UPSC ESIC Nursing Exam 08 July, 2024

1. Period of practical experience and training in clinical nursing supervised by an expert of a particular field is known as:
(1) Preceptorship
(2) Mentorship
(3) Peer group support
(4) Self-reflection

2. The overall plan of rotation of all students in educational institution including teaching learning activities and related events during academic year is known as:
(1) Clinical rotation plan
(2) Master rotation plan
(3) Curriculum planning
(4) Course plan

3. Consider the following statements regarding Objective Structured Clinical Examination (OSCE) method:
1. It provides more emphasis on performance of skills
2. It is more useful in assessing the knowledge of students
3. It requires checklists for evaluation
4. Holistic approach to patient management cannot be assessed
Which of the statements given above are correct?
(1) 1, 3 and 4
(2) 1, 2 and 4
(3) 2, 3 and 4
(4) 2 and 3 only

4. Which one of the following tools maintained by teacher is very valuable for assessment of student's performance?
(1) Incident record
(2) Anecdotal record
(3) Self-report
(4) Clinical attendance

5. A chart indicating the distribution of questions based on objectives and content area is called:
(1) Question paper
(2) Blue print
(3) Question bank
(4) Check list

6. Match the list I with List II and select the correct answer using the code given below the lists:

List I (Developmental task)	**List II (Stage of growth and development)**
A. Develops a sense of trust	**1. Toddlerhood**
B. Develops autonomy	**2. Infancy**
C. Develops initiative and purpose	**3. School age**
D. Develops a sense of accomplishment	**4. Preschool age**

Code :

	A	**B**	**C**	**D**
(1)	2	4	1	3
(2)	2	1	4	3
(3)	3	4	1	2
(4)	3	1	4	2

7. Which one of the following methods is the most appropriate for feeding the baby born at 31 weeks of gestation?
(1) Intravenous fluids and oral feeding
(2) Oro-gastric/nasogastric tube feeding with occasional spoon or paladai feeding
(3) Intravenous fluids with occasional oro-gastric/nasogastric tube feeding
(4) Total parenteral nutrition

8. A fourteen-year-old child has been admitted with the complaints of fever, headache, chills and vomiting. He has been provisionally diagnosed as a case of bacterial meningitis and has been advised lumbar puncture for the examination of cerebrospinal fluid (CSF). Which one of the following variations in CSF will confirm that the child has bacterial meningitis?
(1) Neutrophils and protein content elevated
(2) Colour of CSF is clear or slightly turbid
(3) Lymphocytes are elevated
(4) Glucose content is normal

9. Which of the following are true about the signs of good attachment in breastfeeding technique?
1. The baby's mouth is wide open
2. Upper areola is visible, not the lower one

3. **Baby's chin touches the breast**
4. **The upper lip of the baby is everted/turned outward**
5. **Baby's head and body are in one plane**

Select the correct answer using the code given below:

(1) 1, 4 and 5
(2) 2, 3 and 5
(3) 1, 2 and 3
(4) 3, 4 and 5

10. During resuscitation, which one of the following medications is indicated initially if the heart rate of a newborn continues to be less than 60 per minute after 30 seconds of Positive Pressure Ventilation and Chest Compression?

(1) Epinephrine
(2) Sodium Bicarbonate
(3) Atropine
(4) Dexamethasone

11. A 15-month-old child is brought to the OPD with diarrhoea. He has sunken eyes; the skin pinch goes back slowly and he drinks eagerly. As per the Integrated Management of Neonatal and Childhood Illnesses (IMNCI), this child is classified as:

(1) Severe dehydration
(2) Some dehydration
(3) No dehydration
(4) Severe persistent diarrhoea

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

(1) Baby weighing 1000 gram cared in an incubator
(2) Baby with a birth weight of 2.6 kg
(3) Hemodynamically stable Low birth weight baby
(4) Baby who is sick and cared under radiant warmer

13. A 10-year-old child has been admitted in a paediatric medical ward with sudden onset of haematuria, oliguria, edema and hypertension. Which one of the following conditions the child is likely to have?

(1) Nephrotic syndrome
(2) Acute kidney injury
(3) Acute glomerulonephritis
(4) Chronic renal failure

14. A six-year-old child has been admitted in paediatric medical ware as a case of malignant tumour. Which one of the following is the most common in the above age group?

(1) Acute myeloid leukaemia
(2) Juvenile myelomonocytic leukaemia
(3) Acute lymphoblastic leukaemia
(4) Chronic myeloid leukaemia

15. Mathc the List I with List II and select the correct answer using the code given below the lists:

List I (Condition)	**List II (Symptom)**
A. Hypertrophic pyloric Stenosis	**1. Bilious vomiting**
B. Intussusception	**2. Projectile vomiting**
C. Peptic Ulcer	**3. Pain in the right lower quadrant of abdomen**
D. Appendicitis	**4. Recurrent vomiting**

Code :

	A	**B**	**C**	**D**
(1)	3	4	1	2
(2)	3	1	4	2
(3)	2	4	1	3
(4)	2	1	4	3

16. Excessive stretching of a muscle and its fascial sheath often involving tendon is known as:

(1) Strain
(2) Sprain
(3) Fracture
(4) Greenstick fracture

17. Abnormal, tortuous opening between the bladder and vagina is known as:

(1) Ureterovaginal fistula
(2) Vaginoperineal fistula
(3) Rectovaginal fistula
(4) Vesicovaginal fistula

18. Consider the following steps of Chest tube removal:

1. **Valsalva maneuver**
2. **Administration of analgesic**
3. **Chest X-ray**
4. **Air tight dressing of the site**

Which one of the following is the correct sequence of steps of Chest tube removal?

(1) 3, 1, 4, 2
(2) 2, 1, 4, 3
(3) 3, 4, 1, 2
(4) 2, 4, 1, 3

19. The characteristic manifestations of Nephrotic syndrome include:

(1) Massive proteinuria, Hypertension, Hyperlipidemia, Hypoalbuminemia, foamy uring

(2) Massive proteinuria, Hypertension, Hypolipidemia, Hyperalbuminemia

(3) Peripheral edema, Hypotension, Hypoalbuminemia, Hypolipidemia

(4) Hyperlipidemia, Hypoalbuminemia, Hypotension, cola colored urine

20. A patient is suffering with celiac disease. Which one of the following food items he should avoid in his diet?

(1) Wheat

(2) Eggs

(3) Cheese

(4) Soy products

21. A nurse caring for a patient with Type-2 Diabetes mellitus with high dose insulin was monitoring blood glucose level between 2 am to 4 am. she is trying to assess:

(1) Dawn effect

(2) Somogyi effect

(3) Rebound Hypoglycemia

(4) Insulin effectiveness

22. A patient with renal dysfunction develops uremia, when his GFR is:

(1) $\leq$ 15 mL/min

(2) > 30 ml/min

(3) $\geq$ 45 mL/min

(4) $\geq$ 60 mL/min

23. Conside the following statements regarding preparation of multiple-choice questions:

1. Stem should be clear and explicit

2. Use negatives and double negatives

3. The alternatives should be similar in length, detail and complexity

4. Avoid using distractors that are essentially the same

Which of the statement(s) given above is/are correct?

(1) 1 only

(2) 1 and 2 only

(3) 1, 3 and 4 only

(4) 1, 2, 3 and 4

24. The type of evaluation that compares the student's performance with others in same group is referred as:

(1) Criterion referenced

(2) Norm referenced

(3) Formative

(4) Summative

25. Which of the following are the purposes of audiovisual aids?

1. To simplify unfamiliar concepts

2. To bring about understanding where words fail

3. To reinforce learning appealing to more than one sense

4. To promote monotony

Select the correct answer using the code given below:

(1) 1 and 2 only

(2) 1 and 4

(3) 1, 2 and 3

(4) 2, 3 and 4

26. Which one of the following educational philosophies emphasises practical utility and activity-based curriculum?

(1) Pragmatism

(2) Idealism

(3) Realism

(4) Naturalism

27. Which of the following statements regarding brainstorming method of teaching are correct?

1. It promotes critical thinking

2. It makes student more skilled

3. It promotes group activity

4. Maximum ideas can be sought in a short time

Select the correct answer using the code given below:

(1) 1 and 2

(2) 1 and 3 only

(3) 1, 3 and 4

(4) 2, 3 and 4

28. Which one of the following methods is best for psychomotor skill development among students?

(1) Lecture method

(2) Role play

(3) Demonstration

(4) Group discussion

29. The type of teaching method used for developing teaching skills and competencies in teacher trainee is:

(1) Microteaching
(2) Seminar
(3) Lecture
(4) Group discussion

30. Which one of the following counselling skills involves, paraphrasing client's words and saying what counsellor think about client's feeling?
(1) Concreting
(2) Reflecting
(3) Summarizing
(4) Listening

31. All of the following are true about care bundle EXCEPT :
(1) Care bundle is a group of interventions related to a disease process or condition
(2) Care bundles increases the possibility of long-term complication of a particular disease
(3) Care bundle interventions, when exceuted together, result in better patient outcomes than when implemented individually
(4) Care bundle ensure that patients receive quality care and preventing most common complications associatied with their diagnoses

32. The type of exercise in which muscle contraction occurs without moving the joint is called:
(1) Isotonic exercise
(2) Isokinetic exercise
(3) Aerobic exercise
(4) Isometric exercise

33. All of the following are the potential circulatory problems after surgery EXCEPT:
(1) Thrombophlebitis
(2) Embolus
(3) Hemorrhage
(4) Tympanites

34. In wound healing, the phase where fibroblasts migrate into the wound and begin to synthesize collagen is called:
(1) Inflammatory phase
(2) Maturation phase
(3) Proliferation phase
(4) Evisceration

35. All are the examination methods for assessment of eyes EXCEPT:
(1) Tonometry
(2) Slit lamp test
(3) Refraction test
(4) Romberg test

36. Elderly people are more prone to get respiratory infection because of:
1. Decline in cell mediated immunity
2. Decline in humoral immunity
3. Decreased formation of secretory IgA
4. Fewer or less functional cilia
Select the correct answer using the code given below:
(1) 1 and 2 only
(2) 1 and 4 only
(3) 1, 2 and 3 only
(4) 1, 2, 3 and 4

37. Which of the following are the advantages of Dry powdered Inhalers (DPIs) over Metered Dose inhalers (MDIs)?
1. It requires less manual dexterity
2. It does not require spacer
3. It is effectivy in patients with low FEV_1 (< 1L)
4. There is no need to coordinate device puffs with inhalation
Select the correct answer using the code given below:
(1) 1 and 2 only
(2) 1, 2 and 3
(3) 1, 2 and 4
(4) 2 and 3 only

38. The List I contains the name of the artery and the List II contains the manifestation of stroke related to artery involvement. Match the List I whth List II and select the correct answer using the code given below the lists:

List I	**List II**
A. Anterior cerebral	**1. Aphasia**
B. Middle cerebral	**2. Loss of proprioception and fine touch**
C. Posterior cerebral	**3. Dysarthria and dysphagia**
D. Vertebral	**4. Visual hallucination**

Code :

	A	**B**	**C**	**D**
(1)	3	4	1	2
(2)	2	1	4	3
(3)	2	4	1	3
(4)	3	1	4	2

39. Bell's palsy is an acute, usually temporary condition resulting from damage or trauma of:
(1) Cranial III
(2) Cranial IV
(3) Cranial V
(4) Cranial VII

40. Which one of the following markers begin to rise about 6 hours after Myocardial Infarction and peaks in 18 hours?
(1) CK-MB
(2) Cardiac specific troponin T(cTnT)
(3) Myoglobin
(4) Cardiac specific troponin I (cTnI)

41. A nurse is assessing stoma before changing the colostomy bag. Which one of the following colour of stoma indicates inchemia?
(1) Rose pink
(2) Brown-black
(3) Dusky blue
(4) Bright red

42. A patient is diagnosed with acute pancreatitis. The laboratory test was performed. Which one of the following laboratory findings will show decrease in value?
(1) Blood glucose
(2) Serum amylase
(3) Serum lipase
(4) Serum calcium

43. Nursing care of the patient after thyroid surgery includes all of the following EXCEPT:
(1) Monitoring calcium level
(2) Providing semi-Fowler's position
(3) Assessing patients' ability to speak
(4) Promoting intake of iodine rich food

44. The predominant clinical manifesations of ulcerative colitis include:
(1) Diarrhea, passage of mucus and pus in stool, rectal bleeding
(2) Diarrhea, rectal bleeding, weight gain
(3) Pallor, vomiting, hypercalcemia
(4) Right upper quadrant abdominal pain, joint abnormalities, hypocalcemia

45. Which one of the following is NOT a surgical therapy in case of Meniere's disease?
(1) Stapedotomy
(2) Labyrinthectomy
(3) Endolymphatic stunt
(4) Vestibular nerve section

46. For adults the ratio of chest compression-to-ventilation is case of single rescuer Cardiopulmonary resuscitation (CPR) is:
(1) 15 : 2
(2) 15 : 1
(3) 30 : 2
(4) 30 : 1

47. Wound caused by an injury with a blunt object, leading to tearing of soft tissue is known as:
(1) Laceration
(2) Abrasions
(3) Punctures
(4) Incision

48. In normal range-of-motion, movement of extremity away from midline of body is termed as:
(1) Adduction
(2) Eversion
(3) Inversion
(4) Abduction

49. Which one of the following breathing patterns indicates rhythm abnormality?
(1) Dyspnea
(2) Cheye-Stokes breathing
(3) Bradypnea
(4) Hyperventilation

50. Which one of the following levels of illness prevention includes actions and measures that inhibit the emergence of risk factors?
(1) Secondary prevention
(2) Primordial prevention
(3) Primary prevention
(4) Tertiary prevention

51. Transverse depressions in nails indicating temporary disturbance of nail growht are known as:
(1) Koilonychia
(2) Paronychia
(3) Clubbing
(4) Beau's lines

52. Which of the following are adventitious breath sounds on auscultation?
1. Crackles
2. Rhonchi
3. Wheeze
4. Pleural friction rub
Select the correct answer using the code given below:

(1) 1 and 2 only
(2) 2 and 3 only
(3) 2, 3 and 4 only
(4) 1, 2, 3 and 4

53. Presence and growth of micro-organisms within a host but without tissue invasion or damage is known as:
(1) Infestation
(2) Inflammation
(3) Colonization
(4) Infection

54. Which of the following biomedical wastes should be discarded in yellow colour waste bin?
1. Human anatomical waste
2. Urobag
3. Needles
4. Soiled plaster casts
5. Glass slides
Select the correct answer using the code given below:
(1) 1 and 2
(2) 1 and 4
(3) 2 and 3
(4) 3 and 5

55. Sleepwalking and enuresis occur in which stage of sleep cycle?
(1) Rapid Eye Movement (REM) sleep
(2) Non-Rapid Eye Movement (NREM) sleep stage 1
(3) NREM sleep stage 2
(4) NREM sleep stage 4

56. Which one of the following neuro-transmitters have inhibitory effect on pain?
(1) Substance-P
(2) Endorphins
(3) Bradykinin
(4) Prostaglandins

57. Low arterial concentrations of oxygen in blood is termed as:
(1) Hypoxemia
(2) Hypoxia
(3) Eupnea
(4) Eucapnia

58. Which one among the following is a physiologically hypertonic solution?
(1) 3% sodium chloride
(2) 0.9% sodium chloride
(3) 0.45 sodium chloride
(4) 2.5% dextrose solution

59. Flat and painless thickened portion of epidermis consisting of mass of horny, keratotic cells formed by local pressure or friction found on palm or undersurface of foot is called:
(1) Plantar warts
(2) Corns
(3) Athlete's foot
(4) Callus

60. Which one of the following core critical thinking skills relates to monitoring and correcting mistakes occurring in process of interpreting, analyzing, inferring, evaluating or explaining?
(1) Analysis
(2) Interpretation
(3) Self-regulation
(4) Explanation

61. As per Parkland formula, the amount of fluid to be infused in the first 8 hours to the patient of 70 kg weight having 50% total body surface area of burn will be:
(1) 8000 mL
(2) 7000 mL
(3) 6000 mL
(4) 5000 mL

62. Vascular skin lesions which are benign tumor consisting of blood and lymph vessels are called:
(1) Purpura
(2) Osler's nodes
(3) Ecchymosis
(4) Angioma

63. Consider the following statements regarding the principles of aseptic technique practiced in operating room:
1. All material that enters the sterile field must be sterile
2. The parts of gown worn by surgical team considered sterile are the front from chest to table level and sleeves up to 2 inches above elbow
3. A wide margin of safety is maintained between sterile and unsterile field
4. Tables are sterile at table top and up to 4 inches below it
Which of the statement(s) given above is/are NOT correct?
(1) 2 only

(2) 2, 3 and 4
(3) 1 and 3
(4) 4 only

64. A nurse caring the patient after cataract surgery should include which of the following care immediately after the surgery?

1. Administer topical antibiotics
2. Administer topical corticosteroids
3. Administer sedatives
4. Advise activity restriction like bending and lifting

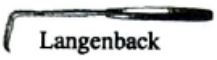
Select the correct answer using the code given below:

(1) 1 and 2 only
(2) 1, 2 and 4
(3) 3 and 4
(4) 1, 2 and 3

65. The definite symptoms of acute angle closure glaucoma include:

(1) Severe eye pain, blurred vision, seeing colored halos around lights and ocular redness
(2) Tunnel vision, loss of peripheral vision with no pain in and around the eye
(3) Severe eye pain, Tunnel vision, loss of peripheral vision
(4) No eye pain, ocular redness, tunnel vision

66. Match the List I with List II and select the correct answer using the code given below the lists:

List I	List II
A. 	**1. Useful for giving maximum exposure in large incisions such as those used in abdomen**
B. 	**2. Useful for holding the liver up during cholecystectomy**
C. 	**3. Useful in major abdominal surgery to retract deeper parts of the abdominal wall or the bladder or uterus while operating on the rectum**
D. 	**4. Useful for holding open wound like in appendicectomy**

Code:

	A	B	C	D
(1)	4	2	1	3
(2)	4	1	2	3
(3)	3	1	2	4
(4)	3	2	1	4

67. Purposes of administering Bacillus Calmette-Guerin (BCG) in cases of bladder cancer are all EXCEPT:

(1) Antitumor activity
(2) Prevents bleeding
(3) Prevents recurrence of transitional cell bladder tumors
(4) Acts as immunotherapeutic agent

68. All of the following instructions related to investigation of a patient who has to undergo bone densitometry are correct EXCEPT:

(1) Calcium supplements should be avoided 24 hours prior to the investigation
(2) Patient must remain nil per orally at least 12 hours before the investigation
(3) Patient has to remove clothing, jawellery and other metallic objects when scanning is done
(4) Patient to lie still with hips flexed for about 20 minutes during test

69. Which one of the following is the prerenal cause of Acute Kidney Injury (AKI)?

(1) Immunologic processes
(2) Toxins
(3) Shock
(4) Urinary stricture

70. Which one of the following is most appropriate for pain assessment in patients with chronic pain?

(1) Multidimensional questionnaire
(2) FACES scale
(3) Visual Analogue Scale
(4) Verbal Descriptor Scale

71. All of the following are non-steroidal anti-inflammatory drugs EXCEPT:

(1) Naproxen
(2) Indomethacin
(3) Allopurinol
(4) Diclofenac sodium

72. Which one of the following is a generalized disorder of connective tissue characterized by hardening and thickening of skin, blood vessels, skeletal muscles and internal organs?
(1) Systemic Lupus Erythematosus
(2) Systemic Sclerosis
(3) Gout
(4) Psoriasis

73. Which one of the following diagnostic tests is used to measure the electrical activity of brain cells?
(1) Computed tomography
(2) Electroneurography
(3) Electroencephalography
(4) Electromyography

74. All of the following are exclusion criteria for tPA (tissue plasminogen activator) therapy EXCEPT:
(1) Glucose level > 400 mg/dL
(2) Coagulopathy
(3) History of major surgery in the past 2 weeks
(4) Ischemic stroke

75. Which one of the following drugs stabilize the cardiac membrane in a patient with hyperkalemia?
(1) Sodium bicarbonate
(2) Insulin
(3) Calcium gluconate
(4) Digoxin

76. Which one of the following hormones is secreted by neurohypophysis that causes uterine contractions?
(1) Estrogen
(2) Progesterone
(3) Prolactin
(4) Oxytocin

77. Which one of the following plasma proteins has the function of maintaining osmotic pressure?
(1) Haptoglobin
(2) Transferrin
(3) Albumin
(4) Ceruloplasmin

78. Which of the following conditions can cause Steatorrhea?
1. Pancreatic enzyme insufficiency
2. Diseases affecting small intestines
3. Bile acid deficiency
4. Insulin deficiency
Select the correct answer using the code given below:
(1) 1 and 2 only
(2) 2 and 3 only
(3) 1, 2 and 3
(4) 2, 3 and 4

79. All of the following are theories of motivation EXCEPT:
(1) Self-determination theory
(2) Hulls theory
(3) Psychoanalytical theory
(4) Sternberg's triarchic theory

80. The highest level of growth needs as per the Maslow's hierarchy of needs theory is:
(1) Aesthetic
(2) Cognitive
(3) Esteem
(4) Self-actualization

81. An IQ score of 90 is classified as:
(1) Borderline
(2) Average
(3) Superior
(4) Bright normal

82. According to Sigmund Freud's theory of Psychoanalysis, all of the following are structures of personality EXCEPT:
(1) Conscious
(2) Id
(3) Ego
(4) Superego

83. The conflict that occurs due to having to choose between two positive goals which are equally attractive at the same time is called:
(1) Approach-avoidance conflict
(2) Double approach avoidance conflict
(3) Avoidance-avoidance conflict
(4) Approach-approach conflict

84. The type of family in which father has highest status in family who controls the social life of family is called:
(1) Patriarchal family
(2) Matriarchal family
(3) Patrilocal family
(4) Patrilineal family

85. Which of the following are ways of Acculturation?
1. Trade and commerce
2. Industrialization

3. Education
4. Conquest

Select the correct answer using the code given below:

(1) 1 and 2 only
(2) 1, 2 and 3 only
(3) 2, 3 and 4 only
(4) 1, 2, 3 and 4

86. Which of the following are essential amino acids?

1. Leucine
2. Tryptophan
3. Methionine
4. Cystine
5. Histidine

Select the correct answer using the code given below:

(1) 1, 2, and 3 only
(2) 3, 4 and 5 only
(3) 1, 2, 3 and 5
(4) 1, 3, 4 and 5

87. Match the List I with List II and select the correct answer using the code given below the lists:

List I (Deficiency)	**List II (Sign)**
A. Corneal xerosis	**1. Triangular, pearly-white or yellowish, foamy**
B. Keratomalacia	**2. Cornea dull, dry and non-wettable and eventually opaque**
C. Conjunetival xerosis	**3. Cornea becomes soft and may burst open**
D. Bitot's spot	**4. Conjunctiva becomes dry and non-wettable**

	A	**B**	**C**	**D**
(1)	2	4	3	1
(2)	1	3	4	2
(3)	2	3	4	1
(4)	1	4	3	2

88. Match the Liest I with List II and select the correct answer using the code given below the lists:

List I (Nutrient)	**List II (Function)**
A. Vitamin D	**1. Essential for the metabolism of carbohydrates, fats and proteins**
B. Niacin	**2. Promotes intestinal absorp-tion of calcium and phosphorus**
C. Vitamin C	**3. Essential for formation of bones and teeth**
D. Phosphorus	**4. Acts as antioxidant**

Code :

	A	**B**	**C**	**D**
(1)	3	1	4	2
(2)	2	1	4	3
(3)	3	4	1	2
(4)	2	4	1	3

89. Which one of the following serum enzymes is used in clinical diagnosis of acute pancreatitis?

(1) Lactate dehydrogenase
(2) Alanine aminotransferase
(3) Aspartate aminotransferase
(4) Amylase

90. Which one of the following is the major immunoglobulin in human serum?

(1) IgA
(2) IgD
(3) IgG
(4) IgE

91. Which one of the following is NOT a component of epidemiological triad?

(1) Environment
(2) Agent
(3) Host
(4) Disease

92. During Pulse Polio Immunization, Auxiliary Nurse Midwife (ANM) has noticed that on vaccine vial monitor the color of square inside the circle is darker than the circle around it. What should be her action?

