) ✗ Laminin supports basement membrane adhesion, not surface-level protection.

Q34. Which condition is presented by the presence of strawberry tongue?

Options:

- (a) Celiac disease
- (b) Maple syrup urine disease
- (c) Kawasaki disease
- (d) Glossitis

Ans.(c)

Sol. Ans. (c) Sol. The **strawberry tongue** is a characteristic feature of **Kawasaki disease**, a condition primarily affecting children and causing inflammation in the walls of blood vessels, leading to symptoms like fever, skin rash, and mucosal changes such as strawberry tongue.

Explanation of each option:

(a) Celiac disease – Incorrect. Celiac disease primarily involves digestive issues and gluten intolerance, and strawberry tongue is not a feature of this condition.

(b) Maple syrup urine disease – Incorrect. This metabolic disorder is characterized by a sweet odor of the urine and does not involve strawberry tongue.

(c) Kawasaki disease – Correct. Strawberry tongue is commonly associated with Kawasaki disease, characterized by red, swollen, and bumpy tongue, resembling a strawberry.

(d) Glossitis – Incorrect. Glossitis refers to inflammation of the tongue, but it is not specifically associated with the strawberry appearance.

Q35. Which of the following is NOT a symptom of schizophrenia?

- (a) Hallucinations.
- (b) Paranoia.
- (c) Impulsiveness.
- (d) Disorganized speech.

Ans.(c)

Sol. Hallucinations: These are common symptoms of schizophrenia, particularly auditory ones. Paranoia: This is often associated with delusions in schizophrenia. Impulsiveness: This is not a core symptom of schizophrenia and is more linked to other disorders. Disorganized speech: This is a hallmark symptom of schizophrenia.

Q36. The pigment melanin, synthesized in the basal layer, protects skin cells by which molecular mechanism?

- (a) Absorbing infrared radiation to promote vitamin D synthesis
- (b) Binding to carotenoids to enhance pigmentation
- (c) Converting UVB to UVA through melanocyte-stimulating hormone
- (d) Absorbing UV radiation and neutralizing reactive oxygen species

Ans.(d)

Sol. Melanin absorbs harmful UV radiation and reduces the formation of DNA-damaging reactive oxygen species (ROS). It forms protective caps over the nuclei of keratinocytes, shielding their DNA.

Option-wise explanation:

- (a) ✗ Melanin primarily absorbs UV, not IR; vitamin D synthesis involves UVB in keratinocytes.
- (b) ✗ Carotenoids are unrelated to melanin's UV protection and do not bind with it.
- (c) ✗ There's no conversion of UVB to UVA; MSH only regulates melanin production.
- (d) ✓ Scientifically valid mechanism—melanin absorbs UV and reduces oxidative DNA damage.

Q37. Which vaccine is given at birth as per the Universal Immunization Program?

- (a) DPT
- (b) OPV
- (c) BCG
- (d) MMR

Ans.(c)

Sol. Ans: (c)

Sol. BCG is given at birth to prevent tuberculosis. OPV and Hep B are also given but BCG is specifically intradermal.

Q38. What is the isolation type for a patient with TB?

- (a) Contact
- (b) Airborne
- (c) Droplet
- (d) Reverse

Ans.(b)

Sol. Ans: (b) Sol. TB spreads through airborne droplets. N95 masks and negative pressure rooms are recommended.

Q39. Which nursing intervention is a priority while caring for a woman in labour with hypertonic uterine contractions which are erratic in their frequency, duration, and intensity?

- (a) Prepare the client for an amniotomy
- (b) Provide pain relief measures
- (c) Promote ambulation every 30 minutes
- (d) Provide oxytocin augmentation

Ans.(b)

Sol. Ans. (b) Sol. The priority nursing intervention for a woman in labour with **hypertonic uterine contractions** is to **provide pain relief measures**. Hypertonic contractions can cause significant discomfort and pain due to the erratic and intense nature of the contractions. Effective pain management is crucial to help the woman cope with the physical and emotional challenges during labour.

Explanation of each option:

- (a) Prepare the client for an amniotomy** – Incorrect. Amniotomy may be considered in some cases but is not the immediate priority. Pain relief is more important in this situation.
- (b) Provide pain relief measures** – Correct. Hypertonic contractions can cause severe pain due to their erratic nature. Offering pain relief is the first priority to ensure the mother's comfort.
- (c) Promote ambulation every 30 minutes** – Incorrect. Ambulation may help in some cases but is not the priority in managing hypertonic contractions where pain control is the most immediate need.
- (d) Provide oxytocin augmentation** – Incorrect. Oxytocin augmentation may be needed in cases of insufficient contractions, but hypertonic contractions are already too frequent and intense.