(1) Administer the vaccine to children from the same vial
(2) Administer the vaccine from same vial after shaking it
(3) Put the vial in ice box for some time and then administer from the same vial
(4) Should not use this vial for vaccination

93. Match the List I with List II and select the correct answer using the dode given below the lists:

List I (Causative agent)	**List II (Disease)**

A. Bordetalla pertusis	**1. Yellow fever**
B. Salmonella typhi	**2. Food poisoning**
C. Clostridium perfringes	**3. Whooping cough**
D. Flavivirus fibricus	**4. Enteric fever**

Code :

	A	B	C	D
(1)	1	2	4	3
(2)	3	4	2	1
(3)	3	2	4	1
(4)	1	4	2	3

94. Which one of the following services should ideally form the base of the health service pyramid?

(1) Clinical preventive services
(2) Population based health care services
(3) Secondary health care services
(4) Tertiary health care services

95. Community Based Assessment Checklist (CBAC) for early detection of non-communicable diseases is to be filled by:

(1) Medical Officer
(2) Staff Nurse
(3) ANM
(4) ASHA

96. Which of the following are the team members of Health and Wellness Centre (HWC) at Sub Centre (SC) level?

1. Community health officers (Mid-Level Health Provider)
2. ANM
3. ASHA
4. Anganwadi worker

Select the correct answer using the code given below:

(1) 1, 2, 3 and 4
(2) 2 and 3 only
(3) 1 and 4 only
(4) 1, 2 and 3 only

97. Which one of the following color codes is NOT correct for triage system adopted in triage of disaster management in India?

(1) Red indicates high priority treatment
(2) Yellow indicates medium care priority
(3) Blue indicates ambulatory patients
(4) Black indicates dead and moribund patients

98. Under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (ABPMJAY), how much cover per family per year is provided for secondary and tertiary care hospitalization?

(1) INR ,00,000
(2) INR 5,00,000
(3) INR 7,00,000
(4) INR 10,00,000

99. Discouraging children from adopting harmful lifestyles for the prevention of non-communicable disease is an example of:

(1) Primordial prevention
(2) Primary prevention
(3) Secondary prevention
(4) Tertiary prevention

100. Screening of a sub group population for a particular disease is called:

(1) Mass screening
(2) Selective screening
(3) High risk screening
(4) Multiphasic screening

101. Which one of the following is the indicator of prevalence of contraceptive practice in the community?

(1) Total Fertility Rate
(2) General Fertility Rate
(3) Couple Protection Rate
(4) Net Reproduction Rate

102. Which one of the following occupational diseases occure due to sugarcance dust?

(1) Anthracosis
(2) Silicosis
(3) Farmer's lung
(4) Bagassosis

103. Which one of the following vaccines is sensitive to freezing and should be protected from sub-zero temperature?

(1) Oral polio
(2) BCG
(3) Japanese encephalitis
(4) Cholera

104. Peyer's patches are present in:

(1) Stomach
(2) Duodenum
(3) Jejunum
(4) Ileum

105. The type of joints, where movement takes place about a single stationary axis, and is largely restricted to one plane are known as:

(1) Plane joints

(2) Hinge joints
(3) Ellipsoid joints
(4) Saddle joints

106. A report of any event that is NOT consistent with the routine of hospital and is written only if any mishap or mistake occurs in patient care is called:
(1) Compliance report
(2) Hand-off report
(3) Incident report
(4) Clinical information report

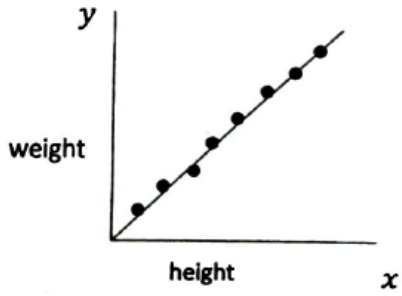
107. When one chooses a course of action from several options, based on a criterion, base on regulations of institutionand professional standards, this process is called:
(1) Problem solving
(2) Decision making
(3) Diagnostic reasoning
(4) Hypothesizing a solution

108. The most appropriate data collection tool to measure attitude towards condom use would be:
(1) Checklist
(2) Q sorts
(3) Vignettes
(4) Likert-scale

109. Consider the following research statement:
"A study to assess motivation-focused intervention effect on self-esteem of adolescents in a school"
What type of variable is 'motivation-focused intervention' in the statement given above?
(1) Confounding (2) Independent
(3) Dependent (4) Extraneous

110. A researcher conducted a study to describe th lived experiences of care givers of patients with Dementia. Which type of qualitative study is conducted by the researcher?
(1) Ethnography
(2) Phenomenology
(3) Case study
(4) Grounded theory

111. The following diagram is indicative of :



(1) Weak negative correlation
(2) Strong negative correlation
(3) Perfect positive correlation
(4) Moderate positive correlation

112. Match the List I with List II and select the correct answer using the code given below the lists:

List I (Phase)	**List II (Step)**
A. Empirical phase	**1. Deciding a sampling plan**
B. Design and Planning phase	**2. Interpreting the results**
C. Dissemination phase	**3. Collecting the data**
D. Analytic phase	**4. Utilizing the findings**

Code:

	A	**B**	**C**	**D**
(1)	2	1	4	3
(2)	2	4	1	3
(3)	3	1	4	2
(4)	3	4	1	2

113. Approach to reliability assessment that involves administration of the same measure to the same people on two occasions is called as:
(1) Inter-rater reliability
(2) Test-retest reliability
(3) Intra-rater reliability
(4) Parallel test reliability

114. A 26 years old woman visiting gynaecology OPD complains of creamy vaginal discharge with fishy odour. There is no history of itching. The possible diagnosis of the patient is:
(1) Candidiasis
(2) Chlamydial infection
(3) Bacterial vaginosis
(4) Leucoderma

115. Match the List I with List II and select the correct answer using the code given below the lists:

List I (Phenomenon)	List II (Diagnostic feature of USG)
A. Threatened abortion	1. Foetus without cardiac activity
B. Missed abortion	2. Uterine cavity empty
C. Incomplete abortion	3. Foetus alive and retroplacental haemorrhage
D. Complete abortion	4. Products of conception partly retained

Code :

	A	B	C	D
(1)	3	1	4	2
(2)	3	4	1	2
(3)	2	1	4	3
(4)	2	4	1	3

116. Daily requirement of calcium during pregnancy and lactation is:
(1) 500 – 1000 mg
(2) 1.0 – 1.5 mg
(3) 1.5 – 2.0 mg
(4) >2.0 mg

117. Presence of functioning endometrium in sites other than uterine mucoa is called:
(1) Uterine polyps
(2) Adenomyosis
(3) Paget's disease
(4) Endometriosis

118. Which one of the following is a non-steroidal compound with potent antiestrogenic properties used for oral contraception?
(1) Progestin-only pill
(2) Levonorgestrel
(3) Desogestrel
(4) Centchroman

119. Active management of 3rd stage of labor includes:
(1) Administration of oxytocin 10 units IM
(2) Crede's expression of the placenta
(3) Administrationof carboprost IM
(4) Administration of misoprostol 1000 μg per rectum

120. All of the following are the causes of secondary dysmenorrhoea EXCEPT:
(1) Endometriosis
(2) Adenomyosis
(3) Bicornuate uterus
(4) Pelvic adhesions

121. The withdrawal and inability to initiate and persist in goal-directed activity is called:
(1) Apathy
(2) Anhedonia
(3) Avoidance
(4) Avolition

122. The most important and effective strategy for the elderly to maintain self-esteem and support the natural healing process of life review is:
(1) Bibliotherapy
(2) Token economy
(3) Reminiscence
(4) Milieu therapy

123. The psychopharmacologic drug classification of Olanzapine is:
(1) Typical antipsychotic
(2) Atypical antipsychotic
(3) Antidepressant
(4) Mood stabilizer

124. While assessing the patient nurse asks the patient, "if a house were on fire, what would you do?" Which one of the following is being assessed by the nurse by asking that question?
(1) Test judgement
(2) Social judgement
(3) Insight
(4) Abstract thinking

125. All of the following are symptoms of opioids overdose EXCEPT:
(1) Delirium tremens
(2) Respiratory depression
(3) Stupor
(4) Come

126. A highly structured psychotherapeutic method used to alter distorted beliefs and problem behaviour by identifying and replacing negative inaccurate thoughts and changing rewards for behaviour is
(1) Behaviour therapy
(2) Cognitive behaviour therapy
(3) Solution-focused belief therapy
(4) Motivational enhancement therapy

127. An excitatory neurotransmitter that is diffusely distributed within cerebral cortex, limbic system and basal ganglia of the CNS, and plays

a role in emotions, cognition and sensory perceptions is:

(1) Histamine
(2) GABA
(3) Serotonin
(4) Glycine

128. Consider the following communication between a patient and nurse:

Patient: I have done something awful.
Nurse : I would lide to hear about it. It's okay to discuss it with me.

Which one of the following verbal communication techniques is being used by the nurse?

(1) Acceptance
(2) Confrontation
(3) Reflection
(4) Validation

129. Match the List I with List II and select the correct answer using the code given below the lists:

List I (Generic drug name)	**List II (Classification)**
A. Flurazepam	**1. Antihistamine**
B. Zolpidem	**2. Melatonergic hypnotic**
C. Ramelteon	**3. Nonbenzodia-zepine hypnotic**
D. Hydroxyzine	**4. Benzodiazepine hypnotic**

	A	**B**	**C**	**D**
(1)	4	3	2	1
(2)	4	2	3	1
(3)	1	3	2	4
(4)	1	2	3	4

130. All of the following symptoms present in a patient since last 2 weeks are indicative of Major Dpressive Disorder EXCEPT:

(1) Depressed mood
(2) Markedly diminished interest
(3) Catatonic behaviour
(4) Fatigue

131. Which of the following are assumptions in Milieu therapy?

1. The patient owns his/her environment
2. The patient takes responsibility for his/her behaviour
3. Inappropriate behaviour needs to be corrected
4. Peer pressure has no role to play

Select the correct answer using the code given below:

(1) 1 and 2 only
(2) 1, 2 and 3
(3) 2, 3 and 4
(4) 1, 3 and 4

132. According to S.I.U. staffing norms for the nurses working in Central government hospitals, the normal/general ward should have:

(1) One nurse/nursing sister for every seven beds
(2) One nurse/nursing sister for every six beds
(3) One nurse/nursing sister for every five beds
(4) One nurse/nursing sister for every four beds

133. A temporary placement of nurses ina ward for 12 hours or less which is done to cover the shortage of nurses, especially during evening and night shifts by the supervisors is called:

(1) Intradepartmental deployment
(2) Interdepartmental deployment
(3) Interlocation deployment
(4) Short-term deployment

134. All of the following are techniques of inventory control EXCEPT:

(1) ABC analysis
(2) VED analysis
(3) XYZ analysis
(4) SDX analysis

135. All of the following are major penalties awarded for the employees for their serious misconduct EXCEPT:

(1) Loss of privileges
(2) Demotion
(3) Transfer
(4) Withholding increments

136. Match the List I with List II and select the correct answer using the code given below the lists:

List 1 (Degree of uterine prolapse)	**List II (Clinical feature of prolapse)**
A. First degree	**1. Uterus prolapses with eversion of entire vagina**
B. Second degree	**2. The uterine cervix, body and the fundus**

		descends outside the introitus
C.	**Third degree**	**3. The external os protrudes outside the vaginal introitus but uterine body still remains inside the vagina**
D.	**Procidentia**	**4. Uterus descends down from its normal anatomical position but the external os remains above the introitus**

Code:

	A	**B**	**C**	**D**
(1)	4	3	2	1
(2)	4	2	3	1
(3)	1	3	2	4
(4)	1	2	3	4

137. All of the following are the causes of menorrhagia EXCEPT:
(1) Androgen producing tumours
(2) Pelvic endometriosis
(3) Adenomyosis
(4) Granulosa cell tumour of the ovary

138. In the neonates, the brown fat is located at the following sites EXCEPT:
(1) Around the heart
(2) In the axillae
(3) Around the brain
(4) Around the kidney

139. The normal respiratory rate of a newborn is:
(1) 14-18 breaths per minute
(2) 30-60 breaths per minute
(3) 50-70 breaths per minute
(4) 20-30 breaths per minute

140. A persistent rise in PCO_2 and decrease in pH level in newborn is indicative of:
(1) Metabolic acidosis
(2) Respiratory acidosis
(3) Respiratory alkalosis
(4) Metabolic alkalosis

141. Nipple confusion is a situation where the infant:
(1) Accepts the artificial as well as mother's nipple
(2) Accepts the mother's nipple but refuses artificial nipple
(3) Accepts the artificial nipple but refuses the mother's nipple
(4) Refuses to feed at all

142. Classical symptom of invasive cervical cancer is:
(1) Hematuria
(2) Back pain
(3) Postcoital bleeding
(4) Anemia

143. The irregular overlapping of the cranial bones on one another due to liquefaction of the brain matter of foetus is called:
(1) Jacquemier's sign
2) Spalding sign
(3) Piskacek's sign
(4) Robert's sign

144. What will be the approximate Body Mass Index (BMI) of a woman with weight 70 kg and height 155 cm?
(1) 26.1
(2) 29.1
(3) 25.2
(4) 24.6

145. What will be the incidence rate, if there are 500 new cases of an illness in a population of 30,000 in a year?
(1) 1.42 per 1000 per year
(2) 14.2 per 1000 per year
(3) 16.7 per 1000 per year
(4) 1.67 per 1000 per year

146. All of the following foods have high glycemic index EXCEPT:
(1) Brown rice
(2) Corn flakes
(3) Baked potato
(4) White bread

147. Which one of the following types of undernutrition is indicated by Z-score below-3SD of the median WHO child growth standards?
(1) Underweight
(2) Stunting
(3) Wasting
(4) Severe acute malnutrition

148. Which one of the following is a measure of overall disease burden expressed as a number of years lost due to ill-health, disability or early death?

(1) Health-adjusted life expectancy
(2) Quality-adjusted life years
(3) Disability-free life expectancy
(4) Disability-adjusted life years

149. Numerator for calculating neonatal mortality rate is neonatal deaths within:

(1) 28 days of life
(2) 45 days of life
(3) 75 days of life
(4) 90 days of life

150. Which one of the following drugs used for treatment of malaria is contraindicated in pregnancy?

(1) Chloroquine
(2) Primaquine
(3) Quinine
(4) Sulfadoxine + Pyrimethamine

Hints & Solutions

UPSC ESIC Nursing Exam 08 July, 2024

1. **The correct answer is: (1) Preceptorship**

Explanation: Preceptorship refers to a period of practical experience and training in clinical nursing that is supervised by an expert in a particular field, known as a preceptor. This structured training allows new nurses or students to learn directly from experienced practitioners in a clinical setting. During preceptorship, the preceptor guides and supports the learner, providing practical instruction, feedback, and evaluation.

Additional Information:

- Mentorship: While similar to preceptorship, mentorship typically involves a longer-term relationship focused on career guidance, personal development, and overall professional growth rather than immediate clinical training.
- Peer group support: This refers to support provided by colleagues who are at a similar professional level or experience, offering mutual encouragement, advice, and shared learning experiences.
- Self-reflection: This involves introspection and critical evaluation of one's own actions, experiences, and decisions to improve personal and professional development.

2. **Correct Answer: (2) Master rotation plan**

Explanation: The term "Master rotation plan" refers to the comprehensive schedule or plan that outlines the rotation of all students in an educational institution throughout the academic year. Master rotation plan: This plan details the entire schedule of rotations for students across all disciplines or programs within the institution. It includes not only clinical rotations but also other learning activities and related events that students are required to participate in during their education.

Additional Information:

- Clinical rotation plan: While related, this term specifically refers to the schedule of clinical placements or rotations that students undergo as part of their training in healthcare professions. It focuses specifically on the clinical aspect rather than the overall educational activities.
- Curriculum planning: This refers to the broader process of designing and organizing the educational program within an institution, including defining learning objectives, selecting instructional methods, and determining assessment strategies for all courses and activities.
- Course plan: This is a more specific term that outlines the objectives, content, instructional strategies, and assessment methods for a particular course or subject within the curriculum.

3. **Correct Answer: (3) 2, 3 and 4**

Explanation: Objective Structured Clinical Examination (OSCE) is a method of assessment commonly used in medical and healthcare education.

- It provides more emphasis on performance of skills: This statement is incorrect. OSCE is designed to assess not only performance skills but also knowledge, clinical reasoning, communication skills, and professionalism. It evaluates the overall competency of students in clinical settings, not just their skills performance.
- It is more useful in assessing the knowledge of students: This statement is correct. OSCE stations can include tasks that assess factual knowledge, understanding of concepts, and the ability to apply knowledge in clinical scenarios. It tests cognitive aspects of learning in addition to practical skills.
- It requires checklists for evaluation: This statement is correct. OSCE stations typically use standardized checklists or scoring rubrics to objectively evaluate the performance of students. These checklists ensure consistency and fairness in assessment across different examiners and stations.
- Holistic approach to patient management cannot be assessed: This statement is incorrect. OSCEs are designed to assess a wide range of competencies, including clinical reasoning and the ability to manage patients holistically. Stations can simulate scenarios where students must demonstrate their ability to integrate clinical skills, communication, ethical considerations, and patient management in a comprehensive manner.

4. The correct answer is: (2) Anecdotal record

Explanation: Anecdotal records are narrative descriptions or accounts of observed student behaviors, interactions, achievements, or challenges in the classroom or clinical settings. These records are maintained by teachers or educators and are valuable for assessing student performance for several reasons:

Detailed Observations: Anecdotal records provide detailed descriptions of specific incidents or behaviors observed by the teacher. This can include academic progress, social interactions, problem-solving abilities, and more.

Contextual Information: They capture the context in which student behaviors occur, providing insights into factors influencing performance such as environment, interactions with peers, and emotional state.

Individualized Feedback: Anecdotal records allow teachers to provide personalized feedback to students based on their strengths and areas needing improvement. This feedback can inform instructional strategies and interventions tailored to each student.

Additional Information:

- **Incident record:** Similar to an anecdotal record, an incident record documents specific events or incidents involving students, but it may focus more on critical incidents rather than a comprehensive view of overall performance.
- **Self-report:** This refers to assessments or evaluations completed by students themselves, where they reflect on their own performance, achievements, and challenges. While useful for self-assessment and reflection, it may not always provide an objective view of performance.

- **Clinical attendance:** This refers to records of student attendance in clinical settings, which are important for tracking participation but do not directly assess performance or provide detailed insights into student behaviors and achievements.

5. The correct answer is: (2) Blue print

Explanation: A blueprint in educational assessment refers to a chart or document that outlines the distribution of questions or test items based on specific objectives and content areas of a curriculum or assessment framework.

Distribution of Questions: A blueprint provides a systematic plan that specifies the number and types of questions that will appear on an exam or assessment. It breaks down the assessment into categories or content areas, ensuring that the test adequately covers all important aspects of the curriculum.

Alignment with Objectives: The blueprint ensures that assessment items align with the learning objectives or educational goals of the course or program. It helps maintain validity and reliability by ensuring that the assessment accurately measures what it intends to measure.

Guidance for Test Construction: Educators use the blueprint as a guide for constructing the actual test or exam. It helps in organizing and structuring the assessment to ensure balanced coverage of topics and objectives.

Additional Information:

- **Question paper:** This term typically refers to the actual test or exam paper that students receive during an assessment session, containing the questions based on the blueprint.
- **Question bank:** This is a collection of pre-written questions that can be used to construct tests or exams. While useful for generating assessments, it does not indicate the distribution of questions based on objectives and content areas as comprehensively as a blueprint.
- **Checklist:** This is a list used for verification or monitoring purposes, ensuring that tasks or steps are completed according to specified criteria. It is not specifically related to the distribution of questions in an assessment.

6. The correct answer is: (3) 3 4 1 2

Explanation: In developmental psychology, Erik Erikson proposed stages of psychosocial development that occur throughout the lifespan. Each stage is associated with a specific developmental task or challenge that individuals must navigate to achieve healthy psychological growth. Here's how the tasks (List I) match with the stages of development (List II):

A. Develops a sense of trust: 2. Infancy

- Infancy (birth to 18 months) is associated with the task of developing trust versus mistrust. This stage focuses on the infant's basic needs being met consistently by caregivers, which forms the foundation for trust in others and the world.

B. Develops autonomy: 4. Preschool age

- The preschool age (around 3 to 5 years) is associated with the task of developing autonomy versus shame and doubt. Children in this stage assert their independence and begin to make choices about activities and self-care tasks.

C. Develops initiative and purpose: 1. Toddlerhood

- Toddlerhood (18 months to 3 years) is associated with the task of developing initiative versus guilt. Children in this stage start to assert themselves more in exploring the world and taking on new challenges, developing a sense of purpose.

D. Develops a sense of accomplishment: 3. School age

- School age (6 to 12 years) is associated with the task of developing industry versus inferiority. Children in this stage focus on developing skills and competence in various activities, which contributes to a sense of accomplishment.

Therefore, the correct matching is:

A - 3 (School age)
B - 4 (Preschool age)
C - 1 (Toddlerhood)
D - 2 (Infancy)

7. The correct answer is:(2) Oro-gastric/nasogastric tube feeding with occasional spoon or paladai feeding

Explanation: Babies born at 31 weeks of gestation are considered preterm and may have immature sucking and swallowing reflexes, as well as underdeveloped coordination of breathing and swallowing. Therefore, they often lack the ability to feed effectively by mouth initially.
Oro-gastric/nasogastric tube feeding: This method involves placing a small tube through the nose or mouth into the stomach, through which breast milk or formula can be delivered directly. This ensures that the baby receives adequate nutrition while their feeding skills mature.

Occasional spoon or paladai feeding: As the baby grows and demonstrates improved feeding skills, they may be offered small amounts of breast milk or formula via a spoon or paladai (a traditional feeding device), under supervision. This encourages the development of oral feeding skills.

Additional Information:

- **Intravenous fluids and oral feeding (Option 1):** Intravenous fluids alone may not provide adequate nutrition and do not support the development of oral feeding skills. Oral feeding alone may be challenging for a premature baby who may not have fully developed sucking and swallowing coordination.
- **Intravenous fluids with occasional orogastric/nasogastric tube feeding (Option 3):** While orogastric/nasogastric tube feeding is appropriate, relying primarily on intravenous fluids is not ideal

for long-term nutrition and growth in a preterm baby. Tube feeding provides direct delivery of nutrients to support growth and development.