Q40. A patient with a Foley catheter should be assessed for:

- (a) Vomiting
- (b) Urinary retention
- (c) Hematuria
- (d) All of the above

Ans.(d)

Sol. Ans: (d) Sol. Vomiting (as a sign of infection), retention, and hematuria all need assessment with catheter use.

Q41. Which of the following best describes the critical intraoperative function of the circulating nurse in a surgical setting?

- (a) Direct handling of operative instruments
- (b) Monitoring patient's anesthesia status
- (c) Supervising surgical count and non-sterile support
- (d) Administering preoperative sedatives

Ans.(c)

Sol. The circulating nurse coordinates non-sterile activities, including supervising sponge/instrument counts, obtaining supplies, and documenting the procedure. They are pivotal in ensuring surgical safety from outside the sterile field.

Explanation of options:

- (a) ✗ Instrument handling is exclusive to the scrub nurse or surgeon.
- (b) ✗ This is the anesthetist's domain, not the nurse's.
- (c) ✓ Correct; they supervise the surgical count and support sterile team members.
- (d) ✗ Preoperative medications are usually handled by pre-op nurses or anesthetists.

Q42. Phobia is:

- (a) Irrational fear
- (b) Obsession
- (c) Delusion
- (d) Memory loss

Ans.(a)

Sol. A phobia is an intense, irrational fear of a specific object, activity, or situation that poses little or no real danger. Common examples include fear of heights (acrophobia), spiders (arachnophobia), or closed spaces (claustrophobia). Phobias lead to avoidance behavior and anxiety when exposure occurs, disrupting daily functioning.

Explanation of each option:

- (a) Irrational fear: Correct. Phobia is a psychological condition marked by excessive and unreasonable fear that is out of proportion to the actual threat and causes avoidance behavior.
- (b) Obsession: An obsession is an intrusive, repetitive thought or urge that causes anxiety. It's internal, unlike phobia which is a reaction to an external trigger.
- (c) Delusion: Delusion refers to a false belief not based in reality (e.g., "People are plotting to kill me"). It is a thought disturbance, not fear-based or situational.
- (d) Memory loss: This refers to amnesia or cognitive decline, common in dementia or head injury, and has no relation to phobic disorders.

Q43. Which linen color is specifically chosen for its psychological and visual ergonomics in a sterile OT setting, aiding in both eye strain reduction and contrast enhancement with blood?

- (a) Blue
- (b) Green
- (c) Maroon
- (d) Beige

Ans.(b)

Sol. Green linen is standard in OTs because it reduces glare and eye fatigue for the surgical team. It provides a sharp contrast to red (blood), improving visibility and precision during surgical procedures.

Explanation of options:

- (a) ✗ Blue is also used but not as common as green in all regions for surgical linen.
- (b) ✓ Green is ideal due to its visual balance and ability to mask stains.
- (c) ✗ Maroon is inappropriate and may be confused with blood.

(d) ✗ Beige shows stains clearly and offers no visual benefit during surgery.

Q44. The hypodermis, also called the subcutaneous tissue, plays a vital role in which integrated physiological functions?

- (a) Enhancing melanocyte activity and skin tone distribution
- (b) Anchoring the dermis while serving as an energy reservoir and thermal insulator
- (c) Synthesizing sebum and maintaining epidermal hydration
- (d) Providing antigen-presenting cells for immune surveillance

Ans.(b)

Sol. The hypodermis contains fat cells (adipocytes) that store energy, cushion organs, and insulate the body. It also connects the dermis to muscles and bones beneath the skin.

Option-wise explanation:

- (a) ✗ Melanocytes are located in the basal layer of the epidermis and are unrelated to the hypodermis.
- (b) ✓ This accurately describes hypodermis function—fat storage, insulation, and dermal anchoring.
- (c) ✗ Sebum is secreted by sebaceous glands found in the dermis, not in the hypodermis.
- (d) ✗ Langerhans cells responsible for immune surveillance reside in the epidermis, not hypodermis.

Q45. Low birth weight (LBW) babies are defined as weighing less than:

- (a) 2250 gm
- (b) 2750 gm
- (c) 2500 gm
- (d) 3000 gm

Ans.(c)

Sol. Ans. (c) Sol. According to the **World Health Organization (WHO)**, a **Low Birth Weight (LBW)** baby is defined as an infant weighing **less than 2500 grams (2.5 kg)** at birth, regardless of gestational age.