- **Total parenteral nutrition (Option 4):** Total parenteral nutrition involves providing nutrients intravenously and is typically reserved for babies who cannot tolerate enteral feeding (feeding via the gastrointestinal tract) at all. It is not usually the first-line method for feeding preterm babies who can tolerate tube feeding.

8. The correct answer is: (1) Neutrophils and protein content elevated

Explanation: In bacterial meningitis, the cerebrospinal fluid (CSF) analysis typically shows specific variations that indicate an inflammatory response to bacterial infection in the meninges (the membranes surrounding the brain and spinal cord).
Neutrophils elevated: Bacterial meningitis causes a significant influx of neutrophils (a type of white blood cell) into the CSF. Neutrophils are the predominant cell type in the CSF in bacterial meningitis, reflecting the acute inflammatory response to bacterial pathogens.

Protein content elevated: Bacterial meningitis leads to an increase in protein levels in the CSF due to leakage of proteins from blood vessels into the cerebrospinal fluid as a result of inflammation and disruption of the blood-brain barrier.

Additional Information:

- Colour of CSF is clear or slightly turbid (Option 2): In bacterial meningitis, the CSF is typically turbid (cloudy) due to the presence of increased white blood cells and proteins. Clear CSF is more characteristic of normal or non-infectious conditions.
- Lymphocytes are elevated (Option 3): Lymphocytes are typically elevated in viral meningitis, not bacterial meningitis. Viral meningitis usually presents with a CSF profile dominated by lymphocytes.
- Glucose content is normal (Option 4): In bacterial meningitis, glucose levels in the CSF are often decreased (hypoglycorrhachia) due to increased consumption by bacteria or impaired glucose transport across inflamed meninges. Normal glucose content would be more indicative of non-infectious causes or viral meningitis.

9. The correct answer is: (3) 1, 2 and 3

Explanation: Good attachment in breastfeeding technique is essential for effective milk transfer and to prevent nipple pain or damage. Here's how each statement corresponds to signs of good attachment:

- **The baby's mouth is wide open:** This is true. A wide-open mouth with lips flanged outward (like fish lips) helps the baby latch onto the breast deeply and effectively.
- **Upper areola is visible, not the lower one:** This is true. During a good latch, more of the darker skin around the nipple (areola) should be visible above the baby's upper lip. This ensures that the baby has a deep latch and is not just sucking on the nipple.

- **Baby's chin touches the breast:** This is true. The baby's chin should be pressed into the breast, and their nose should be opposite to the nipple. This position allows the baby to take more breast tissue into their mouth and facilitates effective milk transfer.
- **The upper lip of the baby is everted/turned outward:** This statement is not included in the correct answer options, but it is also a sign of good attachment. The baby's lips should be flanged outward, especially the upper lip, which helps create a better seal and prevents nipple discomfort.
- **Baby's head and body are in one plane:** This statement is not included in the correct answer options, but it also contributes to good attachment. The baby's head, shoulders, and hips should be aligned in a straight line, facing the breast. This position allows the baby to latch deeply and comfortably.

10. The correct answer is: (1) Epinephrine

Explanation: In neonatal resuscitation, if the heart rate of a newborn remains less than 60 beats per minute (bpm) despite adequate positive pressure ventilation and chest compressions, the administration of epinephrine is indicated. Here's why epinephrine is the appropriate choice:

Epinephrine (adrenaline): It is a medication used to stimulate the heart rate and increase blood pressure during cardiac arrest or severe bradycardia (low heart rate). In neonatal resuscitation, it is administered via the endotracheal tube or intravenously if vascular access is established.

Additional Information:

- **Sodium Bicarbonate (Option 2):** Sodium bicarbonate is not routinely recommended in neonatal resuscitation for correcting acidosis or other metabolic imbalances unless specific conditions such as severe metabolic acidosis are present.
- **Atropine (Option 3):** Atropine is not routinely used in neonatal resuscitation for bradycardia. Its use is generally limited to specific situations such as bradycardia due to vagal tone or asystole in older children and adults.
- **Dexamethasone (Option 4):** Dexamethasone is a corticosteroid used for its anti-inflammatory effects and is not indicated for immediate treatment of bradycardia during neonatal resuscitation.

11. Based on the symptoms described according to the Integrated Management of Neonatal and Childhood Illnesses (IMNCI), the child is classified as: (1) Severe dehydration

Explanation: The symptoms align with the classification of severe dehydration:

- Sunken eyes: This is a clinical sign of dehydration, indicating significant fluid loss.
- Skin pinch goes back slowly: In severe dehydration, the skin loses elasticity, and when pinched, it does not promptly return to its normal position.
- Drinks eagerly: Thirst is a common symptom in dehydration, and a child with severe dehydration may appear eager to drink.

According to the IMNCI guidelines, the classification of dehydration in children is based on clinical signs such as those described:

- **No dehydration:** Child has no clinical signs of dehydration.
- **Some dehydration:** Child has two or more of the following signs: restlessness or irritability, sunken eyes, drinks eagerly, skin pinch goes back slowly.
- **Severe dehydration:** Child has two or more of the following signs: lethargic or unconscious, sunken eyes with inability to drink or drinking poorly, skin pinch goes back very slowly or tented, and/or radial pulse is absent.

In this case, the child presents with sunken eyes, slow skin pinch return, and eager drinking, which corresponds to "some dehydration" according to the IMNCI guidelines.

12. The correct answer is: (3) Hemodynamically stable Low birth weight baby

Explanation: Kangaroo Mother Care (KMC) is a method of care for newborns, especially preterm or low birth weight infants, where the baby is held skin-to-skin with the mother or caregiver. It has numerous benefits including improved bonding, better temperature regulation, enhanced breastfeeding, and overall better outcomes for premature babies.
Hemodynamically stable Low birth weight baby: This option describes a baby who is stable in terms of their circulation and vital signs, and who also meets the criteria of being low birth weight. Low birth weight babies are those born weighing less than 2500 grams (5.5 pounds), regardless of gestational age.

Additional Information:

- **Baby weighing 1000 grams cared in an incubator (Option 1):** While this baby is low birth weight and currently cared for in an incubator, they would be eligible for KMC once stable and able to tolerate skin-to-skin contact. However, the question asks for the baby eligible for KMC at the present moment, and we typically initiate KMC for stable low birth weight babies even if they are initially in an incubator.
- **Baby with a birth weight of 2.6 kg (Option 2):** This baby has a birth weight within the normal range and does not typically require KMC for thermal regulation or weight gain. KMC is primarily recommended for preterm infants or low birth weight babies.
- **Baby who is sick and cared under radiant warmer (Option 4):** A sick baby requiring intensive care under a radiant warmer would not initially be considered for KMC until their condition stabilizes and they can tolerate skin-to-skin contact.

13. The correct answer is: (3) Acute glomerulonephritis

Explanation: Acute glomerulonephritis (AGN) is characterized by inflammation of the glomeruli, the filtering units of the kidneys. The sudden onset of haematuria (blood in the urine), oliguria (reduced urine output), edema (swelling), and hypertension (high blood pressure) are classic symptoms and signs of acute glomerulonephritis. Here's how these symptoms align with the condition:

Haematuria: Blood in the urine is a common early sign of glomerulonephritis, indicating that the glomeruli are allowing blood cells to pass through into the urine.

Oliguria: Reduced urine output occurs because of decreased filtration and possibly reduced blood flow through the kidneys due to inflammation.

Edema: Fluid retention and swelling occur due to impaired kidney function and loss of protein in the urine (proteinuria), leading to a decrease in serum albumin and subsequent edema.

Hypertension: Increased blood pressure can result from fluid retention, sodium retention, and activation of the renin-angiotensin-aldosterone system due to decreased renal perfusion.

Additional Information:

- **Nephrotic syndrome (Option 1):** Nephrotic syndrome is characterized by heavy proteinuria, hypoalbuminemia (low serum albumin), edema, and hyperlipidemia. It typically presents with massive proteinuria rather than haematuria, and hypertension is less common.
- **Acute kidney injury (Option 2):** Acute kidney injury (AKI) can present with oliguria, edema, and hypertension, but it is a broader term that includes various causes such as dehydration, infection, or nephrotoxic medications. Haematuria is less specific for AKI unless there is an underlying glomerular involvement.
- **Chronic renal failure (Option 4):** Chronic renal failure is a long-term, progressive loss of kidney function over months to years. It does not typically present with sudden onset haematuria and oliguria but rather with gradual decline in kidney function, often without hypertension as a prominent feature early on.

14. The correct answer is: (3) Acute lymphoblastic leukaemia

Explanation: Acute lymphoblastic leukaemia (ALL) is the most common type of malignant tumour in children, particularly in the age group mentioned (around 6 years old). Here's why:

Age Distribution: ALL predominantly affects children between 2 and 5 years old, with a peak incidence around 4 years of age. It is less common in infants and older children.

Cell Type: ALL arises from abnormal lymphocyte precursor cells in the bone marrow, leading to overproduction of immature lymphocytes (white blood cells). These abnormal cells crowd out normal blood cells, leading to symptoms such as anaemia, easy bruising or bleeding, infections, bone pain, and enlarged lymph nodes.

Incidence: ALL represents about 75-80% of childhood leukaemias. It is more common than acute myeloid leukaemia (AML), which accounts for a smaller percentage of childhood leukaemias.

Additional Information:

- **Acute myeloid leukaemia (AML) (Option 1):** AML is less common than ALL in children, representing around 15-20% of childhood leukaemias. It typically occurs more frequently in older children and adolescents compared to younger children.
- **Juvenile myelomonocytic leukaemia (JMML) (Option 2):** JMML is a rare form of childhood leukaemia characterized by excessive production of myelomonocytic cells. It typically presents in infants and young children under 4 years of age, rather than in older children like the 6-year-old mentioned in the question.
- **Chronic myeloid leukaemia (CML) (Option 4):** CML is extremely rare in children. It is more commonly seen in adults and rarely presents before adolescence.

15. The correct answer is: (4) 2 1 4 3

Explanation: Each condition (List I) with its corresponding symptom (List II):

A. Hypertrophic pyloric Stenosis: Symptom - 2. Projectile vomiting. This condition typically presents in infants with projectile vomiting due to obstruction at the pylorus (the opening between the stomach and small intestine).

B. Intussusception: Symptom - 1. Bilious vomiting. Intussusception is characterized by the telescoping of one segment of the intestine into another, which can lead to bilious vomiting among other symptoms.

C. Peptic Ulcer: Symptom - 4. Recurrent vomiting. Peptic ulcers can cause recurrent vomiting, often associated with pain in the abdomen.

D. Appendicitis: Symptom - 3. Pain in the right lower quadrant of abdomen. Appendicitis typically presents with pain that starts around the belly button and then moves to the lower right side of the abdomen.

16. The correct answer is: (1) Strain

Explanation: Strain: Excessive stretching or tearing of a muscle or tendon due to overuse, overstretching, or trauma is referred to as a strain. It commonly affects muscles and their tendons, often causing pain, swelling, and sometimes bruising. Strains are categorized into three grades based on severity: mild (Grade I), moderate (Grade II), and severe (Grade III).

Additional information:

- **Sprain:** This term refers to excessive stretching or tearing of ligaments, which connect bones at joints. Sprains usually occur when a joint is forced beyond its normal range of motion, leading to pain, swelling, and instability.
- **Fracture:** A fracture is a break in a bone, which can occur due to trauma, overuse, or underlying medical conditions. Fractures vary in severity and may require immobilization or surgical intervention for treatment.

- **Greenstick fracture:** This is a specific type of fracture seen in children where the bone bends and partially breaks, resembling a green stick that has been bent but not completely broken.

17. The correct answer is: (4) Vesicovaginal fistula

Explanation: Vesicovaginal fistula: This is an abnormal connection or fistula between the bladder and the vagina. It can occur due to various reasons such as prolonged obstructed labor, pelvic surgery, radiation therapy, or trauma. Symptoms may include continuous urinary incontinence, recurrent urinary tract infections, and irritation of the vaginal tissue from exposure to urine.

Additional Information:

- **Ureterovaginal fistula (Option 1):** This is a fistula between the ureter (the tube that carries urine from the kidney to the bladder) and the vagina. It can lead to urinary leakage through the vagina and typically requires surgical repair.
- **Vaginoperineal fistula (Option 2):** This is a fistula between the vagina and the perineum (the area between the vagina and anus). It can cause fecal incontinence and may require surgical correction.
- **Rectovaginal fistula (Option 3):** This is a fistula between the rectum and the vagina, causing passage of stool through the vagina. It can occur due to childbirth trauma, inflammatory bowel disease, or surgery.

18. The correct sequence of steps for chest tube removal is: (3) 3, 4, 1, 2

The explanation for each step:

Chest X-ray: Before removing the chest tube, it is essential to confirm through a chest X-ray that the underlying condition (such as pneumothorax or pleural effusion) has resolved adequately. The X-ray ensures

that there is no recurrence of pneumothorax or significant pleural effusion that would necessitate continued drainage.

Air tight dressing of the site: After confirming with the chest X-ray that the lung has re-expanded and there are no ongoing issues, the chest tube is clamped and then removed. Immediately after removal, an airtight dressing is applied over the site to prevent air from entering the pleural space and to reduce the risk of pneumothorax.

Valsalva maneuver: The patient is instructed to perform a Valsalva maneuver (bearing down as if having a bowel movement or blowing out against a closed glottis). This maneuver increases intra-thoracic pressure and can help prevent air from entering the pleural space as the chest tube is removed.

Administration of analgesic: Depending on the patient's condition and institutional protocols, an analgesic may be administered before or after the procedure to manage any discomfort or pain associated with the chest tube removal.

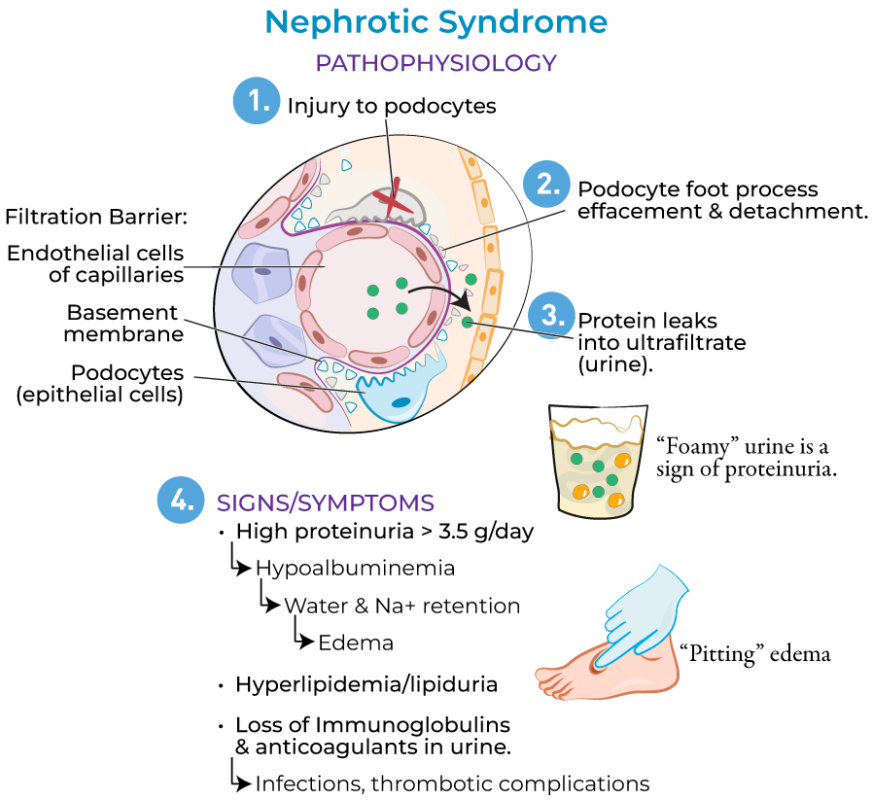
Therefore, the correct sequence of steps for chest tube removal is:

Step 3: Chest X-ray to confirm resolution.
Step 4: Air tight dressing of the site immediately after removal.
Step 1: Instructing the patient to perform the Valsalva maneuver.
Step 2: Administration of analgesic as needed.
Hence, option (3) - 3, 4, 1, 2, is the correct answer.

19. The correct answer is:(1) Massive proteinuria, Hypertension, Hyperlipidemia, Hypoalbuminemia, foamy urine

Explanation:

- **Massive proteinuria:** Nephrotic syndrome is characterized by significant loss of protein in the urine, typically exceeding 3.5 grams per day in adults. This leads to decreased levels of protein in the blood.
- **Hypertension:** Elevated blood pressure is commonly observed in nephrotic syndrome. It can result from fluid retention due to hypoalbuminemia and activation of the renin-angiotensin-aldosterone system.
- **Hyperlipidemia:** There is an increase in blood lipid levels, including cholesterol and triglycerides. This occurs because the liver increases lipid synthesis in response to decreased oncotic pressure from hypoalbuminemia.
- **Hypoalbuminemia:** Reduced serum albumin levels due to loss of protein in the urine. Albumin is an important protein that helps maintain oncotic pressure in the blood vessels. Its loss contributes to edema formation.
- **Foamy urine:** Proteinuria causes the urine to appear foamy due to the presence of proteins.



Additional Information:

- **Option (2):** Hypolipidemia (low lipid levels) and hyperalbuminemia (high albumin levels) are not characteristic of nephrotic syndrome. Instead, nephrotic syndrome is associated with hyperlipidemia and hypoalbuminemia.
- **Option (3):** Peripheral edema and hypotension are not typical manifestations of nephrotic syndrome. Edema (fluid retention) is common, but hypertension rather than hypotension is usually present.
- **Option (4):** Hypotension and cola-colored urine (suggestive of hematuria) are not characteristic of nephrotic syndrome. Hematuria is not a typical finding in nephrotic syndrome, which primarily manifests with proteinuria.

20. The correct answer is: (1) Wheat

Explanation: Celiac disease is an autoimmune disorder triggered by the ingestion of gluten, a protein found in wheat, barley, and rye. When individuals with celiac disease consume gluten, it triggers an immune response that damages the lining of the small intestine. This damage impairs the absorption of nutrients from food.

Therefore, people with celiac disease should strictly avoid foods that contain gluten, particularly wheat and wheat products. This includes:
Bread

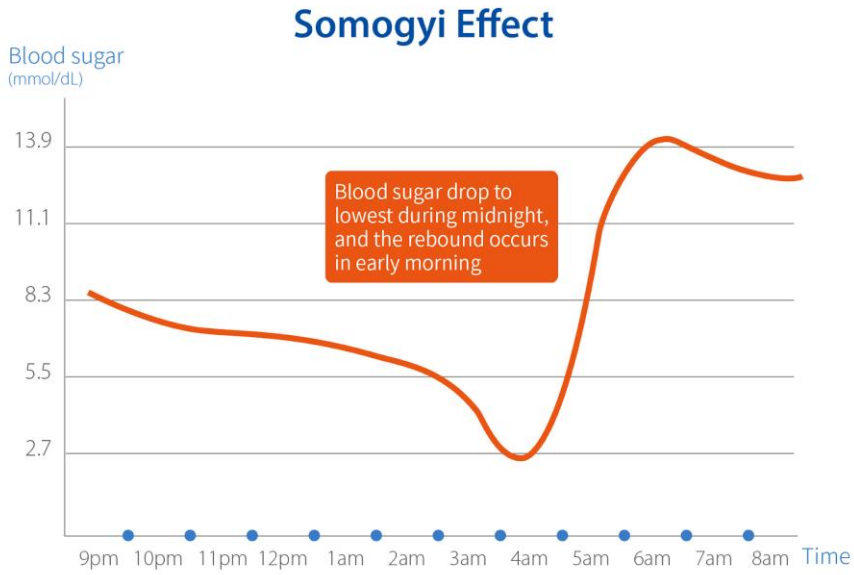
Pasta
Cereal
Baked goods
Sauces and gravies containing wheat flour

21. The correct answer is: (2) Somogyi effect

Explanation: The Somogyi effect, also known as rebound hyperglycemia, occurs when blood sugar levels drop too low (hypoglycemia) during the night, typically between 2 am and 4 am. In response to hypoglycemia, the body releases counterregulatory hormones such as epinephrine, cortisol, and growth hormone. These hormones stimulate the liver to release glucose into the bloodstream, leading to an increase in blood sugar levels by the morning.

A breakdown of the Somogyi effect:

- Timing: It occurs in the early morning hours, typically between 2 am and 4 am, when the nurse was monitoring the patient's blood glucose levels.
- Cause: The Somogyi effect is often caused by high doses of insulin or medications that lower blood sugar levels, which can lead to hypoglycemia during the night.
- Manifestation: The nurse monitors to see if there is a rebound rise in blood glucose levels despite the patient receiving high doses of insulin. This rise in blood sugar levels is due to the body's physiological response to counteract hypoglycemia.



22. The correct answer is: (1) ≤ 15 mL/min

Explanation: A patient with renal dysfunction develops uremia, when his GFR is:

Uremia refers to the clinical syndrome associated with the retention of urea and other nitrogenous waste products due to kidney dysfunction. The Glomerular Filtration Rate (GFR) is a key indicator of kidney function. In renal dysfunction, uremia typically manifests when GFR decreases significantly.
Uremia becomes clinically evident when the GFR drops below 15 mL/min. At this stage, the kidneys are unable to adequately filter waste products from the blood, leading to symptoms of uremia such as nausea, vomiting, fatigue, and confusion.

23. The correct answer is: (3) 1, 3 and 4 only

Explanation: Statement 1 is correct because a clear and explicit stem is crucial for effective multiple-choice questions.
Statement 3 is correct because alternatives should indeed be similar in length, detail, and complexity to ensure fairness and validity of the assessment.
Statement 4 is correct because using distractors that are essentially the same reduces the effectiveness of the question by making it easier for students to identify the correct answer.

Additional Information:

Stem should be clear and explicit: This statement is correct. The stem of a multiple-choice question should clearly present the problem or scenario to which the student responds with the choices provided. A clear stem helps avoid ambiguity and ensures that the question assesses the intended knowledge or skill.

The alternatives should be similar in length, detail and complexity: This statement is correct. The answer choices (alternatives) in a multiple-choice question should be balanced in length, detail, and complexity. This ensures that the question effectively assesses the student's understanding or application of knowledge, rather than their ability to choose the correct answer based on the formatting of the choices.

Avoid using distractors that are essentially the same: This statement is correct. Distractors (incorrect answer choices) should be plausible alternatives that reflect common student misconceptions or errors, not simply variations of the correct answer. Effective distractors help differentiate between students who have mastered the material and those who have not.

24. The correct answer is: (2) Norm referenced

Explanation: Norm-referenced evaluation compares a student's performance with the performance of others in the same group or population. This type of evaluation focuses on assessing how well a student performs relative to their peers rather than against specific criteria or standards.

Key characteristics of norm-referenced evaluation:

- **Comparison with peers:** The primary purpose of norm-referenced evaluation is to determine where a student stands in relation to their peers. It provides information about a student's relative ranking within the group.
- **Standardized tests:** Norm-referenced evaluations are often associated with standardized tests where a student's performance is compared to the performance of a large, representative sample of students who have taken the same test.
- **Scores interpretation**: Scores in norm-referenced evaluations are typically reported as percentiles or standardized scores (e.g., stanines, z-scores). These scores indicate how well a student's performance compares to the performance of others in the norm group.
- **Ranking:** The emphasis in norm-referenced evaluation is on ranking students from highest to lowest based on their performance. It does not provide detailed feedback on specific skills or knowledge areas.

25. The correct answer is: (3) 1, 2 and 3

Explanation: Audiovisual aids are instructional tools that are used to enhance learning by appealing to multiple senses and facilitating understanding in various ways. Let's break down each purpose:

To simplify unfamiliar concepts: Audiovisual aids can simplify complex or unfamiliar concepts by presenting them visually or through demonstrations. Visual representations can make abstract ideas more concrete and understandable to learners.

To bring about understanding where words fail: Sometimes, certain concepts or processes are difficult to explain solely through verbal or written descriptions. Audiovisual aids, such as animations, diagrams, or videos, can effectively convey information that is challenging to articulate with words alone.

To reinforce learning appealing to more than one sense: Audiovisual aids engage multiple senses (sight and sometimes sound), which can enhance learning retention and understanding. When learners can see and hear information simultaneously, it reinforces their understanding and memory of the material.

To promote monotony: This statement is incorrect in the context of the purposes of audiovisual aids. The correct purpose is to combat monotony in learning environments by providing dynamic and varied ways of presenting information. Audiovisual aids are used to make learning sessions more engaging and interactive, thereby enhancing interest and attention.

26. The correct answer is: (1) Pragmatism

Explanation: Pragmatism is an educational philosophy that emphasizes practical utility and activity-based curriculum. Key characteristics of pragmatism in education include:

Focus on practical experience: Pragmatism emphasizes learning through practical experience, experimentation, and active participation rather than abstract theories or beliefs.

Problem-solving orientation: Pragmatism encourages students to engage in problem-solving activities where they can apply their knowledge and skills to real-life situations.

Activity-based learning: Pragmatism promotes hands-on learning and encourages educators to design curriculum and learning activities that are relevant, meaningful, and applicable to students' lives.

Integration of learning: Pragmatism values the integration of different subject areas and learning experiences to foster holistic development and prepare students for practical challenges they may encounter in life.

Additional Information:

- **Idealism (Option 2):** Idealism emphasizes the importance of ideas, values, and principles as the basis of education. It focuses on the development of the mind and intellectual pursuits rather than practical applications.
- **Realism (Option 3):** Realism emphasizes the importance of objective reality and factual knowledge in education. It advocates for teaching students about the real world and preparing them to understand and interact with it.
- **Naturalism (Option 4):** Naturalism is a philosophy that emphasizes learning through natural experiences and interactions with the environment. It focuses on observing and studying nature as a means of education.

27. Based on the analysis, the correct answer is: (3) 1, 3 and 4

Explanation: Statement 1: Brainstorming indeed promotes critical thinking by encouraging participants to analyze, evaluate, and refine ideas.
Statement 3: Brainstorming is inherently a group activity that fosters collaboration and interaction among participants.
Statement 4: One of the main advantages of brainstorming is its effectiveness in generating numerous ideas quickly, leveraging the collective creativity and contributions of the group.

Additional Information:

- **It promotes critical thinking:** This statement is correct. Brainstorming encourages participants to think creatively, consider different perspectives, evaluate ideas, and build upon each other's contributions. This process stimulates critical thinking skills as participants analyze and refine ideas.
- **It makes students more skilled:** This statement is not directly supported by the typical outcomes of brainstorming sessions. While brainstorming enhances collaborative skills, creativity, and problem-solving abilities, it does not inherently make students more skilled in a specific area unless the skills being practiced are related to idea generation and collaboration.
- **It promotes group activity:** This statement is correct. Brainstorming is a collaborative activity where participants work together to generate ideas, share insights, and build upon each other's contributions. It encourages active participation and interaction among group members.
- **Maximum ideas can be sought in a short time:** This statement is correct. One of the primary benefits of brainstorming is its ability to generate a large quantity of ideas rapidly. The process of

brainstorming encourages participants to freely share their thoughts without criticism, which facilitates the exploration of multiple possibilities in a short period.

28. The correct answer is: (3) Demonstration

Explanation: Psychomotor skills involve the coordination of physical movements and mental processes. Effective methods for developing psychomotor skills should emphasize hands-on practice, visual learning, and active engagement.
Demonstration: Demonstration involves showing students how to perform a skill or task. This method is highly effective for psychomotor skill development because:

- **Visual learning:** Students can observe the correct techniques, movements, and procedures demonstrated by the instructor or a skilled individual.
- **Active engagement:** It allows students to see the practical application of the skill, understand the correct sequence of actions, and visualize the expected outcomes.
- **Immediate feedback:** Students can receive immediate feedback on their performance by observing the demonstration, which helps in understanding nuances and correcting errors.
- **Skill acquisition:** Through demonstration, students can imitate and practice the demonstrated skills under supervision, leading to skill acquisition and improvement over time.

Additional Information:

- **Lecture method:** The lecture method primarily involves the transmission of knowledge through verbal presentation. It focuses on imparting theoretical information and is not suitable for developing psychomotor skills, which require physical practice and feedback.
- **Role play:** Role play involves acting out scenarios or roles, which can help students practice social and cognitive skills. While role play can be beneficial for interpersonal and emotional development, it does not primarily target the development of psychomotor skills.
- **Group discussion:** Group discussion focuses on exchanging ideas and perspectives verbally among students. While it promotes cognitive and social skills, it does not directly facilitate the development of psychomotor skills, which involve physical movement and coordination.

29. The correct answer is: (1) Microteaching

Explanation: Microteaching is a specialized teaching technique used for teacher training and development. It involves:

- Focused practice: Teacher trainees deliver short lessons (micro-lessons) to a small group of peers or students.
- Feedback: Peers, mentors, or supervisors provide constructive feedback on various aspects of the teaching, such as instructional techniques, classroom management, clarity of presentation, and engagement of students.
- Skill improvement: Through iterative practice and feedback, teacher trainees can improve their teaching skills, gain confidence, and refine their instructional strategies.

- Microteaching is effective because it allows teacher trainees to practice teaching in a controlled environment, receive immediate feedback, and reflect on their teaching practices. It helps in developing essential teaching competencies before entering actual classroom settings.

30. The correct answer is: (2) Reflecting

Explanation: Reflecting is a key counseling skill that involves paraphrasing or restating the client's words, thoughts, or feelings to demonstrate understanding and empathy. It goes beyond simple repetition and includes acknowledging the client's emotions and reflecting back to them what the counselor perceives the client is experiencing emotionally.
Paraphrasing: In reflecting, the counselor summarizes or paraphrases what the client has said to ensure mutual understanding and clarification.
Client's feelings: Reflecting also involves acknowledging and commenting on the client's emotions or affective states based on their verbal and non-verbal cues.

Reflecting helps to:

- **Enhance rapport:** It shows the client that the counselor is actively listening and understanding their perspective.
- **Deepen exploration:** It encourages the client to explore their thoughts and feelings further.
- **Facilitate insight:** Reflecting can help the client gain insights into their own emotions and experiences, promoting self-awareness and personal growth.

31. The correct answer is:(2) Care bundles increase the possibility of long-term complications of a particular disease

Explanation: Care bundles are sets of evidence-based practices or interventions that, when implemented together, have been shown to improve patient outcomes. Here's an explanation of each option:

Care bundle is a group of interventions related to a disease process or condition: This statement is true. Care bundles consist of a small set of evidence-based practices or interventions that, when implemented collectively and reliably, aim to improve patient outcomes for a specific condition or procedure.

Care bundles increase the possibility of long-term complications of a particular disease: This statement is incorrect. Care bundles are designed to reduce complications and improve outcomes by ensuring that multiple evidence-based practices are consistently applied. They are not intended to increase the risk of complications.

Care bundle interventions, when executed together, result in better patient outcomes than when implemented individually: This statement is true. The synergy created by implementing multiple evidence-based interventions together often leads to better outcomes compared to implementing these interventions individually or sporadically.

Care bundles ensure that patients receive quality care and prevent most common complications associated with their diagnoses: This statement is true. Care bundles are structured to ensure that all patients receive consistent, high-quality care based on the best available evidence. They aim to reduce the occurrence of common complications associated with specific diagnoses or procedures.

32. The correct answer is: (4) Isometric exercise

Explanation: Isometric exercise is a type of exercise where muscle contraction occurs without any visible movement in the angle of the joint. Here's a detailed explanation:

Definition: Isometric exercises involve static contractions of muscles against an immovable resistance. During these exercises, the muscle tenses but does not change length, and there is no movement at the joint. Mechanism: When you perform an isometric exercise, such as holding a plank position, pushing against an immovable object, or pressing your hands together forcefully without movement, the muscle contracts but stays in a fixed position.

Examples: Common examples of isometric exercises include wall sits, static squats, plank holds, holding a yoga pose like Warrior Pose, or pushing against a stable surface like a wall or door frame.

Benefits:

- **Strength gains:** Isometric exercises can help improve muscle strength and endurance, particularly in the specific joint angles where the exercise is performed.
- **Joint stability:** They can enhance joint stability and support, as muscles around the joint strengthen without necessarily moving the joint.
- **Convenience:** Isometric exercises can be performed almost anywhere without the need for specialized equipment, making them accessible for various fitness levels.

33. The correct answer is: (4) Tympanites

Explanation: Tympanites: Tympanites refers to abdominal distension due to gas accumulation, particularly in the intestines, and is not directly related to circulatory problems.

Additional information:

- **Thrombophlebitis:** This is inflammation of a vein usually in the legs, which can lead to blood clots (thrombus) and potentially cause circulation issues.
- **Embolus:** This refers to a blood clot or air bubble that travels through the bloodstream and can block blood flow to vital organs.
- **Hemorrhage:** This is excessive bleeding, either internally or externally, which can lead to a decrease in blood volume and affect circulation.

34. The correct answer is: (3) Proliferation phase

Explanation: Proliferation phase: This phase occurs after the inflammatory phase where fibroblasts migrate to the wound area, proliferate (increase in number), and begin to synthesize collagen and other extracellular matrix components. This phase is critical for tissue repair and the formation of new tissue.

Additional Information:

- **Inflammatory phase:** This is the initial phase of wound healing characterized by inflammation, blood clotting, and recruitment of immune cells to the wound site to prevent infection.
- **Maturation phase:** This is the final phase of wound healing where the collagen fibers reorganize, the wound gains strength, and scar tissue forms.
- **Evisceration:** This refers to the protrusion of internal organs through a wound opening, which is a complication rather than a phase of wound healing.

35. The correct answer is: (4) Romberg test

Explanation: Romberg test: This is a neurological test used to assess balance and proprioception (sense of body position) and is not related to eye examination.

Additional information:

- **Tonometry:** This is a method to measure intraocular pressure, commonly used in diagnosing glaucoma.
- **Slit lamp test:** This is a microscope with a light source used to examine the eye's anterior segment in detail, including the cornea, iris, and lens.
- **Refraction test:** This is used to determine a person's eyeglass prescription by measuring how light bends as it passes through the eye.

36. The correct answer is: (3) 1, 2, and 3 only

Explanation:
Decline in cell-mediated immunity: Cell-mediated immunity involves immune responses mediated by T cells, which play a crucial role in recognizing and destroying infected or abnormal cells. As people age, there is a decline in the function of T cells, which reduces the body's ability to combat infections effectively.

Decline in humoral immunity: Humoral immunity involves immune responses mediated by B cells and antibodies. With aging, there is a decline in the production of new B cells and antibodies, which are important for fighting infections caused by pathogens like bacteria and viruses.

Decreased formation of secretory IgA: IgA (Immunoglobulin A) is an antibody that plays a crucial role in mucosal immunity, particularly in the respiratory and gastrointestinal tracts. It helps in neutralizing

pathogens before they can cause infection. Aging can lead to a decrease in the production and effectiveness of secretory IgA, making elderly individuals more susceptible to respiratory infections.

Additional Information:
Fewer or less functional cilia: Cilia are tiny hair-like structures lining the respiratory tract that help in trapping and removing pathogens and debris. Aging can lead to changes in cilia structure and function, reducing their ability to clear pathogens effectively from the respiratory tract.

37. The correct answer is: (3) 1, 2, and 4

Explanation: It requires less manual dexterity: Dry powdered inhalers (DPIs) generally require less manual dexterity compared to metered dose inhalers (MDIs). DPIs often involve simpler steps such as twisting or pressing a button to release the dose, which can be easier for patients with limited hand coordination.

It does not require spacer: DPIs do not require a spacer device to use effectively. A spacer is often used with MDIs to improve the delivery of medication to the lungs and reduce the coordination required between inhalation and actuation.

It is effective in patients with low FEV1 (< 1L): DPIs are generally effective in patients with low Forced Expiratory Volume in 1 second (FEV1), which indicates compromised lung function. The fine powder formulation can reach deeper into the lungs even with reduced inhalation effort.

38. The correct matching of List I (arteries) with List II (manifestations of stroke related to artery involvement) is as follows:

A. Anterior cerebral --> 1. Aphasia
B. Middle cerebral --> 3. Dysarthria and dysphagia
C. Posterior cerebral --> 4. Visual hallucination
D. Vertebral --> 2. Loss of proprioception and fine touch

Therefore, the correct code is: (3) 2 4 1 3
Explanation:
Anterior cerebral artery (A): This artery supplies blood to the medial aspects of the frontal and parietal lobes of the brain. Damage to this artery can lead to aphasia, which is a difficulty in understanding or producing speech.

Middle cerebral artery (B): This artery is the largest branch of the internal carotid artery and supplies blood to a large part of the lateral surface of the brain, including areas responsible for motor and sensory functions. Stroke involving this artery can cause dysarthria (difficulty in articulating speech) and dysphagia (difficulty in swallowing).

Posterior cerebral artery (C): This artery supplies blood to the occipital lobe and part of the temporal lobe. Stroke affecting this artery can lead to visual hallucinations due to involvement of the visual processing areas in the brain.

Vertebral artery (D): This artery supplies blood to the brainstem, cerebellum, and posterior part of the brain. Damage to this artery can result in loss of proprioception (sense of body position) and fine touch due to involvement of sensory pathways in the brainstem and cerebellum.

39. The correct answer is: (4) Cranial VII

Explanation: Bell's palsy is a condition characterized by sudden onset of facial muscle weakness or paralysis, typically affecting one side of the face. It results from damage or trauma to the facial nerve, which is cranial nerve VII. This nerve controls the muscles of facial expression, including those that close the eyelids, lift the eyebrows, and smile.

The exact cause of Bell's palsy is often not clear, but it is believed to be related to inflammation and swelling of the facial nerve, possibly due to viral infection (such as herpes simplex virus) or autoimmune factors.

- Cranial III (1): This nerve is the oculomotor nerve, responsible for eye movement.
- Cranial IV (2): This nerve is the trochlear nerve, responsible for eye movement.
- Cranial V (3): This nerve is the trigeminal nerve, responsible for sensation in the face and chewing.
- Cranial VII (4): This nerve is the facial nerve, responsible for controlling the muscles of facial expression.

40. The correct answer is: (4) Cardiac specific troponin I (cTnI).

Explanation: Troponin I is a cardiac-specific protein that begins to rise in the blood within 4-6 hours after myocardial infarction (heart attack). It typically peaks around 18 hours and remains elevated for several days. This marker is highly specific for myocardial injury and is essential in the diagnosis of acute coronary syndrome, including myocardial infarction.

41. The correct answer is: (3) Dusky blue

Explanation: When assessing a stoma before changing the colostomy bag, it's crucial for a nurse to observe the color of the stoma as it can indicate its health status. A dusky blue color of the stoma suggests ischemia, which means there is reduced blood flow to the stoma area. Ischemia can lead to tissue damage and necrosis if not promptly addressed.

Additional Information:

(1) Rose pink: This is a healthy color for a stoma and indicates good blood flow.
(2) Brown-black: This color might indicate older blood or tissue, but it doesn't specifically indicate ischemia.
(3) Dusky blue: This color indicates poor blood flow and suggests ischemia.

(4) Bright red: This is also a healthy color for a stoma and indicates good blood flow.

42. The correct answer is: (3) Serum lipase

Explanation: Acute pancreatitis is an inflammatory condition of the pancreas that results in the leakage of pancreatic enzymes (such as amylase and lipase) into the bloodstream. Serum lipase (3): Like serum amylase, serum lipase is also elevated in acute pancreatitis. Lipase levels typically rise within 4-8 hours after the onset of symptoms, peak at 24 hours, and remain elevated for a longer duration compared to amylase. However, serum lipase levels do not decrease in acute pancreatitis; they remain elevated until pancreatic inflammation subsides.

Additional Information:

Blood glucose (1): Blood glucose levels can be elevated in acute pancreatitis due to insulin resistance and stress response. They may not decrease; instead, they can remain stable or fluctuate depending on the severity of the pancreatitis and the patient's metabolic status.

Serum amylase (2): Serum amylase is typically elevated in acute pancreatitis. It rises rapidly (usually within 6-12 hours), peaks within 24 hours, and then gradually decreases over several days. Elevated amylase levels are a classic marker used in diagnosing acute pancreatitis.

Serum calcium (4): Serum calcium levels can decrease in acute pancreatitis due to several factors, including calcium binding to fatty acids released during fat necrosis, and precipitation of calcium soaps within the pancreas and surrounding tissues. Hypocalcemia is a known complication of severe acute pancreatitis.

43. The correct answer is: (4) Promoting intake of iodine-rich food

Explanation: After thyroid surgery, the nursing care focuses on monitoring the patient closely for complications and promoting recovery. Promoting intake of iodine-rich food (4): After thyroid surgery, promoting intake of iodine-rich foods is not necessary and can even be detrimental. The thyroid gland produces hormones that regulate metabolism and iodine uptake. If the entire thyroid gland is removed (total thyroidectomy), the patient will eventually require thyroid hormone replacement therapy. However, this does not involve increasing iodine intake but rather ensuring adequate thyroid hormone replacement through medication.

Additional Information:

Monitoring calcium level (1): After thyroid surgery, particularly if the parathyroid glands were inadvertently removed or damaged during the procedure, there is a risk of hypocalcemia (low calcium levels). Monitoring calcium levels is crucial to detect and manage hypocalcemia promptly.

Providing semi-Fowler's position (2): Semi-Fowler's position, with the head of the bed elevated to around 30-45 degrees, is commonly used post-thyroidectomy to reduce edema and facilitate breathing. It helps prevent tension on the wound and reduces the risk of aspiration.

Assessing patients' ability to speak (3): Thyroid surgery can affect the function of the vocal cords due to manipulation of the recurrent laryngeal nerve. Assessing the patient's ability to speak postoperatively helps detect any changes or complications such as vocal cord paralysis.

44. **The correct answer is: (1) Diarrhea, passage of mucus and pus in stool, rectal bleeding**

Explanation: Ulcerative colitis (UC) is a type of inflammatory bowel disease (IBD) that primarily affects the colon (large intestine) and rectum. The clinical manifestations of ulcerative colitis typically include:

Diarrhea: This is a hallmark symptom of ulcerative colitis. The diarrhea can be frequent, often with urgency, and may be accompanied by abdominal cramping.

Passage of mucus and pus in stool: Inflammation and ulceration of the colon lining in ulcerative colitis can lead to the presence of mucus and pus in the stool. This is due to the inflammatory process affecting the mucosal layer of the colon.

Rectal bleeding: Ulcers in the colon can cause bleeding, which often presents as bright red blood in the stool. The severity of bleeding can vary depending on the extent and severity of the inflammation.

Additional Information:

(2) Diarrhea, rectal bleeding, weight gain: Weight loss is more common in ulcerative colitis due to malabsorption, loss of appetite, and the chronic inflammatory state. Weight gain is not typically associated with active ulcerative colitis.

(3) Pallor, vomiting, hypercalcemia: Pallor (pale appearance) and vomiting are not typically predominant manifestations of ulcerative colitis. Hypercalcemia (high calcium levels) is not a characteristic feature of ulcerative colitis and is more commonly seen in conditions like hyperparathyroidism.

(4) Right upper quadrant abdominal pain, joint abnormalities, hypocalcemia: Right upper quadrant abdominal pain is not typical of ulcerative colitis, which primarily affects the colon and rectum. Joint abnormalities (such as arthritis) can occur in some cases of IBD but are not predominant in ulcerative colitis. Hypocalcemia is also not a typical manifestation of ulcerative colitis.

45. The correct answer is: (1) Stapedotomy

Explanation: Meniere's disease is a disorder of the inner ear characterized by episodes of vertigo, fluctuating hearing loss, tinnitus (ringing in the ears), and a sensation of fullness or pressure in the ear. Surgical therapy for Meniere's disease is typically considered when conservative treatments fail to manage symptoms

adequately. Surgical options aim to alleviate symptoms by reducing endolymphatic pressure or affecting vestibular function. Here's an explanation of the surgical options listed:

Stapedotomy: This surgical procedure involves the repair or replacement of the stapes bone in the middle ear. It is primarily used to treat conductive hearing loss, not Meniere's disease. It does not address the underlying pathology of Meniere's disease, which involves the fluid balance in the inner ear.

Additional Information:

Labyrinthectomy: This procedure involves the surgical removal of the labyrinth (the structure in the inner ear responsible for balance and hearing). It is considered when severe vertigo associated with Meniere's disease is not controlled by other treatments. Labyrinthectomy destroys the balance function of the affected ear.

Endolymphatic sac surgery: This procedure, often referred to as endolymphatic shunt surgery or endolymphatic duct surgery, involves creating a drainage pathway for excess fluid (endolymph) in the inner ear. It aims to reduce the pressure in the inner ear and alleviate symptoms of Meniere's disease.

Vestibular nerve section: Also known as vestibular neurectomy, this procedure involves the surgical severing of the vestibular nerve, which carries balance information from the inner ear to the brain. By disrupting the vestibular input from the affected ear, this surgery can relieve vertigo associated with Meniere's disease.

46. The correct answer is: (3) 30 : 2

Explanation: During adult cardiopulmonary resuscitation (CPR) performed by a single rescuer, the recommended ratio of chest compressions to ventilations is 30 compressions to 2 ventilations. Here's why this ratio is recommended and how it is applied:

Compression-to-Ventilation Ratio: This ratio refers to the sequence of actions performed during CPR. Chest compressions help circulate oxygenated blood throughout the body, while ventilations (rescue breaths) provide oxygen directly to the lungs. The 30:2 ratio ensures adequate circulation and oxygenation during CPR.

Chest Compressions: Chest compressions are crucial for maintaining blood flow to vital organs, including the brain and heart, during cardiac arrest. The deeper and faster the compressions, the better the chances of maintaining blood circulation.

Ventilations: Ventilations are performed to deliver oxygen to the lungs and remove carbon dioxide. Each ventilation should be delivered over approximately 1 second, sufficient to cause visible chest rise.

Single Rescuer Protocol: When a single rescuer is performing CPR, the standard sequence involves starting with 30 chest compressions followed by 2 ventilations. This sequence is repeated continuously until help arrives or the person shows signs of recovery.

Compression Depth and Rate: The depth of chest compressions should be at least 2 inches (5 cm) in adults, and the rate should be around 100-120 compressions per minute. This ensures effective circulation.

47. The correct answer is: (1) Laceration

Explanation: Laceration: A laceration is a wound caused by a tearing or ripping of the skin and underlying tissues due to a blunt force trauma. This type of injury typically occurs when tissues are forcefully stretched or torn apart, such as from a blunt object impact or a fall. Lacerations have irregular edges and may bleed depending on their depth and severity.