Low Birth Weight (LBW): <2500 gm

Very Low Birth Weight (VLBW): <1500 gm

Extremely Low Birth Weight (ELBW): <1000 gm

Low birth weight is often caused by **premature birth, intrauterine growth restriction (IUGR)**, or maternal factors such as poor nutrition, smoking, or illness during pregnancy. It is a critical factor contributing to **neonatal morbidity and mortality**.

Q46. Which of the following is a live attenuated vaccine?

- (a) IPV
- (b) BCG
- (c) Hepatitis B
- (d) Tetanus

Ans.(b)

Sol. Ans: (b) Sol. BCG is a live attenuated vaccine for tuberculosis given intradermally at birth.

Q47. The temporary accumulation of epithelial cells formed on the hard palate in a neonate are called:

- (a) supernumerary teeth
- (b) Epstein pearls
- (c) retention cysts
- (d) sucking callosities

Ans.(b)

Sol. Ans. (b) Sol. Epstein pearls are the temporary accumulation of epithelial cells that are formed on the hard palate in neonates. They are benign and typically disappear on their own after a few weeks.

Explanation of each option:

(a) supernumerary teeth – Incorrect. Supernumerary teeth are extra teeth that develop beyond the normal number, not epithelial accumulations on the hard palate.

(b) Epstein pearls – Correct. Epstein pearls are benign cystic lesions that occur in neonates due to the retention of epithelial cells on the hard palate.

(c) retention cysts – Incorrect. Retention cysts can form in various places due to blocked glands, but they are not specific to the hard palate in neonates.

(d) sucking callosities – Incorrect. Sucking callosities are thickened skin areas that develop due to repeated sucking, not related to the accumulation of epithelial cells.

Q48. Which is a negative symptom of schizophrenia?

- (a) Hallucination
- (b) Delusion
- (c) Apathy
- (d) Disorganized speech

Ans.(c)

Sol. Negative symptoms in schizophrenia are deficits in normal emotional and behavioral functioning. Apathy—lack of motivation and indifference—is one such symptom. Patients with apathy show little interest in daily activities, social interaction, or personal care. Unlike positive symptoms like hallucinations, negative symptoms are harder to treat and are often associated with long-term disability.

Explanation of each option:

(a) Hallucination: This is a positive symptom involving false sensory perceptions like hearing voices or seeing things that aren't there. It represents added abnormal experiences rather than a loss of normal behavior.

(b) Delusion: Delusions are fixed false beliefs (e.g., thinking one is being followed or spied on). Like hallucinations, they are positive symptoms and reflect a distortion of thought processes.

(c) Apathy: Correct. Apathy is a classic negative symptom in schizophrenia. It reflects emotional withdrawal, lack of motivation, and inability to initiate purposeful activity, contributing significantly to social dysfunction.

(d) Disorganized speech: This is a positive symptom reflecting disturbed thought processes. It includes incoherent or illogical speech, making communication difficult.

Q49. Which of the following assessment findings of a pregnant lady determine that she is in the second stage of labour?

- (a) Membranes have ruptured
- (b) Cervix is dilated completely
- (c) Begins to expel clear vaginal fluid
- (d) Contractions are regular

Ans.(b)

Sol. Ans. (b) Sol. The second stage of labour is identified when the cervix is fully dilated, and the woman is ready to push the baby out.

Explanation of each option:

(a) Membranes have ruptured – Incorrect. While the rupture of membranes may occur before or during labour, it does not specifically indicate the second stage.

(b) Cervix is dilated completely – Correct. Complete dilation (10 cm) marks the start of the second stage of labour, which involves the expulsion of the baby.

(c) Begins to expel clear vaginal fluid – Incorrect. Expulsion of fluid can occur at various stages, particularly during the first stage, but it doesn't mark the second stage.

(d) Contractions are regular – Incorrect. Regular contractions are a feature of all stages of labour but do not specifically signify the second stage.

Q50. What is the normal range of serum potassium in adults?

- (a) 2.5–3.0 mEq/L
- (b) 3.5–5.0 mEq/L
- (c) 4.5–6.0 mEq/L
- (d) 5.5–7.0 mEq/L

Ans.(b)

Sol. Ans: (b)

Sol. The normal serum potassium level is 3.5–5.0 mEq/L. Levels outside this range can lead to cardiac issues.