Additional Information:

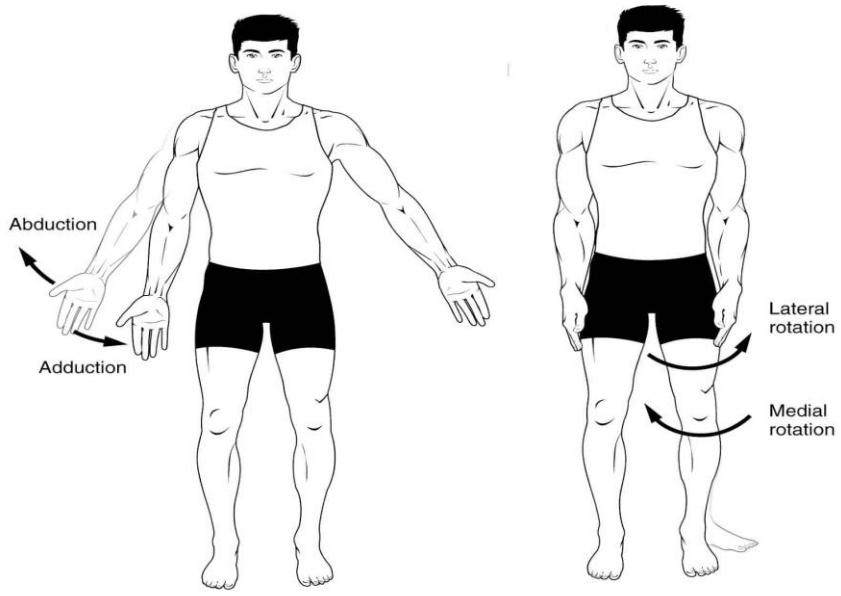
Abrasion: An abrasion, often called a scrape or graze, is a wound where the skin is rubbed or scraped away, typically from a rough surface. It is different from a laceration because it doesn't involve tearing of the tissue but rather superficial damage to the outer layers of the skin.

Puncture: A puncture wound is caused by a sharp object piercing through the skin and into the underlying tissues, creating a small hole. Examples include wounds from nails, needles, or sharp tools. Unlike lacerations, puncture wounds are typically narrow and deep.

Incision: An incision is a clean, straight cut made intentionally during surgical procedures or medical treatments. It is different from a laceration, which is caused by a tearing or ripping force.

48. The correct answer is: (4) Abduction

Explanation: Adduction: Movement of a body part toward the midline of the body. For example, bringing the arms back to the sides of the body from a raised position.



Additional information:

Eversion: Outward turning or rotation of a body part, typically referring to the foot and ankle. It moves the sole of the foot away from the midline of the body.

Inversion: Inward turning or rotation of a body part, particularly the foot and ankle. It moves the sole of the foot toward the midline of the body.

Abduction: Movement of a body part away from the midline of the body or from another body part. For example, lifting the arm or leg sideways away from the body.

49. The correct answer is: (2) Cheyne-Stokes breathing

Explanation: Cheyne-Stokes breathing: This is an abnormal breathing pattern characterized by a cycle of progressively deeper and faster breathing, followed by a decrease that results in temporary apnea (periods of no breathing). This cycle repeats, and it is typically associated with severe heart failure, stroke, or brain injury. Cheyne-Stokes breathing reflects an irregularity in the rhythm of breathing due to its cyclical nature.

Additional Information:

- **Dyspnea**: Dyspnea refers to difficult or labored breathing. It is a subjective sensation of difficulty in breathing and is not a specific breathing pattern that indicates rhythm abnormality.
- **Bradypnea**: Bradypnea refers to abnormally slow breathing rate. It indicates a decreased respiratory rate but is not specifically indicative of rhythm abnormality. Bradypnea may be seen in conditions such as drug overdose, neurological disorders, or during sleep.
- **Hyperventilation**: Hyperventilation refers to rapid and deep breathing. It is characterized by an increased respiratory rate and is not typically associated with rhythm abnormality but rather with metabolic disturbances, anxiety, or respiratory disorders.

50. The correct answer is: (2) Primordial prevention

Explanation: Primordial prevention: This is a relatively newer concept that addresses the social, economic, and environmental conditions that contribute to the emergence and distribution of risk factors in populations. It aims to prevent the development of risk factors themselves, rather than the diseases they may cause. Examples include policies and interventions to promote healthy lifestyles, reduce socioeconomic disparities, and create supportive environments for health.

Additional Information:

- **Primary prevention**: This level of prevention focuses on preventing the occurrence of disease or injury. It aims to reduce the incidence of disease by promoting healthy behaviors and reducing exposure to risk factors before the disease process begins. Examples include vaccinations, health education, and lifestyle modifications.
- **Secondary prevention**: This involves early detection and prompt intervention to halt or reduce the progress of a disease at its earliest stages. It aims to detect and treat asymptomatic individuals to prevent complications and disabilities. Examples include screening programs and regular health check-ups.
- **Tertiary prevention**: This level aims to minimize the impact of established disease through rehabilitation, treatment, and palliative care. It focuses on preventing further complications and improving quality of life in individuals already diagnosed with a disease. Examples include cardiac rehabilitation programs and support groups for chronic diseases.

51. The correct answer is: (4) Beau's lines

Explanation: Beau's lines are transverse depressions or ridges that appear across the nails. These lines are typically caused by a temporary interruption of nail growth due to various systemic conditions or local trauma to the nail matrix. Here's a detailed explanation of Beau's lines:

1. **Appearance**: Beau's lines appear as horizontal depressions or ridges that extend across the width of the nail. They can affect one or multiple nails, and their depth and severity can vary depending on the underlying cause and the duration of the disruption in nail growth.
2. **Causes**:
    - **Systemic illnesses**: Conditions such as severe infections, systemic diseases (like diabetes or peripheral vascular disease), nutritional deficiencies (especially zinc deficiency), and metabolic disturbances (like hypoalbuminemia) can lead to Beau's lines.
    - **Local trauma**: Physical trauma or injury to the nail matrix, such as from crushing injuries or excessive manicuring, can interrupt nail growth and cause Beau's lines.
    - **Chemotherapy**: Some chemotherapy drugs can affect rapidly dividing cells, including those responsible for nail growth, leading to the development of Beau's lines.

3. **Mechanism**: Beau's lines occur when there is a temporary disruption in the growth of the nail plate at the proximal nail matrix. This disruption could be due to the temporary cessation of nail matrix cell division or reduced production of keratin, which is the protein that forms the nail plate.
4. **Appearance over time**: Beau's lines are typically not continuous across the nail but rather appear as multiple parallel lines if the condition persists or recurs. As the nail continues to grow, the lines may move distally (towards the nail tip), indicating the time frame during which the growth disturbance occurred.
5. **Clinical significance**: Beau's lines themselves are not typically painful or harmful. They are rather a sign or marker of an underlying systemic condition or temporary disturbance in health. Identifying Beau's lines during a physical examination can prompt further investigation into potential underlying causes, especially if they are seen in multiple nails or persist over time.

Additional Information:

- **Koilonychia** refers to a concave shape of the nails, often seen in iron deficiency anemia.
- **Paronychia** is an infection of the skin around the nail.
- **Clubbing** refers to the enlargement of the fingertips and nails, associated with various lung and heart conditions.

52. The correct answer is: (4) 1, 2, 3 and 4

Explanation: Adventitious breath sounds are abnormal breath sounds heard upon auscultation of the lungs. They typically indicate pathology or abnormal conditions within the respiratory system. Here's a breakdown of each adventitious breath sound listed:

1. **Crackles (Rales)**:
    - **Description**: Crackles are brief, discontinuous, popping or bubbling sounds heard during inspiration.
    - **Causes**: They are commonly associated with conditions such as pneumonia, heart failure, interstitial lung disease, and bronchiectasis.
    - **Characteristics**: They can be fine (high-pitched) or coarse (low-pitched), depending on the underlying pathology.
2. **Rhonchi**:
    - **Description**: Rhonchi are continuous, low-pitched rattling sounds heard during inspiration and expiration.
    - **Causes**: They are typically caused by the movement of air through secretions or narrowed airways due to conditions like chronic bronchitis, bronchiolitis, or COPD.
    - **Characteristics**: They often clear with coughing or suctioning and can be heard over larger airways.
3. **Wheeze (Sibilant and Sonorous)**:
    - **Description**: Wheezes are continuous, musical or whistling sounds heard primarily during expiration, but can also be heard during inspiration.
    - **Causes**: They occur due to airway narrowing or obstruction, such as in asthma, COPD, or anaphylaxis.
    - **Characteristics**: Sibilant wheezes are high-pitched and occur in smaller airways, while sonorous wheezes are lower-pitched and occur in larger airways.

4. **Pleural Friction Rub**:
    - **Description**: Pleural friction rub is a dry, crackling or grating sound heard during both inspiration and expiration.
    - **Causes**: It occurs due to inflamed pleural surfaces rubbing against each other, often seen in conditions like pleurisy (inflammation of the pleura) or pneumonia.
    - **Characteristics**: It is typically heard over the lateral lung fields and changes with patient positioning.

53. The correct answer is: (3) Colonization

Explanation: Colonization refers to the presence and growth of microorganisms within a host without causing tissue invasion or damage.**Colonization:** Colonization occurs when microorganisms, such as bacteria or fungi, reside and multiply within a host's body but do not cause harm or disease. These microorganisms can be found in various locations such as the skin, respiratory tract, gastrointestinal tract, or genitourinary tract.

Additional Information:

1. **Infestation:** This term typically refers to the presence of parasites on the surface of the body, such as lice or mites, which can cause irritation but not necessarily invade tissues or cause systemic illness.
2. **Inflammation:** Inflammation is a localized response to tissue injury or infection, characterized by redness, heat, swelling, pain, and sometimes loss of function. It involves the immune system's response to clear pathogens or damaged tissue.
3. **Infection:** Infection occurs when microorganisms invade tissues, replicate, and cause damage or disease. This process typically involves an immune response and can lead to symptoms such as fever, inflammation, and tissue destruction.

54. The correct answer is: (2) 1 and 4

Explanation: In biomedical waste management, different types of wastes are categorized into color-coded bins for proper disposal.

1. **Human anatomical waste:** This includes tissues, organs, body parts, and fluids removed during surgery or autopsy. It should be discarded in a yellow color waste bin.
2. **Urobag:** This typically contains urine and is considered infectious waste. It should also be discarded in a yellow color waste bin.
3. **Needles:** Needles are sharp objects and fall under the category of sharp waste. They should be discarded in a puncture-proof container (sharps container) labeled with a yellow color code.
4. **Soiled plaster casts:** These are considered non-sharp biomedical waste and can harbor contaminants. They should be discarded in a yellow color waste bin.
5. **Glass slides:** These are generally considered to be non-infectious waste unless they have been in contact with infectious materials. They are typically discarded in a clear or transparent color-coded waste bin.

55. Correct answer: 3) NREM sleep stage 3

Explanation: Sleepwalking (somnambulism) and **enuresis (bedwetting)** usually occur during Non-Rapid Eye Movement (NREM) sleep, specifically in **NREM sleep stage 3** (also known as slow-wave sleep or deep sleep).

- NREM sleep stage 3 is characterized by deep sleep with slow delta waves on EEG (electroencephalogram). This stage is associated with restorative functions of the body, including tissue repair and growth.

56. Correct answer: 2) Endorphins

Explanation:

- **Endorphins** are natural peptides produced by the body that have pain-relieving properties. They bind to opioid receptors in the brain and spinal cord, inhibiting the transmission of pain signals and producing feelings of euphoria and analgesia.
- Substance-P is involved in transmitting pain signals.
- Bradykinin and prostaglandins are inflammatory mediators that can sensitize pain receptors.

57. Correct answer: 1) Hypoxemia

Explanation:

- **Hypoxemia** refers to low oxygen levels in the arterial blood.
- **Hypoxia** refers to low oxygen levels in the tissues, which can result from hypoxemia.
- Eupnea refers to normal breathing rate and depth.
- Eucapnia refers to normal levels of carbon dioxide in the blood.

58. The correct answer is:

(1) 3% sodium chloride

Explanation: A physiologically hypertonic solution refers to a solution that has a higher osmolarity (concentration of solutes) compared to normal body fluids. This means it has a greater concentration of solutes relative to the body's cells and fluids.

3% sodium chloride:

- This solution contains 3 grams of sodium chloride (NaCl) per 100 mL of water.
- Sodium chloride (common table salt) dissociates into sodium ions (Na+) and chloride ions (Cl-) in water.
- 3% sodium chloride solution is hypertonic because it has a higher osmolarity than normal body fluids. When administered intravenously, it draws water out of cells via osmosis, which can be used to treat conditions where fluid needs to be drawn out of tissues or cells, such as cerebral edema.

Additional Information:

0.9% sodium chloride (normal saline):

- This solution contains 0.9 grams of sodium chloride per 100 mL of water.
- 0.9% sodium chloride is isotonic, meaning it has the same osmolarity as normal body fluids. It is commonly used as a fluid replacement in medicine.

0.45% sodium chloride:

- This solution contains 0.45 grams of sodium chloride per 100 mL of water.
- 0.45% sodium chloride is hypotonic, meaning it has a lower osmolarity than normal body fluids. It is used to treat conditions where cellular dehydration needs to be corrected.

2.5% dextrose solution:

- This solution contains 2.5 grams of dextrose (a type of sugar) per 100 mL of water.
- Dextrose is metabolized by the body and does not contribute significantly to osmolarity. Therefore, 2.5% dextrose solution is considered isotonic.

59. The correct answer is: (4) Callus

Explanation: A callus is a flat, painless thickened portion of the epidermis (outer layer of the skin) that consists of a mass of horny, keratotic (hardened) cells. Calluses are formed due to repetitive local pressure or friction on the skin, commonly found on the palms of the hands or the undersurfaces of the feet (especially over bony prominences or areas of frequent friction).

Characteristics of Calluses:

- **Appearance:** Calluses appear as thickened, toughened areas of skin that may be yellowish or grayish in color.
- **Texture:** They feel rough or hardened to the touch.
- **Location:** Typically found on weight-bearing areas of the feet (such as the soles or heels) or areas subject to repeated friction or pressure (such as the palms or fingers).
- **Symptoms:** Calluses are usually painless, unlike other conditions such as corns, which can cause discomfort.

Causes:

- Continuous friction or pressure on the skin leads to the formation of calluses as a protective response of the skin to prevent injury.

Treatment:

- Calluses can often be managed by reducing the pressure or friction that caused them. This can include wearing comfortable shoes, using cushioned pads, or using pumice stones to gently remove excess skin.
- Severe or persistent calluses may require professional treatment by a healthcare provider.

Additional Information:

- **Plantar warts (option 1)** are caused by a viral infection (human papillomavirus, HPV) and appear as small, fleshy growths on the sole of the foot. They may cause pain or discomfort.
- **Corns (option 2)** are also thickened areas of skin but have a central core of hard material. They typically develop on the toes or other areas where there is friction or pressure.
- **Athlete's foot (option 3)** is a fungal infection that usually affects the skin between the toes but can also spread to the sole of the foot, causing itching, redness, and scaling.

60. The correct answer is: (3) Self-regulation

Explanation: Self-regulation, as a core critical thinking skill, pertains to the ability to monitor and correct mistakes that occur during the process of interpreting, analyzing, inferring, evaluating, or explaining information or ideas.

Self-regulation: This critical thinking skill involves being aware of one's own thinking processes, strategies, and potential biases. It includes the ability to monitor how information is being interpreted, analyzed, and evaluated. Importantly, self-regulation allows individuals to recognize errors or flaws in their reasoning or understanding and take corrective actions.

Additional Information:

1. **Analysis (option 1):** Analysis refers to the process of breaking down complex information into smaller parts to understand its structure, components, and relationships. While analysis is a critical thinking skill, it focuses more on examining the parts rather than monitoring and correcting mistakes.
2. **Interpretation (option 2):** Interpretation involves making sense of or explaining the meaning of information or ideas. It focuses on understanding and explaining rather than actively monitoring or correcting mistakes in the thinking process.
3. **Explanation (option 4):** Explanation is the process of providing reasons, justifications, or causes for a particular phenomenon or conclusion. It involves clarity and coherence in presenting information rather than monitoring or correcting mistakes.

61. The correct answer is: (1) 8000 mL

Explanation: The Parkland formula is used to calculate the amount of fluid resuscitation required in the first 24 hours for a patient with burns. The formula is:

Total fluid requirement (in mL) = 4 × body weight (in kg) × percentage of total body surface area burned

Total fluid requirement (in mL)=4×body weight (in kg)×percentage of total body surface area burned

According to the scenario provided:

Patient's weight: 70 kg

Percentage of total body surface area burned: 50%

Let's calculate the fluid requirement step by step:

Calculate the total fluid requirement for the first 24 hours:

Total fluid requirement = 4 × 70 × 50

Total fluid requirement=4×70×50

Total fluid requirement=4×70×0.5

Total fluid requirement = 140 × 0.5

Total fluid requirement

= 7000 mL

Total fluid requirement=7000 mL

Determine the amount of fluid to be infused in the first 8 hours: According to the Parkland formula, half of the total fluid requirement is given in the first 8 hours.

Fluid for first 8 hours = Total fluid requirement/ 2

Fluid for first 8 hours= 3500 mL

62. The correct answer is: (4) Angioma

Explanation: Angiomas are vascular skin lesions that are benign tumors consisting of blood vessels (and sometimes lymphatic vessels).

Angioma:

Angiomas are benign tumors composed of blood vessels (and sometimes lymphatic vessels). They can appear as small red dots (cherry angiomas), flat red patches (strawberry hemangiomas), or larger raised lesions. Angiomas are typically harmless but may be removed for cosmetic reasons or if they bleed or become painful.

Additional Information:

Purpura (option 1):

Purpura refers to purple-colored spots or patches that appear on the skin due to small blood vessels (capillaries) leaking blood into the skin. It is not a tumor but rather a skin manifestation often associated with bleeding disorders or vasculitis.

Osler's nodes (option 2):

Osler's nodes are painful, red, raised lesions that occur on the fingers or toes. They are typically associated with infective endocarditis and are not vascular tumors.

Ecchymosis (option 3):

Ecchymosis refers to a larger bruise-like discoloration of the skin caused by bleeding under the skin. It is also not a tumor but a result of trauma or injury.

63. The correct answer is: (2) 2, 3 and 4

Explanation: To evaluate each statement regarding the principles of aseptic technique in the operating room:

Statement 1: "All material that enters the sterile field must be sterile"

This statement is **correct**. Aseptic technique requires that all items and materials entering the sterile field must be sterile to prevent contamination.

Statement 2: "The parts of gown worn by surgical team considered sterile are the front from chest to table level and sleeves up to 2 inches above elbow"

This statement is **not correct**. According to aseptic technique:

- The sterile gown is considered sterile only in the front from chest to the level of the sterile field (typically the waist level).
- The sleeves are sterile up to 2 inches above the elbows.
- The back of the gown and areas below the waist are considered non-sterile.

Statement 3: "A wide margin of safety is maintained between sterile and unsterile field"

This statement is **correct**. Aseptic technique mandates maintaining a significant distance or physical barrier (such as a sterile drape) between sterile and non-sterile areas to prevent contamination.

Statement 4: "Tables are sterile at table top and up to 4 inches below it"

This statement is **not correct**. In aseptic technique:

The sterile field typically extends only to the level of the tabletop.There is no standard for the sterile field extending 4 inches below the tabletop. The area below the tabletop is considered non-sterile.

64. The correct answer is:

(1) 1 and 2 only

Explanation:

After cataract surgery, it is essential for the nurse to provide appropriate care to promote healing and prevent complications. An explanation for each option:

Administer topical antibiotics (option 1):

Administering topical antibiotics after cataract surgery helps prevent infection. Antibiotic eye drops are typically prescribed to be used multiple times a day for a few days post-surgery to reduce the risk of bacterial infection.

Administer topical corticosteroids (option 2):

Topical corticosteroids are used to reduce inflammation and promote healing after cataract surgery. They help control postoperative inflammation and are usually prescribed for a short duration after surgery.

65. The correct answer is: (1) Severe eye pain, blurred vision, seeing colored halos around lights and ocular redness

Explanation: Acute angle closure glaucoma is a sudden and severe form of glaucoma where there is a rapid increase in intraocular pressure (IOP) due to the blockage of the drainage angle in the eye. This leads to symptoms such as:

1. **Severe eye pain:** Patients typically experience intense pain in the affected eye or around the brow area due to the sudden rise in intraocular pressure.
2. **Blurred vision:** Vision becomes hazy or blurred due to the pressure affecting the optic nerve and visual pathways.
3. **Seeing colored halos around lights:** Patients may perceive rainbow-colored halos around lights, which is a result of corneal edema (swelling) caused by increased pressure.
4. **Ocular redness:** The eye may appear red due to conjunctival congestion or dilation of blood vessels in response to the elevated pressure.

66. The correct answer is Option C

Explanation:

A. Langenback: 3. Useful in major abdominal surgery to retract deeper parts of the abdominal wall or the bladder or uterus while operating on the rectum

B. Morris: 1. Useful for giving maximum exposure in large incisions such as those used in abdomen

C. Deaver: 2. Useful for holding the liver up during cholecystectomy

D. Dyball: 4. Useful for holding open wound like in appendicectomy

67. The correct answer is: (2) Prevents bleeding

Explanation:

Bacillus Calmette-Guerin (BCG) is a vaccine typically used as an immunotherapy treatment for bladder cancer:

Prevents bleeding (option 2): BCG treatment is not aimed at preventing bleeding. While it can cause irritation and inflammation of the bladder lining as a side effect, its primary purpose is not to prevent bleeding.

Additional Information:

1. **Antitumor activity (option 1):** BCG is primarily administered intravesically (directly into the bladder) to stimulate the immune system's response against cancer cells. It has significant antitumor activity and is effective in reducing the recurrence of superficial bladder cancer.

2. **Prevents recurrence of transitional cell bladder tumors (option 3):** BCG treatment is effective in reducing the recurrence of superficial (non-muscle invasive) bladder tumors, particularly those composed of transitional cell carcinoma.
3. **Acts as immunotherapeutic agent (option 4):** BCG functions as an immunotherapeutic agent by activating the immune system to recognize and destroy cancer cells in the bladder. It stimulates a local immune response, which is crucial for its effectiveness in treating bladder cancer.

68. The correct answer is: (2) Patient must remain nil per orally at least 12 hours before the investigation

Explanation:

Bone densitometry, often referred to as DEXA (Dual-energy X-ray absorptiometry), is a non-invasive imaging technique used to measure bone mineral density. **Patient must remain nil per orally at least 12 hours before the investigation (option 2):** This statement is incorrect. There is no need for the patient to fast or remain nil per orally before bone densitometry. Unlike some other imaging tests (like CT scans with contrast), bone densitometry does not require fasting.

Additional Information:

1. **Calcium supplements should be avoided 24 hours prior to the investigation (option 1):** This is correct. Calcium supplements can interfere with the accuracy of bone densitometry results, so patients are typically advised to avoid taking them for 24 hours before the test.
2. **Patient has to remove clothing, jewelry and other metallic objects when scanning is done (option 3):** This is correct. Patients are instructed to remove any clothing with metal components, jewelry, and other metallic objects that could interfere with the imaging process.
3. **Patient to lie still with hips flexed for about 20 minutes during test (option 4):** This is correct. Patients undergoing bone densitometry are positioned lying down on a table while the scanner arm passes over the body. They are required to lie still for the duration of the scan, which typically takes about 20 minutes.

69. The correct answer is: (3) Shock

Explanation: Acute Kidney Injury (AKI) can be categorized based on its causes into prerenal, intrinsic renal, and postrenal. Prerenal AKI occurs when there is a decrease in renal blood flow, leading to decreased glomerular filtration rate (GFR) and subsequent kidney injury. Causes of prerenal AKI include conditions that reduce blood flow to the kidneys, such as:

- **Hypovolemia:** Reduced blood volume due to dehydration, hemorrhage (blood loss), or fluid loss from burns.
- **Hypotension:** Low blood pressure due to conditions like shock (cardiogenic, hypovolemic, or septic shock), which reduces renal perfusion.
- **Renal artery stenosis:** Narrowing of the renal arteries, reducing blood flow to the kidneys.

70. The correct answer is: (1) Multidimensional questionnaire

Explanation:

Chronic pain is complex and often involves multiple dimensions beyond just the intensity of pain. Therefore, pain assessment tools used in chronic pain management are designed to capture various aspects of the patient's pain experience. Explanation for each option:

Multidimensional questionnaire (option 1): Chronic pain assessment often requires evaluating not only the intensity of pain but also its impact on daily functioning, emotional well-being, and quality of life. Multidimensional questionnaires, such as the McGill Pain Questionnaire or the Brief Pain Inventory (BPI), are structured tools that assess pain intensity, location, quality, emotional impact, and functional impairment. They provide a comprehensive understanding of the patient's pain experience, aiding in treatment planning and monitoring.

Additional Information:

1. **FACES scale (option 2):** The FACES scale is a visual scale where patients choose a face that best represents their level of pain intensity. It is commonly used in pediatric settings and for patients who may have difficulty with numerical scales, but it primarily assesses pain intensity without capturing other dimensions of chronic pain.
2. **Visual Analogue Scale (option 3):** The Visual Analogue Scale (VAS) is a numeric scale (usually 0-10 or 0-100) where patients rate their pain intensity by marking a point on a line corresponding to their pain level. It provides a quantitative measure of pain intensity but does not address other dimensions of chronic pain.
3. **Verbal Descriptor Scale (option 4):** This scale asks patients to verbally describe their pain using specific descriptors (e.g., mild, moderate, severe). While it helps in understanding pain intensity, it may not capture the broader aspects of chronic pain experience.

71. The correct answer is: (3) Allopurinol

Explanation: Non-steroidal anti-inflammatory drugs (NSAIDs) are a class of medications commonly used to reduce inflammation, relieve pain, and lower fever. They work by inhibiting the enzyme cyclooxygenase (COX), which is involved in the production of prostaglandins that cause inflammation. **Allopurinol (option 3):** Allopurinol is not a NSAID. It is a medication used primarily to reduce uric acid levels in the blood and urine, and is used for the prevention of gout attacks and certain types of kidney stones. It works by inhibiting the enzyme xanthine oxidase involved in the production of uric acid.

Additional Information:

1. **Naproxen (option 1):** Naproxen is a NSAID used to treat pain, inflammation, and stiffness caused by conditions such as arthritis, menstrual cramps, and gout.
2. **Indomethacin (option 2):** Indomethacin is another NSAID used to reduce fever, pain, stiffness, and swelling. It is commonly used in conditions like arthritis, gout, and ankylosing spondylitis.
3. **Diclofenac sodium (option 4):** Diclofenac sodium is a NSAID used to relieve pain, swelling, and joint stiffness caused by arthritis, as well as for treating migraine headaches.

72. The correct answer is: (2) Systemic Sclerosis

Explanation: Systemic sclerosis, also known as scleroderma, is a chronic autoimmune disorder affecting the connective tissue. **Systemic Sclerosis (option 2):** Systemic sclerosis is characterized by abnormal growth of

connective tissue, leading to hardening (sclerosis) and thickening of the skin, blood vessels, skeletal muscles, and internal organs such as the lungs, heart, and kidneys. It can cause symptoms such as skin tightening, Raynaud's phenomenon (which affects blood flow to the fingers and toes), and various complications depending on the organs involved.

Additional Information:

1. **Systemic Lupus Erythematosus (option 1):** Systemic Lupus Erythematosus (SLE) is another autoimmune disorder, but it primarily affects multiple organs and tissues, causing inflammation and damage.
2. **Gout (option 3):** Gout is a type of arthritis caused by the buildup of uric acid crystals in the joints, leading to inflammation and pain. It is not a disorder of connective tissue involving hardening and thickening.
3. **Psoriasis (option 4):** Psoriasis is a chronic autoimmune condition that primarily affects the skin, causing red, scaly patches. It is not characterized by the systemic hardening and thickening of connective tissue seen in systemic sclerosis.

73. The correct answer is: (3) Electroencephalography

Explanation: Electroencephalography (EEG) is a diagnostic test used to measure the electrical activity of brain cells (neurons). **Electroencephalography (EEG) (option 3):** EEG measures the electrical activity generated by the brain cells. It is commonly used to diagnose epilepsy, monitor brain function during surgery, and evaluate sleep disorders.

Additional Information:

1. **Computed tomography (CT) (option 1):** CT scan is a diagnostic imaging technique that uses X-rays to create detailed images of the brain structure. It does not measure electrical activity but rather provides information about brain anatomy.
2. **Electroneurography (option 2):** Electroneurography is a test that measures the electrical activity of peripheral nerves. It is used to assess nerve function, particularly in conditions affecting the peripheral nervous system.
3. **Electromyography (option 4):** Electromyography (EMG) is a test that measures the electrical activity of muscles. It is used to assess muscle function and diagnose neuromuscular disorders.

74. The correct answer is: (4) Ischemic stroke

Explanation: Tissue plasminogen activator (tPA) therapy is a treatment used to dissolve blood clots in ischemic strokes to restore blood flow to the affected part of the brain. **Ischemic stroke (option 4):** Ischemic stroke is not an exclusion criterion but rather the indication for tPA therapy. tPA is specifically used to treat acute ischemic stroke by dissolving blood clots that are blocking blood flow to the brain.

Additional Information:

1. **Glucose level > 400 mg/dL (option 1):** Elevated blood glucose levels (hyperglycemia) can complicate stroke outcomes and are considered an exclusion criterion for tPA therapy.

2. **Coagulopathy (option 2):** Patients with coagulopathy, including abnormal clotting or bleeding disorders, are at increased risk of bleeding complications with tPA therapy and are therefore excluded from treatment.
3. **History of major surgery in the past 2 weeks (option 3):** Recent major surgery increases the risk of bleeding complications and is considered an exclusion criterion for tPA therapy.

75. The correct answer is: (3) Calcium gluconate

Explanation: Hyperkalemia is a condition characterized by elevated potassium levels in the blood, which can lead to cardiac arrhythmias and other serious complications. **Calcium gluconate (option 3):** Calcium gluconate stabilizes the cardiac membrane and can counteract the effects of hyperkalemia-induced cardiac toxicity. It does not lower potassium levels but protects the heart from arrhythmias caused by high potassium levels.

Additional information:

1. **Sodium bicarbonate (option 1):** Sodium bicarbonate can help in treating metabolic acidosis but does not directly stabilize the cardiac membrane in hyperkalemia.
2. **Insulin (option 2):** Insulin, particularly when given with glucose, helps to shift potassium from the bloodstream into cells, thereby reducing serum potassium levels. This can stabilize the cardiac membrane in hyperkalemia.
3. **Digoxin (option 4):** Digoxin is a cardiac glycoside used to treat heart conditions like heart failure and atrial fibrillation. It does not stabilize the cardiac membrane in hyperkalemia and can be dangerous in the setting of high potassium levels.

76. **Correct Answer: (4) Oxytocin**

Concept

The neurohypophysis, also known as the posterior pituitary gland, releases two main hormones: oxytocin and vasopressin (antidiuretic hormone or ADH). Oxytocin is particularly known for its role in childbirth and lactation. It stimulates uterine contractions during labor and helps in the ejection of milk from the mammary glands.

Important Points

- **Neurohypophysis:** Part of the pituitary gland responsible for storing and releasing hormones produced by the hypothalamus.
- **Oxytocin:** A hormone that plays a crucial role in childbirth by inducing uterine contractions. It is also involved in lactation and social bonding.
- **Other Hormones:**
    - **Estrogen:** A steroid hormone responsible for the development and regulation of the female reproductive system and secondary sexual characteristics.
    - **Progesterone:** A hormone that regulates the condition of the endometrium (inner lining of the uterus), preparing it for potential pregnancy after ovulation.
    - **Prolactin:** A hormone that promotes milk production in mammals.

Confusion Points

- **Neurohypophysis vs. Adenohypophysis:** It's important not to confuse the neurohypophysis (posterior pituitary) with the adenohypophysis (anterior pituitary), which secretes different hormones.
- **Hormone Functions:** Differentiating between the functions of various hormones can be tricky. For example, while oxytocin induces uterine contractions, estrogen and progesterone play more significant roles in regulating the menstrual cycle and pregnancy, and prolactin is primarily associated with milk production.
- **Source of Hormones:** Understanding that oxytocin is produced by the hypothalamus and stored in the neurohypophysis, while other hormones like estrogen and progesterone are primarily produced by the ovaries, can help clarify their distinct roles and origins.

77. **Correct Answer**

(3) Albumin

Concept

Plasma proteins are crucial components of blood plasma, each serving different functions. Albumin is the most abundant plasma protein and plays a vital role in maintaining osmotic pressure, which is essential for the proper distribution of body fluids between blood vessels and body tissues.

Important Points

- **Albumin:**
  - Major plasma protein produced by the liver.
  - Maintains colloid osmotic pressure, which helps keep fluid within the bloodstream.
  - Transports hormones, vitamins, and drugs.
- **Haptoglobin:**
  - Binds free hemoglobin released from erythrocytes, thus preventing loss of iron through the kidneys and protecting the kidneys from damage.
- **Transferrin:**
  - Iron-binding blood plasma glycoprotein that controls the level of free iron in biological fluids.
- **Ceruloplasmin:**
  - A copper-carrying protein in the blood, also has a role in iron metabolism by oxidizing Fe^{2+} to Fe^{3+}.

Confusion Points

- **Functions of Plasma Proteins:** It is easy to confuse the functions of different plasma proteins due to their diverse roles. For instance, while albumin is primarily responsible for maintaining osmotic pressure, haptoglobin binds hemoglobin, transferrin transports iron, and ceruloplasmin carries copper.
- **Similar Sounding Proteins:** Some proteins have names that might sound similar, leading to confusion about their functions. Remember that "albumin" is associated with osmotic pressure, while others like "transferrin" relate to iron transport.

- **Role of Osmotic Pressure:** Osmotic pressure is crucial for maintaining fluid balance in the body. Albumin's role in this process is vital, as it ensures that fluids do not leak excessively from blood vessels into surrounding tissues, preventing edema (swelling)

78. **Correct Answer**
(1) 1 and 2 only

1. Pancreatic enzyme insufficiency
2. Diseases affecting small intestines

Concept

Steatorrhea is the presence of excess fat in feces. Stools may be bulky, pale, and foul-smelling. This condition occurs when the digestion or absorption of fats is impaired.

Important Points

- **Pancreatic enzyme insufficiency:** The pancreas produces enzymes such as lipase, which are essential for the digestion of fats. Insufficient production of these enzymes leads to incomplete digestion of fats, resulting in steatorrhea.
- **Diseases affecting small intestines:** Conditions like celiac disease, Crohn's disease, or other disorders that damage the lining of the small intestine can impair fat absorption, leading to steatorrhea.
- **Bile acid deficiency:** Bile acids, produced by the liver and stored in the gallbladder, are essential for emulsifying fats and aiding in their absorption. A deficiency in bile acids can also cause steatorrhea. However, this was not listed as part of the correct answer.
- **Insulin deficiency:** Insulin deficiency is primarily associated with diabetes mellitus and does not directly cause steatorrhea. It is not involved in the digestion or absorption of fats.

Confusion Points

- **Bile acid deficiency vs. Pancreatic enzyme insufficiency:** Both conditions can cause steatorrhea, but in this context, only pancreatic enzyme insufficiency and diseases affecting the small intestines are considered correct answers.
- **Direct vs. Indirect Causes:** Understanding that insulin deficiency does not directly cause steatorrhea can help clarify why it is not part of the correct answer. Insulin's primary role is in glucose metabolism, not fat digestion.
- **Overlap in Symptoms:** Some symptoms of gastrointestinal disorders can overlap, making it important to distinguish the specific cause of steatorrhea by identifying whether the issue lies in enzyme production, bile acid availability, or intestinal health.

79. **Correct Answer**

(4) Sternberg's triarchic theory

Concept

Theories of motivation explain what drives individuals to act or behave in certain ways. They often address intrinsic and extrinsic factors influencing motivation.

Important Points

- **Self-determination theory:** Focuses on intrinsic and extrinsic motivation, emphasizing the importance of autonomy, competence, and relatedness in fostering motivation.
- **Hull's theory (Drive Reduction Theory):** Proposes that motivation arises from biological needs or drives that push an organism to satisfy those needs and reduce internal tension.
- **Psychoanalytical theory:** While not primarily a motivation theory, it involves aspects of motivation, particularly through unconscious desires and instincts, as proposed by Sigmund Freud.
- **Sternberg's triarchic theory:** Not a theory of motivation, but a theory of intelligence. It outlines three types of intelligence: analytical, creative, and practical.

Confusion Points

- **Motivation vs. Intelligence:** Understanding that Sternberg's triarchic theory pertains to intelligence, not motivation, helps clarify why it is not included in the list of motivation theories.
- **Overlap in Psychological Theories:** Some psychological theories address multiple aspects of human behavior, which can lead to confusion about their primary focus. For example, psychoanalytical theory encompasses elements of motivation but is broader in scope, addressing personality and unconscious processes.
- **Names and Terminology:** The names of theories can sometimes be misleading. For instance, knowing that Hull's theory is also called Drive Reduction Theory helps in recognizing it as a motivation theory.

8o. **Correct Answer**

(4) Self-actualization

Concept

Maslow's hierarchy of needs is a psychological theory proposed by Abraham Maslow, which is often depicted as a pyramid with five levels of human needs. The needs range from basic (physiological) to the highest (self-actualization).

Important Points

- **Physiological Needs:** Basic needs for survival, such as food, water, shelter, and sleep.
- **Safety Needs:** Security and protection from physical and emotional harm.
- **Love and Belongingness Needs:** Social needs for relationships, love, and affection.
- **Esteem Needs:** The need for self-esteem, recognition, and respect from others.
- **Self-actualization:** The highest level of growth needs, where an individual realizes their full potential and seeks personal growth and peak experiences.

Confusion Points

- **Aesthetic and Cognitive Needs:** These are sometimes considered additional levels beyond the basic five in Maslow's expanded hierarchy. Aesthetic needs involve the appreciation of beauty and balance, while cognitive needs involve the pursuit of knowledge and understanding. However, these are not the highest in the original hierarchy.
- **Esteem Needs vs. Self-actualization:** Esteem needs are important for self-respect and respect from others, but they are not at the top of the hierarchy. Self-actualization represents the fulfillment of personal potential and self-growth.
- **Hierarchy Levels:** Remembering the sequence of needs can help avoid confusion. The hierarchy progresses from basic survival needs to complex psychological and self-fulfillment needs.

81. **Correct Answer**

(2) Average

Concept

IQ (Intelligence Quotient) scores are used to assess human intelligence. The scores are typically distributed in a bell curve, with the majority of people scoring near the average.

Important Points

- **IQ Score Ranges:**
  - **Below 70:** Intellectual disability
  - **70-79:** Borderline
  - **80-89:** Low average
  - **90-109:** Average
  - **110-119:** High average
  - **120-129:** Superior
  - **130 and above:** Very superior or gifted
- **Average IQ Score:** The average IQ score is typically set at 100, with the majority of the population (about 68%) scoring within one standard deviation (15 points) of the mean, i.e., between 85 and 115.

Confusion Points

- **Different Classifications:** Various sources might have slightly different terms or ranges for IQ classifications, but the central concept remains consistent.
- **Understanding "Average":** It's important to understand that an IQ score of 90 falls within the "average" range and is not considered low or high.
- **Terminology:** Terms like "borderline," "superior," and "bright normal" can be confusing without clear definitions, but knowing the numerical ranges helps clarify these categories.

82. **Correct Answer**

(1) Conscious

Concept

Sigmund Freud's theory of psychoanalysis divides the human psyche into three structures of personality: the id, ego, and superego. These structures interact to shape human behavior and personality.

Important Points

- **Id:** The primal, unconscious part of the personality that operates on the pleasure principle, seeking immediate gratification of basic drives and desires.
- **Ego:** The conscious, rational part of the personality that operates on the reality principle, mediating between the desires of the id and the constraints of reality.
- **Superego:** The moral and ethical component of the personality, representing internalized societal norms and values, often in conflict with the desires of the id.

Confusion Points

- **Conscious vs. Unconscious:** While Freud's theory includes concepts of the conscious and unconscious mind, these are not considered structures of personality. The conscious mind is simply the part of the mind we are aware of, while the unconscious contains thoughts and memories outside of conscious awareness.
- **Role of the Ego:** The ego balances the demands of the id, the superego, and reality. It is important to differentiate it from the conscious mind, although it includes conscious thought processes.
- **Terminology:** Understanding the specific roles and interactions of the id, ego, and superego helps clarify their distinct functions within Freud's framework of personality

83. **Correct Answer**

(4) Approach-approach conflict

Concept

In psychology, conflicts refer to situations where an individual faces competing demands, desires, or goals. Each type of conflict presents unique challenges and requires different coping strategies.

Important Points

- **Approach-approach conflict:** This occurs when an individual has to choose between two equally attractive options. It is generally considered the least stressful type of conflict because both choices are positive.
- **Approach-avoidance conflict:** Involves a single goal that has both attractive and unattractive aspects, causing the individual to be drawn to and repelled by the same goal.
- **Double approach-avoidance conflict:** Occurs when a person has to choose between two options, both of which have positive and negative aspects.
- **Avoidance-avoidance conflict:** This type occurs when an individual must choose between two equally unattractive options. It is often more stressful than approach-approach conflict because both choices are negative.

Confusion Points

- **Similar Terminology:** The terms can be confusing due to their similarity. Remembering the nature of the choices (positive or negative) helps clarify the types.
- **Approach-approach vs. Avoidance-avoidance:** Approach-approach involves choosing between two positive outcomes, while avoidance-avoidance involves choosing between two negative outcomes.
- **Mixed Conflicts:** Approach-avoidance and double approach-avoidance conflicts involve more complex decision-making due to the presence of both positive and negative aspects within the choices.

84. **Correct Answer**

(1) Patriarchal family

Concept

Family structures and dynamics vary across cultures and societies, with different types reflecting varying degrees of authority and lineage.

Important Points

- **Patriarchal family:** A family structure where the father or eldest male holds the highest status and authority, controlling the social, economic, and moral life of the family. This type of family is characterized by male dominance and decision-making power.
- **Matriarchal family:** A family structure where the mother or eldest female holds the highest status and authority, often seen in societies where women have significant control over social, economic, and family matters.
- **Patrilocal family:** A family system where the married couple resides with or near the husband's parents. The emphasis is on the location of the household rather than authority.
- **Patrilineal family:** A family system where lineage and inheritance are traced through the male line. This type focuses on descent and inheritance rather than authority within the household.

Confusion Points

- **Authority vs. Descent:** Understanding the difference between authority (patriarchal/matriarchal) and descent (patrilineal/matrilineal) helps clarify the specific type of family structure.
- **Location vs. Authority:** Patrilocal and matrilocal refer to the living arrangements post-marriage, whereas patriarchal and matriarchal refer to the power dynamics within the family.
- **Cultural Variations:** Different cultures may have varying definitions and manifestations of these family structures, but the core concepts remain consistent across societies.

85. **Correct Answer**

(4) 1, 2, 3 and 4

Concept

Acculturation refers to the process of cultural change and adaptation that occurs when individuals or groups from different cultures come into continuous first-hand contact. Various factors contribute to acculturation, influencing how cultures interact and integrate with one another.

Important Points

- **Trade and Commerce:** Facilitates the exchange of goods, ideas, and cultural practices between different societies, leading to acculturation.
- **Industrialization:** Introduces new technologies and ways of life that can alter cultural practices and social structures, promoting cultural integration and adaptation.
- **Education:** Plays a significant role in acculturation by spreading knowledge, values, and cultural norms, often leading to greater cultural awareness and assimilation.
- **Conquest:** Can lead to forced acculturation, where the dominant culture imposes its practices and beliefs on the conquered society, resulting in significant cultural change.

Confusion Points

- **Overlap in Factors:** While each factor independently contributes to acculturation, they often overlap and interact with each other, making it important to recognize their collective impact.
- **Voluntary vs. Involuntary Acculturation:** Trade, commerce, and education often involve voluntary acculturation, whereas conquest typically involves involuntary acculturation, highlighting different dynamics of cultural change.
- **Broad Impact of Industrialization:** Understanding that industrialization not only affects economic and technological aspects but also leads to profound cultural shifts helps clarify its role in acculturation.

86. **Correct Answer**

(1) 1, 2, and 3 only

Concept

Essential amino acids are those that cannot be synthesized by the human body and must be obtained through diet. They play crucial roles in various physiological processes, including protein synthesis, enzyme function, and cellular repair.

Important Points

- **Leucine:** An essential amino acid important for protein synthesis and muscle repair.
- **Tryptophan:** An essential amino acid that serves as a precursor for serotonin and melatonin, which are important for mood regulation and sleep.
- **Methionine:** An essential amino acid that is vital for metabolism and detoxification, as well as for the growth and repair of tissues.
- **Histidine:** An essential amino acid, particularly important for infants and necessary for growth and tissue repair. Although its essentiality for adults can be context-dependent, it is generally considered essential.

- **Cystine:** A non-essential amino acid because it can be synthesized by the body from methionine.

Confusion Points

- **Essential vs. Non-essential:** Distinguishing between essential amino acids (which must be obtained from the diet) and non-essential amino acids (which the body can synthesize) is crucial.
- **Context of Histidine:** While histidine is essential for infants and growth, its classification as essential for adults can vary based on dietary and physiological conditions.
- **Role of Amino Acids:** Understanding the specific functions and dietary sources of essential amino acids helps in recognizing their importance in nutrition and health.

87. **Correct Answer**

(3) 2 3 4 1

Matching Lists

List I (Deficiency) with List II (Sign):

- **A. Corneal xerosis - 2. Cornea dull, dry, and non-wettable and eventually opaque**
- **B. Keratomalacia - 3. Cornea becomes soft and may burst open**
- **C. Conjunctival xerosis - 4. Conjunctiva becomes dry and non-wettable**
- **D. Bitot's spot - 1. Triangular, pearly-white or yellowish, foamy**

Explanation

- **Corneal xerosis (A):** This condition is characterized by a dull, dry, and non-wettable cornea that can eventually become opaque, indicating severe vitamin A deficiency.
- **Keratomalacia (B):** A severe form of vitamin A deficiency that causes the cornea to soften and may result in the cornea bursting open.
- **Conjunctival xerosis (C):** This is where the conjunctiva becomes dry and non-wettable, another sign of vitamin A deficiency.
- **Bitot's spot (D):** These are triangular, pearly-white or yellowish, foamy spots on the conjunctiva, often seen in vitamin A deficiency.

Therefore, the correct match for the lists is:

- A -> 2
- B -> 3
- C -> 4
- D -> 1

88. **Correct Answer**

(4) 2 4 1 3

Matching Lists

List I (Nutrient) with List II (Function):

- **A. Vitamin D - 2. Promotes intestinal absorption of calcium and phosphorus**
- **B. Niacin - 4. Acts as antioxidant**
- **C. Vitamin C - 1. Essential for the metabolism of carbohydrates, fats and proteins**
- **D. Phosphorus - 3. Essential for formation of bones and teeth**

Explanation

- **Vitamin D (A):** Promotes the intestinal absorption of calcium and phosphorus, which are crucial for maintaining healthy bones and teeth.
- **Niacin (B):** While primarily known for its role in energy metabolism, it also has antioxidant properties.
- **Vitamin C (C):** Known for its antioxidant properties and its essential role in the metabolism of carbohydrates, fats, and proteins.
- **Phosphorus (D):** Essential for the formation of bones and teeth, as it is a key component of bone mineral matrix and teeth.

Therefore, the correct match for the lists is:

- A -> 2
- B -> 4
- C -> 1
- D -> 3

89. The correct answer is:

(4) Amylase

Explanation:

- **Amylase:** Amylase is an enzyme produced by the pancreas and salivary glands. Elevated levels of serum amylase are indicative of pancreatic injury or inflammation, such as in acute pancreatitis. Therefore, serum amylase levels are often measured in clinical diagnosis to help confirm acute pancreatitis.
- **Lactate dehydrogenase (LDH), Alanine aminotransferase (ALT), and Aspartate aminotransferase (AST):**These enzymes are also used in clinical diagnosis but are not specifically indicative of acute pancreatitis. LDH is a general marker of tissue damage, while ALT and AST are primarily used to assess liver function and can be elevated in liver diseases.

In summary, among the options given, amylase is the specific serum enzyme used in clinical diagnosis to detect acute pancreatitis.

90. The correct answer is:

(3) IgG

Explanation:

- **IgG:** Immunoglobulin G (IgG) is the major antibody found in human serum. It plays a key role in immune responses against bacteria, viruses, and toxins. IgG is the most abundant antibody in the bloodstream and is crucial for long-term immunity.
- **IgA, IgD, and IgE:**
    - **IgA:** Found primarily in mucosal areas such as the gut, respiratory tract, and urogenital tract.
    - **IgD:** Found on the surface of B cells and involved in the initiation of immune responses.
    - **IgE:** Involved in allergic reactions and defense against parasitic infections.

While all immunoglobulins have specific roles in the immune system, IgG is particularly abundant in serum and plays a broad role in defending against infections and providing immune memory.

91. The correct answer is:

(4) Disease

Concept

The epidemiological triad is a model used in public health to study the interactions between three key components that influence the spread of diseases. These components are:

1. **Agent**: The cause of the disease (e.g., bacteria, viruses, parasites, fungi, or any other microorganism).
2. **Host**: The organism (usually a human or animal) that harbors the disease.
3. **Environment**: External factors that affect the agent and the opportunity for exposure (e.g., climate, living conditions, sanitation, healthcare availability).

Important Points

- **Agent**: Can be biological (bacteria, viruses), chemical (poison, alcohol), or physical (radiation, trauma).
- **Host**: Factors include genetic susceptibility, immune status, nutritional status, and presence of other diseases.
- **Environment**: Includes all external factors that can influence the transmission and development of disease, such as socio-economic conditions, climate, and sanitation.

Confusion Points

- **Disease vs. Agent**: The term "disease" is often confused with "agent." The agent is the cause of the disease, while the disease is the outcome of the interaction between the agent, host, and environment.
- **Environment's Broad Scope**: The environment includes a wide range of factors from physical surroundings to socio-economic conditions, which can be confusing as it encompasses many aspects.
- **Host Factors**: It's important to distinguish between intrinsic (genetic) and extrinsic (behavioral) factors that affect the host's susceptibility to the agent.

92. The correct answer is:

(4) Should not use this vial for vaccination

Concept

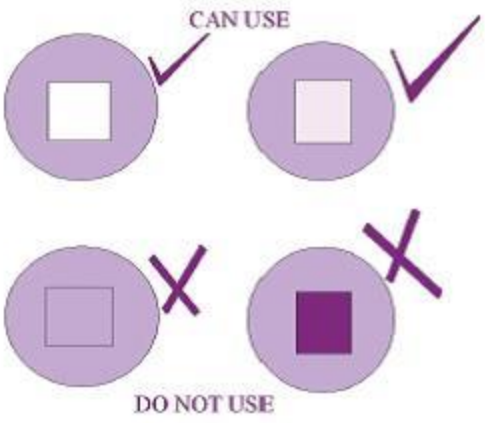
The Vaccine Vial Monitor (VVM) is a small label that changes color with exposure to heat, indicating whether a vaccine vial has been exposed to temperatures that might reduce its potency. It is an essential tool to ensure the effectiveness and safety of vaccines.

Important Points

- **VVM Working**: The VVM consists of a heat-sensitive square within a circle. The color of the square changes as it is exposed to heat over time.
- **Reading VVM**:
  - If the square is lighter than the circle, the vaccine is still potent and safe to use.
  - If the square is the same color as or darker than the circle, the vaccine should not be used because it may no longer be effective.
- **Action on VVM Indication**: Any vial with a VVM that shows the square darker than the circle should be discarded and not used for vaccination.

Confusion Points

- **Misinterpretation of VVM**: Healthcare workers might misinterpret the VVM, thinking that shaking or cooling the vial can restore its potency. This is not true; once the VVM indicates exposure to excessive heat, the vaccine's potency cannot be restored.
- **Vaccine Storage Misconceptions**: There might be a misconception that placing the vial back in an ice box or shaking it could correct the issue. The VVM reading is irreversible and indicates the cumulative exposure to heat, not something that can be rectified by temporary cooling.



93. The correct answer is:

(2) 3 4 2 1

Concept

This question involves matching causative agents (pathogens) with the diseases they cause. Understanding the link between pathogens and diseases is crucial in microbiology and epidemiology for diagnosis, treatment, and prevention of diseases.

Important Points

- **Bordetella pertussis**: This bacterium is the causative agent of whooping cough (pertussis).
- **Salmonella typhi**: This bacterium causes enteric fever, commonly known as typhoid fever.
- **Clostridium perfringens**: This bacterium is a common cause of food poisoning.
- **Flavivirus fibricus**: This virus causes yellow fever.

Confusion Points

- **Similar Names**: It's easy to confuse pathogens with similar-sounding names or those within the same family of bacteria or viruses.
- **Disease Names**: Some diseases have multiple causative agents, especially in the case of food poisoning, which can be caused by various bacteria, viruses, and parasites.

94. The correct answer is:

(2) Population based health care services

Concept

The health service pyramid is a model that illustrates the organization of health services into different levels of care. It is structured to ensure a comprehensive and efficient health system, with each level serving a specific role in public health.

Important Points

- **Population-Based Health Care Services**: These services form the foundation of the health service pyramid. They focus on preventive measures and health promotion for the entire population, such as vaccinations, sanitation, health education, and disease surveillance. These services aim to reduce the overall disease burden and promote public health.
- **Clinical Preventive Services**: These services, such as screenings and immunizations, are provided to individuals to prevent disease and detect health issues early.
- **Secondary Health Care Services**: This level includes specialized medical care provided by specialists after referral from primary care providers. It involves more complex and specific treatments.
- **Tertiary Health Care Services**: These services are the highest level of care, providing advanced medical treatment and surgical procedures typically in specialized hospitals.

Confusion Points

- **Preventive vs. Population-Based Services**: While clinical preventive services (e.g., screenings, immunizations) are critical, population-based health care services are broader and encompass measures that affect entire communities.

- **Hierarchy of Services**: Understanding the hierarchy and how each level of the pyramid builds upon the other can be confusing. The base of the pyramid supports all higher levels by reducing the burden on secondary and tertiary services through prevention and health promotion.

95. The correct answer is:

(4) ASHA

Concept

The Community Based Assessment Checklist (CBAC) is a tool used for the early detection of non-communicable diseases (NCDs) at the community level. This checklist is part of various public health programs aimed at identifying individuals at risk for conditions such as hypertension, diabetes, and cancer.

Important Points

- **ASHA (Accredited Social Health Activist)**: ASHAs are community health workers instituted by the government to act as a link between the community and the health care system. They are responsible for filling out the CBAC as they have direct and regular contact with the community members.
- **Role of ASHAs**: ASHAs play a crucial role in health promotion and disease prevention at the grassroots level. They conduct home visits, provide health education, and encourage individuals to seek timely medical care.
- **Purpose of CBAC**: The checklist helps in identifying individuals with potential risk factors for NCDs, allowing for early intervention and management. It includes questions related to lifestyle, family history, and symptoms indicative of NCDs.

Confusion Points

- **Roles of Health Workers**: It's essential to distinguish the roles of different health workers in public health initiatives. While medical officers, staff nurses, and ANMs have critical roles in healthcare delivery, the CBAC is specifically designed for ASHAs due to their close community interaction.
- **Scope of CBAC**: The checklist is for early detection and not for diagnosing diseases. It helps in identifying individuals who need further medical evaluation.

96. The correct answer is:

(4) 1, 2 and 3 only

Concept

Health and Wellness Centres (HWCs) at the Sub Centre (SC) level are designed to provide comprehensive primary healthcare services to the community. They aim to deliver a wide range of health services, focusing on preventive, promotive, curative, rehabilitative, and palliative care.

Important Points

- **Community Health Officers (Mid-Level Health Providers)**: These are trained healthcare professionals who lead the HWCs and ensure the delivery of health services. They play a crucial role in providing clinical services, health promotion, and disease prevention activities.
- **ANM (Auxiliary Nurse Midwife)**: ANMs are frontline health workers responsible for maternal and child health, immunization, and family planning services. They also support community health initiatives and basic medical care.
- **ASHA (Accredited Social Health Activist)**: ASHAs act as a bridge between the community and the health system. They engage in health promotion, disease prevention activities, and help in mobilizing the community for health services.

Confusion Points

- **Anganwadi Worker**: While Anganwadi workers play a vital role in providing nutrition and early childhood care, they are not officially part of the team at HWCs at the Sub Centre level. Their focus is more on child development and nutrition services provided through the Integrated Child Development Services (ICDS) program.

Summary

By including Community Health Officers, ANMs, and ASHAs in the team, HWCs at the Sub Centre level are well-equipped to deliver comprehensive primary healthcare services to the community. This integration ensures a holistic approach to healthcare, covering preventive, promotive, and curative aspects effectively.

97. The correct answer is:

(3) Blue indicates ambulatory patients

Concept

The triage system is used in disaster management to prioritize patients based on the severity of their condition and the urgency of their need for medical treatment. This system ensures that medical resources are used effectively during emergencies.

Important Points

- **Red**: Indicates high priority treatment. These patients have life-threatening injuries or conditions but have a chance of survival if they receive immediate medical attention.
- **Yellow**: Indicates medium care priority. These patients have serious but not immediately life-threatening injuries. They require treatment but can wait for a short period.
- **Green**: Indicates ambulatory patients. These patients have minor injuries and can walk. They are the lowest priority for immediate medical treatment.
- **Black**: Indicates dead or moribund patients. These patients are either deceased or have injuries so severe that they are not expected to survive even with immediate treatment.

Confusion Points

- **Blue Color Code**: In the context of disaster triage, "blue" is not typically used. The standard triage color codes include red, yellow, green, and black. Misunderstanding color codes can lead to improper prioritization of patients, impacting the effectiveness of disaster response.

Summary

In disaster management, using the correct triage color codes is crucial for effective patient prioritization and resource allocation. Understanding and adhering to the standard color codes (red, yellow, green, and black) ensures that patients receive appropriate and timely medical care based on the severity of their conditions.

98. The correct answer is:

(2) INR 5,00,000

Concept

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is a flagship health insurance scheme launched by the Government of India. It aims to provide financial protection to over 10 crore poor and vulnerable families against healthcare costs.

Important Points

- **Coverage**: Under AB-PMJAY, each eligible family is entitled to a health cover of up to INR 5,00,000 per year for secondary and tertiary care hospitalization.
- **Scope**: The scheme covers medical and hospitalization expenses for almost all secondary and tertiary procedures, including pre-existing conditions.
- **Beneficiaries**: The beneficiaries are identified based on the Socio-Economic Caste Census (SECC) database.

Confusion Points

- **Coverage Limit**: Understanding the coverage limit is crucial, as it ensures that beneficiaries can access quality healthcare services without financial burden up to the specified limit.
- **Implementation**: The scheme is implemented through the National Health Authority (NHA) and aims to strengthen the healthcare infrastructure in India.

99. The correct answer is:

(1) Primordial prevention

Concept

Primordial prevention focuses on creating and maintaining conditions that minimize behavioral and biological risk factors even before they occur. It aims to prevent the emergence and establishment of risk factors in populations.

Important Points

- **Target**: Primordial prevention targets the root causes of diseases, such as unhealthy lifestyles, by promoting healthy behaviors from early childhood.
- **Examples**: Discouraging children from adopting harmful lifestyles like smoking, excessive alcohol consumption, and unhealthy eating habits falls under primordial prevention.
- **Scope**: This approach emphasizes health education, lifestyle modification, and creating supportive environments for healthy choices.

Confusion Points

- **Other Prevention Levels**: While primary, secondary, and tertiary prevention also aim to prevent diseases, they focus on different stages:
    - **Primary prevention**: Aims to prevent the onset of disease by reducing exposure to risk factors (e.g., vaccination, health education).
    - **Secondary prevention**: Involves early detection and prompt treatment to halt the progression of disease (e.g., screenings).
    - **Tertiary prevention**: Focuses on rehabilitation, reducing complications, and improving quality of life in individuals already affected by disease (e.g., cardiac rehabilitation programs).

Summary

Primordial prevention plays a critical role in public health by addressing societal and environmental factors that contribute to disease risk. By promoting healthy behaviors early in life, it aims to prevent the development of non-communicable diseases and promote overall well-being.

100. The correct answer is:

(2) Selective screening

Concept

Selective screening refers to the screening of a specific subgroup of the population that is considered to be at higher risk for a particular disease. This approach targets individuals who are more likely to benefit from early detection and intervention.

Important Points

- **Target Population**: Selective screening focuses on groups with known risk factors or characteristics associated with the disease being screened for.
- **Purpose**: The goal is to maximize the effectiveness of screening efforts by directing resources toward those who are most likely to benefit.
- **Examples**: Screening individuals with a family history of a disease, occupational exposure, or specific demographic characteristics are examples of selective screening.

Confusion Points

- **Other Screening Types**:

- **Mass screening**: Involves screening an entire population or a large segment of it, regardless of individual risk factors.
- **High risk screening**: While not a standard term, it could refer to screening high-risk individuals within a population.
- **Multiphasic screening**: Involves screening for multiple diseases or conditions simultaneously.

Summary

Selective screening allows healthcare providers to focus resources efficiently on populations where screening is most likely to yield significant health benefits. This approach helps in early detection, timely intervention, and improved outcomes for individuals at higher risk of specific diseases.

76. **Correct Answer**

(4) Oxytocin

Concept

The neurohypophysis, also known as the posterior pituitary gland, releases two main hormones: oxytocin and vasopressin (antidiuretic hormone or ADH). Oxytocin is particularly known for its role in childbirth and lactation. It stimulates uterine contractions during labor and helps in the ejection of milk from the mammary glands.

Important Points

- **Neurohypophysis:** Part of the pituitary gland responsible for storing and releasing hormones produced by the hypothalamus.
- **Oxytocin:** A hormone that plays a crucial role in childbirth by inducing uterine contractions. It is also involved in lactation and social bonding.
- **Other Hormones:**
  - **Estrogen:** A steroid hormone responsible for the development and regulation of the female reproductive system and secondary sexual characteristics.
  - **Progesterone:** A hormone that regulates the condition of the endometrium (inner lining of the uterus), preparing it for potential pregnancy after ovulation.
  - **Prolactin:** A hormone that promotes milk production in mammals.

Confusion Points

- **Neurohypophysis vs. Adenohypophysis:** It's important not to confuse the neurohypophysis (posterior pituitary) with the adenohypophysis (anterior pituitary), which secretes different hormones.
- **Hormone Functions:** Differentiating between the functions of various hormones can be tricky. For example, while oxytocin induces uterine contractions, estrogen and progesterone play more significant roles in regulating the menstrual cycle and pregnancy, and prolactin is primarily associated with milk production.

- **Source of Hormones:** Understanding that oxytocin is produced by the hypothalamus and stored in the neurohypophysis, while other hormones like estrogen and progesterone are primarily produced by the ovaries, can help clarify their distinct roles and origins.

77. **Correct Answer**

(3) Albumin

Concept

Plasma proteins are crucial components of blood plasma, each serving different functions. Albumin is the most abundant plasma protein and plays a vital role in maintaining osmotic pressure, which is essential for the proper distribution of body fluids between blood vessels and body tissues.

Important Points

- **Albumin:**
  - Major plasma protein produced by the liver.
  - Maintains colloid osmotic pressure, which helps keep fluid within the bloodstream.
  - Transports hormones, vitamins, and drugs.
- **Haptoglobin:**
  - Binds free hemoglobin released from erythrocytes, thus preventing loss of iron through the kidneys and protecting the kidneys from damage.
- **Transferrin:**
  - Iron-binding blood plasma glycoprotein that controls the level of free iron in biological fluids.
- **Ceruloplasmin:**
  - A copper-carrying protein in the blood, also has a role in iron metabolism by oxidizing Fe^{2+} to Fe^{3+}.

Confusion Points

- **Functions of Plasma Proteins:** It is easy to confuse the functions of different plasma proteins due to their diverse roles. For instance, while albumin is primarily responsible for maintaining osmotic pressure, haptoglobin binds hemoglobin, transferrin transports iron, and ceruloplasmin carries copper.
- **Similar Sounding Proteins:** Some proteins have names that might sound similar, leading to confusion about their functions. Remember that "albumin" is associated with osmotic pressure, while others like "transferrin" relate to iron transport.
- **Role of Osmotic Pressure:** Osmotic pressure is crucial for maintaining fluid balance in the body. Albumin's role in this process is vital, as it ensures that fluids do not leak excessively from blood vessels into surrounding tissues, preventing edema (swelling)

78. **Correct Answer**
(1) 1 and 2 only

1. Pancreatic enzyme insufficiency
2. Diseases affecting small intestines

Concept

Steatorrhea is the presence of excess fat in feces. Stools may be bulky, pale, and foul-smelling. This condition occurs when the digestion or absorption of fats is impaired.

Important Points

- **Pancreatic enzyme insufficiency:** The pancreas produces enzymes such as lipase, which are essential for the digestion of fats. Insufficient production of these enzymes leads to incomplete digestion of fats, resulting in steatorrhea.
- **Diseases affecting small intestines:** Conditions like celiac disease, Crohn's disease, or other disorders that damage the lining of the small intestine can impair fat absorption, leading to steatorrhea.
- **Bile acid deficiency:** Bile acids, produced by the liver and stored in the gallbladder, are essential for emulsifying fats and aiding in their absorption. A deficiency in bile acids can also cause steatorrhea. However, this was not listed as part of the correct answer.
- **Insulin deficiency:** Insulin deficiency is primarily associated with diabetes mellitus and does not directly cause steatorrhea. It is not involved in the digestion or absorption of fats.

Confusion Points

- **Bile acid deficiency vs. Pancreatic enzyme insufficiency:** Both conditions can cause steatorrhea, but in this context, only pancreatic enzyme insufficiency and diseases affecting the small intestines are considered correct answers.
- **Direct vs. Indirect Causes:** Understanding that insulin deficiency does not directly cause steatorrhea can help clarify why it is not part of the correct answer. Insulin's primary role is in glucose metabolism, not fat digestion.
- **Overlap in Symptoms:** Some symptoms of gastrointestinal disorders can overlap, making it important to distinguish the specific cause of steatorrhea by identifying whether the issue lies in enzyme production, bile acid availability, or intestinal health.

79. **Correct Answer**

(4) Sternberg's triarchic theory

Concept

Theories of motivation explain what drives individuals to act or behave in certain ways. They often address intrinsic and extrinsic factors influencing motivation.

Important Points

- **Self-determination theory:** Focuses on intrinsic and extrinsic motivation, emphasizing the importance of autonomy, competence, and relatedness in fostering motivation.
- **Hull's theory (Drive Reduction Theory):** Proposes that motivation arises from biological needs or drives that push an organism to satisfy those needs and reduce internal tension.
- **Psychoanalytical theory:** While not primarily a motivation theory, it involves aspects of motivation, particularly through unconscious desires and instincts, as proposed by Sigmund Freud.

- **Sternberg's triarchic theory:** Not a theory of motivation, but a theory of intelligence. It outlines three types of intelligence: analytical, creative, and practical.

Confusion Points

- **Motivation vs. Intelligence:** Understanding that Sternberg's triarchic theory pertains to intelligence, not motivation, helps clarify why it is not included in the list of motivation theories.
- **Overlap in Psychological Theories:** Some psychological theories address multiple aspects of human behavior, which can lead to confusion about their primary focus. For example, psychoanalytical theory encompasses elements of motivation but is broader in scope, addressing personality and unconscious processes.
- **Names and Terminology:** The names of theories can sometimes be misleading. For instance, knowing that Hull's theory is also called Drive Reduction Theory helps in recognizing it as a motivation theory.

80. **Correct Answer**

(4) Self-actualization

Concept

Maslow's hierarchy of needs is a psychological theory proposed by Abraham Maslow, which is often depicted as a pyramid with five levels of human needs. The needs range from basic (physiological) to the highest (self-actualization).

Important Points

- **Physiological Needs:** Basic needs for survival, such as food, water, shelter, and sleep.
- **Safety Needs:** Security and protection from physical and emotional harm.
- **Love and Belongingness Needs:** Social needs for relationships, love, and affection.
- **Esteem Needs:** The need for self-esteem, recognition, and respect from others.
- **Self-actualization:** The highest level of growth needs, where an individual realizes their full potential and seeks personal growth and peak experiences.

Confusion Points

- **Aesthetic and Cognitive Needs:** These are sometimes considered additional levels beyond the basic five in Maslow's expanded hierarchy. Aesthetic needs involve the appreciation of beauty and balance, while cognitive needs involve the pursuit of knowledge and understanding. However, these are not the highest in the original hierarchy.
- **Esteem Needs vs. Self-actualization:** Esteem needs are important for self-respect and respect from others, but they are not at the top of the hierarchy. Self-actualization represents the fulfillment of personal potential and self-growth.
- **Hierarchy Levels:** Remembering the sequence of needs can help avoid confusion. The hierarchy progresses from basic survival needs to complex psychological and self-fulfillment needs.

81. **Correct Answer**

(2) Average

Concept

IQ (Intelligence Quotient) scores are used to assess human intelligence. The scores are typically distributed in a bell curve, with the majority of people scoring near the average.

Important Points

- **IQ Score Ranges:**
  - **Below 70:** Intellectual disability
  - **70-79:** Borderline
  - **80-89:** Low average
  - **90-109:** Average
  - **110-119:** High average
  - **120-129:** Superior
  - **130 and above:** Very superior or gifted
- **Average IQ Score:** The average IQ score is typically set at 100, with the majority of the population (about 68%) scoring within one standard deviation (15 points) of the mean, i.e., between 85 and 115.

Confusion Points

- **Different Classifications:** Various sources might have slightly different terms or ranges for IQ classifications, but the central concept remains consistent.
- **Understanding "Average":** It's important to understand that an IQ score of 90 falls within the "average" range and is not considered low or high.
- **Terminology:** Terms like "borderline," "superior," and "bright normal" can be confusing without clear definitions, but knowing the numerical ranges helps clarify these categories.

82. **Correct Answer**

(1) Conscious

Concept

Sigmund Freud's theory of psychoanalysis divides the human psyche into three structures of personality: the id, ego, and superego. These structures interact to shape human behavior and personality.

Important Points

- **Id:** The primal, unconscious part of the personality that operates on the pleasure principle, seeking immediate gratification of basic drives and desires.
- **Ego:** The conscious, rational part of the personality that operates on the reality principle, mediating between the desires of the id and the constraints of reality.
- **Superego:** The moral and ethical component of the personality, representing internalized societal norms and values, often in conflict with the desires of the id.

Confusion Points

- **Conscious vs. Unconscious:** While Freud's theory includes concepts of the conscious and unconscious mind, these are not considered structures of personality. The conscious mind is simply the part of the mind we are aware of, while the unconscious contains thoughts and memories outside of conscious awareness.
- **Role of the Ego:** The ego balances the demands of the id, the superego, and reality. It is important to differentiate it from the conscious mind, although it includes conscious thought processes.
- **Terminology:** Understanding the specific roles and interactions of the id, ego, and superego helps clarify their distinct functions within Freud's framework of personality

83. **Correct Answer**

(4) Approach-approach conflict

Concept

In psychology, conflicts refer to situations where an individual faces competing demands, desires, or goals. Each type of conflict presents unique challenges and requires different coping strategies.

Important Points

- **Approach-approach conflict:** This occurs when an individual has to choose between two equally attractive options. It is generally considered the least stressful type of conflict because both choices are positive.
- **Approach-avoidance conflict:** Involves a single goal that has both attractive and unattractive aspects, causing the individual to be drawn to and repelled by the same goal.
- **Double approach-avoidance conflict:** Occurs when a person has to choose between two options, both of which have positive and negative aspects.
- **Avoidance-avoidance conflict:** This type occurs when an individual must choose between two equally unattractive options. It is often more stressful than approach-approach conflict because both choices are negative.

Confusion Points

- **Similar Terminology:** The terms can be confusing due to their similarity. Remembering the nature of the choices (positive or negative) helps clarify the types.
- **Approach-approach vs. Avoidance-avoidance:** Approach-approach involves choosing between two positive outcomes, while avoidance-avoidance involves choosing between two negative outcomes.
- **Mixed Conflicts:** Approach-avoidance and double approach-avoidance conflicts involve more complex decision-making due to the presence of both positive and negative aspects within the choices.

84. **Correct Answer**

(1) Patriarchal family

Concept

Family structures and dynamics vary across cultures and societies, with different types reflecting varying degrees of authority and lineage.

Important Points

- **Patriarchal family:** A family structure where the father or eldest male holds the highest status and authority, controlling the social, economic, and moral life of the family. This type of family is characterized by male dominance and decision-making power.
- **Matriarchal family:** A family structure where the mother or eldest female holds the highest status and authority, often seen in societies where women have significant control over social, economic, and family matters.
- **Patrilocal family:** A family system where the married couple resides with or near the husband's parents. The emphasis is on the location of the household rather than authority.
- **Patrilineal family:** A family system where lineage and inheritance are traced through the male line. This type focuses on descent and inheritance rather than authority within the household.

Confusion Points

- **Authority vs. Descent:** Understanding the difference between authority (patriarchal/matriarchal) and descent (patrilineal/matrilineal) helps clarify the specific type of family structure.
- **Location vs. Authority:** Patrilocal and matrilocal refer to the living arrangements post-marriage, whereas patriarchal and matriarchal refer to the power dynamics within the family.
- **Cultural Variations:** Different cultures may have varying definitions and manifestations of these family structures, but the core concepts remain consistent across societies.

85. **Correct Answer**

(4) 1, 2, 3 and 4

Concept

Acculturation refers to the process of cultural change and adaptation that occurs when individuals or groups from different cultures come into continuous first-hand contact. Various factors contribute to acculturation, influencing how cultures interact and integrate with one another.

Important Points

- **Trade and Commerce:** Facilitates the exchange of goods, ideas, and cultural practices between different societies, leading to acculturation.
- **Industrialization:** Introduces new technologies and ways of life that can alter cultural practices and social structures, promoting cultural integration and adaptation.
- **Education:** Plays a significant role in acculturation by spreading knowledge, values, and cultural norms, often leading to greater cultural awareness and assimilation.
- **Conquest:** Can lead to forced acculturation, where the dominant culture imposes its practices and beliefs on the conquered society, resulting in significant cultural change.

Confusion Points

- **Overlap in Factors:** While each factor independently contributes to acculturation, they often overlap and interact with each other, making it important to recognize their collective impact.
- **Voluntary vs. Involuntary Acculturation:** Trade, commerce, and education often involve voluntary acculturation, whereas conquest typically involves involuntary acculturation, highlighting different dynamics of cultural change.
- **Broad Impact of Industrialization:** Understanding that industrialization not only affects economic and technological aspects but also leads to profound cultural shifts helps clarify its role in acculturation.

86. **Correct Answer**

(1) 1, 2, and 3 only

Concept

Essential amino acids are those that cannot be synthesized by the human body and must be obtained through diet. They play crucial roles in various physiological processes, including protein synthesis, enzyme function, and cellular repair.

Important Points

- **Leucine:** An essential amino acid important for protein synthesis and muscle repair.
- **Tryptophan:** An essential amino acid that serves as a precursor for serotonin and melatonin, which are important for mood regulation and sleep.
- **Methionine:** An essential amino acid that is vital for metabolism and detoxification, as well as for the growth and repair of tissues.
- **Histidine:** An essential amino acid, particularly important for infants and necessary for growth and tissue repair. Although its essentiality for adults can be context-dependent, it is generally considered essential.
- **Cystine:** A non-essential amino acid because it can be synthesized by the body from methionine.

Confusion Points

- **Essential vs. Non-essential:** Distinguishing between essential amino acids (which must be obtained from the diet) and non-essential amino acids (which the body can synthesize) is crucial.
- **Context of Histidine:** While histidine is essential for infants and growth, its classification as essential for adults can vary based on dietary and physiological conditions.
- **Role of Amino Acids:** Understanding the specific functions and dietary sources of essential amino acids helps in recognizing their importance in nutrition and health.

87. **Correct Answer**

(3) 2 3 4 1

Matching Lists

List I (Deficiency) with List II (Sign):

- **A. Corneal xerosis - 2. Cornea dull, dry, and non-wettable and eventually opaque**
- **B. Keratomalacia - 3. Cornea becomes soft and may burst open**
- **C. Conjunctival xerosis - 4. Conjunctiva becomes dry and non-wettable**
- **D. Bitot's spot - 1. Triangular, pearly-white or yellowish, foamy**

Explanation

- **Corneal xerosis (A):** This condition is characterized by a dull, dry, and non-wettable cornea that can eventually become opaque, indicating severe vitamin A deficiency.
- **Keratomalacia (B):** A severe form of vitamin A deficiency that causes the cornea to soften and may result in the cornea bursting open.
- **Conjunctival xerosis (C):** This is where the conjunctiva becomes dry and non-wettable, another sign of vitamin A deficiency.
- **Bitot's spot (D):** These are triangular, pearly-white or yellowish, foamy spots on the conjunctiva, often seen in vitamin A deficiency.

Therefore, the correct match for the lists is:

- A -> 2
- B -> 3
- C -> 4
- D -> 1

88. **Correct Answer**

(4) 2 4 1 3

Matching Lists

List I (Nutrient) with List II (Function):

- **A. Vitamin D - 2. Promotes intestinal absorption of calcium and phosphorus**
- **B. Niacin - 4. Acts as antioxidant**
- **C. Vitamin C - 1. Essential for the metabolism of carbohydrates, fats and proteins**
- **D. Phosphorus - 3. Essential for formation of bones and teeth**

Explanation

- **Vitamin D (A):** Promotes the intestinal absorption of calcium and phosphorus, which are crucial for maintaining healthy bones and teeth.
- **Niacin (B):** While primarily known for its role in energy metabolism, it also has antioxidant properties.
- **Vitamin C (C):** Known for its antioxidant properties and its essential role in the metabolism of carbohydrates, fats, and proteins.
- **Phosphorus (D):** Essential for the formation of bones and teeth, as it is a key component of bone mineral matrix and teeth.

Therefore, the correct match for the lists is:

- A -> 2
- B -> 4
- C -> 1
- D -> 3

89. The correct answer is:

(4) Amylase

Explanation:

- **Amylase:** Amylase is an enzyme produced by the pancreas and salivary glands. Elevated levels of serum amylase are indicative of pancreatic injury or inflammation, such as in acute pancreatitis. Therefore, serum amylase levels are often measured in clinical diagnosis to help confirm acute pancreatitis.
- **Lactate dehydrogenase (LDH), Alanine aminotransferase (ALT), and Aspartate aminotransferase (AST):**These enzymes are also used in clinical diagnosis but are not specifically indicative of acute pancreatitis. LDH is a general marker of tissue damage, while ALT and AST are primarily used to assess liver function and can be elevated in liver diseases.

In summary, among the options given, amylase is the specific serum enzyme used in clinical diagnosis to detect acute pancreatitis.

90. The correct answer is:

(3) IgG

Explanation:

- **IgG:** Immunoglobulin G (IgG) is the major antibody found in human serum. It plays a key role in immune responses against bacteria, viruses, and toxins. IgG is the most abundant antibody in the bloodstream and is crucial for long-term immunity.
- **IgA, IgD, and IgE:**
    - **IgA:** Found primarily in mucosal areas such as the gut, respiratory tract, and urogenital tract.
    - **IgD:** Found on the surface of B cells and involved in the initiation of immune responses.
    - **IgE:** Involved in allergic reactions and defense against parasitic infections.

While all immunoglobulins have specific roles in the immune system, IgG is particularly abundant in serum and plays a broad role in defending against infections and providing immune memory.

91. The correct answer is:

(4) Disease

Concept

The epidemiological triad is a model used in public health to study the interactions between three key components that influence the spread of diseases. These components are:

1. **Agent**: The cause of the disease (e.g., bacteria, viruses, parasites, fungi, or any other microorganism).
2. **Host**: The organism (usually a human or animal) that harbors the disease.
3. **Environment**: External factors that affect the agent and the opportunity for exposure (e.g., climate, living conditions, sanitation, healthcare availability).

Important Points

- **Agent**: Can be biological (bacteria, viruses), chemical (poison, alcohol), or physical (radiation, trauma).
- **Host**: Factors include genetic susceptibility, immune status, nutritional status, and presence of other diseases.
- **Environment**: Includes all external factors that can influence the transmission and development of disease, such as socio-economic conditions, climate, and sanitation.

Confusion Points

- **Disease vs. Agent**: The term "disease" is often confused with "agent." The agent is the cause of the disease, while the disease is the outcome of the interaction between the agent, host, and environment.
- **Environment's Broad Scope**: The environment includes a wide range of factors from physical surroundings to socio-economic conditions, which can be confusing as it encompasses many aspects.
- **Host Factors**: It's important to distinguish between intrinsic (genetic) and extrinsic (behavioral) factors that affect the host's susceptibility to the agent.

92. The correct answer is:

(4) Should not use this vial for vaccination

Concept

The Vaccine Vial Monitor (VVM) is a small label that changes color with exposure to heat, indicating whether a vaccine vial has been exposed to temperatures that might reduce its potency. It is an essential tool to ensure the effectiveness and safety of vaccines.

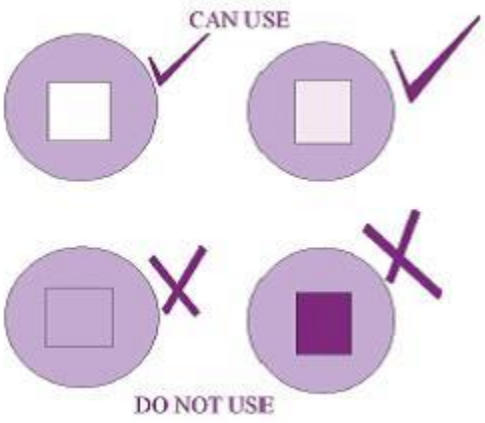
Important Points

- **VVM Working**: The VVM consists of a heat-sensitive square within a circle. The color of the square changes as it is exposed to heat over time.
- **Reading VVM**:
    - If the square is lighter than the circle, the vaccine is still potent and safe to use.
    - If the square is the same color as or darker than the circle, the vaccine should not be used because it may no longer be effective.

- **Action on VVM Indication**: Any vial with a VVM that shows the square darker than the circle should be discarded and not used for vaccination.

Confusion Points

- **Misinterpretation of VVM**: Healthcare workers might misinterpret the VVM, thinking that shaking or cooling the vial can restore its potency. This is not true; once the VVM indicates exposure to excessive heat, the vaccine's potency cannot be restored.
- **Vaccine Storage Misconceptions**: There might be a misconception that placing the vial back in an ice box or shaking it could correct the issue. The VVM reading is irreversible and indicates the cumulative exposure to heat, not something that can be rectified by temporary cooling.



93. The correct answer is:

(2) 3 4 2 1

Concept

This question involves matching causative agents (pathogens) with the diseases they cause. Understanding the link between pathogens and diseases is crucial in microbiology and epidemiology for diagnosis, treatment, and prevention of diseases.

Important Points

- **Bordetella pertussis**: This bacterium is the causative agent of whooping cough (pertussis).
- **Salmonella typhi**: This bacterium causes enteric fever, commonly known as typhoid fever.
- **Clostridium perfringens**: This bacterium is a common cause of food poisoning.
- **Flavivirus fibricus**: This virus causes yellow fever.

Confusion Points

- **Similar Names**: It's easy to confuse pathogens with similar-sounding names or those within the same family of bacteria or viruses.
- **Disease Names**: Some diseases have multiple causative agents, especially in the case of food poisoning, which can be caused by various bacteria, viruses, and parasites.

94. The correct answer is:

(2) Population based health care services

Concept

The health service pyramid is a model that illustrates the organization of health services into different levels of care. It is structured to ensure a comprehensive and efficient health system, with each level serving a specific role in public health.

Important Points

- **Population-Based Health Care Services**: These services form the foundation of the health service pyramid. They focus on preventive measures and health promotion for the entire population, such as vaccinations, sanitation, health education, and disease surveillance. These services aim to reduce the overall disease burden and promote public health.
- **Clinical Preventive Services**: These services, such as screenings and immunizations, are provided to individuals to prevent disease and detect health issues early.
- **Secondary Health Care Services**: This level includes specialized medical care provided by specialists after referral from primary care providers. It involves more complex and specific treatments.
- **Tertiary Health Care Services**: These services are the highest level of care, providing advanced medical treatment and surgical procedures typically in specialized hospitals.

Confusion Points

- **Preventive vs. Population-Based Services**: While clinical preventive services (e.g., screenings, immunizations) are critical, population-based health care services are broader and encompass measures that affect entire communities.
- **Hierarchy of Services**: Understanding the hierarchy and how each level of the pyramid builds upon the other can be confusing. The base of the pyramid supports all higher levels by reducing the burden on secondary and tertiary services through prevention and health promotion.

95. The correct answer is:

(4) ASHA

Concept

The Community Based Assessment Checklist (CBAC) is a tool used for the early detection of non-communicable diseases (NCDs) at the community level. This checklist is part of various public health programs aimed at identifying individuals at risk for conditions such as hypertension, diabetes, and cancer.

Important Points

- **ASHA (Accredited Social Health Activist)**: ASHAs are community health workers instituted by the government to act as a link between the community and the health care system. They are responsible for filling out the CBAC as they have direct and regular contact with the community members.
- **Role of ASHAs**: ASHAs play a crucial role in health promotion and disease prevention at the grassroots level. They conduct home visits, provide health education, and encourage individuals to seek timely medical care.
- **Purpose of CBAC**: The checklist helps in identifying individuals with potential risk factors for NCDs, allowing for early intervention and management. It includes questions related to lifestyle, family history, and symptoms indicative of NCDs.

Confusion Points

- **Roles of Health Workers**: It's essential to distinguish the roles of different health workers in public health initiatives. While medical officers, staff nurses, and ANMs have critical roles in healthcare delivery, the CBAC is specifically designed for ASHAs due to their close community interaction.
- **Scope of CBAC**: The checklist is for early detection and not for diagnosing diseases. It helps in identifying individuals who need further medical evaluation.

96. The correct answer is:

(4) 1, 2 and 3 only

Concept

Health and Wellness Centres (HWCs) at the Sub Centre (SC) level are designed to provide comprehensive primary healthcare services to the community. They aim to deliver a wide range of health services, focusing on preventive, promotive, curative, rehabilitative, and palliative care.

Important Points

- **Community Health Officers (Mid-Level Health Providers)**: These are trained healthcare professionals who lead the HWCs and ensure the delivery of health services. They play a crucial role in providing clinical services, health promotion, and disease prevention activities.
- **ANM (Auxiliary Nurse Midwife)**: ANMs are frontline health workers responsible for maternal and child health, immunization, and family planning services. They also support community health initiatives and basic medical care.
- **ASHA (Accredited Social Health Activist)**: ASHAs act as a bridge between the community and the health system. They engage in health promotion, disease prevention activities, and help in mobilizing the community for health services.

Confusion Points

- **Anganwadi Worker**: While Anganwadi workers play a vital role in providing nutrition and early childhood care, they are not officially part of the team at HWCs at the Sub Centre level. Their focus is

more on child development and nutrition services provided through the Integrated Child Development Services (ICDS) program.

Summary

By including Community Health Officers, ANMs, and ASHAs in the team, HWCs at the Sub Centre level are well-equipped to deliver comprehensive primary healthcare services to the community. This integration ensures a holistic approach to healthcare, covering preventive, promotive, and curative aspects effectively.

97. The correct answer is:

(3) Blue indicates ambulatory patients

Concept

The triage system is used in disaster management to prioritize patients based on the severity of their condition and the urgency of their need for medical treatment. This system ensures that medical resources are used effectively during emergencies.

Important Points

- **Red**: Indicates high priority treatment. These patients have life-threatening injuries or conditions but have a chance of survival if they receive immediate medical attention.
- **Yellow**: Indicates medium care priority. These patients have serious but not immediately life-threatening injuries. They require treatment but can wait for a short period.
- **Green**: Indicates ambulatory patients. These patients have minor injuries and can walk. They are the lowest priority for immediate medical treatment.
- **Black**: Indicates dead or moribund patients. These patients are either deceased or have injuries so severe that they are not expected to survive even with immediate treatment.

Confusion Points

- **Blue Color Code**: In the context of disaster triage, "blue" is not typically used. The standard triage color codes include red, yellow, green, and black. Misunderstanding color codes can lead to improper prioritization of patients, impacting the effectiveness of disaster response.

Summary

In disaster management, using the correct triage color codes is crucial for effective patient prioritization and resource allocation. Understanding and adhering to the standard color codes (red, yellow, green, and black) ensures that patients receive appropriate and timely medical care based on the severity of their conditions.

98. The correct answer is:

(2) INR 5,00,000

Concept

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is a flagship health insurance scheme launched by the Government of India. It aims to provide financial protection to over 10 crore poor and vulnerable families against healthcare costs.

Important Points

- **Coverage**: Under AB-PMJAY, each eligible family is entitled to a health cover of up to INR 5,00,000 per year for secondary and tertiary care hospitalization.
- **Scope**: The scheme covers medical and hospitalization expenses for almost all secondary and tertiary procedures, including pre-existing conditions.
- **Beneficiaries**: The beneficiaries are identified based on the Socio-Economic Caste Census (SECC) database.

Confusion Points

- **Coverage Limit**: Understanding the coverage limit is crucial, as it ensures that beneficiaries can access quality healthcare services without financial burden up to the specified limit.
- **Implementation**: The scheme is implemented through the National Health Authority (NHA) and aims to strengthen the healthcare infrastructure in India.

99. The correct answer is:

(1) Primordial prevention

Concept

Primordial prevention focuses on creating and maintaining conditions that minimize behavioral and biological risk factors even before they occur. It aims to prevent the emergence and establishment of risk factors in populations.

Important Points

- **Target**: Primordial prevention targets the root causes of diseases, such as unhealthy lifestyles, by promoting healthy behaviors from early childhood.
- **Examples**: Discouraging children from adopting harmful lifestyles like smoking, excessive alcohol consumption, and unhealthy eating habits falls under primordial prevention.
- **Scope**: This approach emphasizes health education, lifestyle modification, and creating supportive environments for healthy choices.

Confusion Points

- **Other Prevention Levels**: While primary, secondary, and tertiary prevention also aim to prevent diseases, they focus on different stages:
    - **Primary prevention**: Aims to prevent the onset of disease by reducing exposure to risk factors (e.g., vaccination, health education).
    - **Secondary prevention**: Involves early detection and prompt treatment to halt the progression of disease (e.g., screenings).

- **Tertiary prevention**: Focuses on rehabilitation, reducing complications, and improving quality of life in individuals already affected by disease (e.g., cardiac rehabilitation programs).

Summary

Primordial prevention plays a critical role in public health by addressing societal and environmental factors that contribute to disease risk. By promoting healthy behaviors early in life, it aims to prevent the development of non-communicable diseases and promote overall well-being.

100. The correct answer is:

(2) Selective screening

Concept

Selective screening refers to the screening of a specific subgroup of the population that is considered to be at higher risk for a particular disease. This approach targets individuals who are more likely to benefit from early detection and intervention.

Important Points

- **Target Population**: Selective screening focuses on groups with known risk factors or characteristics associated with the disease being screened for.
- **Purpose**: The goal is to maximize the effectiveness of screening efforts by directing resources toward those who are most likely to benefit.
- **Examples**: Screening individuals with a family history of a disease, occupational exposure, or specific demographic characteristics are examples of selective screening.

Confusion Points

- **Other Screening Types**:
  - **Mass screening**: Involves screening an entire population or a large segment of it, regardless of individual risk factors.
  - **High risk screening**: While not a standard term, it could refer to screening high-risk individuals within a population.
  - **Multiphasic screening**: Involves screening for multiple diseases or conditions simultaneously.

Summary

Selective screening allows healthcare providers to focus resources efficiently on populations where screening is most likely to yield significant health benefits. This approach helps in early detection, timely intervention, and improved outcomes for individuals at higher risk of specific diseases.

101. The correct answer is:

(3) Couple Protection Rate

Concept

The Couple Protection Rate (CPR) is an indicator used to measure the prevalence of contraceptive use within a community or population. It represents the proportion of couples of reproductive age who are currently using contraception.

Important Points

- **Measurement**: CPR is expressed as a percentage and provides insight into the extent to which couples are practicing contraception.
- **Calculation**: CPR is calculated by dividing the number of couples using contraception by the total number of couples of reproductive age, multiplied by 100.
- **Uses**: CPR is used to monitor and evaluate family planning programs, assess contraceptive prevalence rates, and track changes in contraceptive use over time.

Confusion Points

- **Other Indicators**:
  - **Total Fertility Rate (TFR)**: The average number of children born per woman over her lifetime.
  - **General Fertility Rate (GFR)**: The number of live births per 1,000 women of reproductive age (usually 15-49 years).
  - **Net Reproduction Rate (NRR)**: The average number of daughters that would be born to a woman over her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year.

Summary

Couple Protection Rate (CPR) serves as a key indicator in assessing the prevalence and effectiveness of contraceptive practices within a community. It helps in planning and implementing effective family planning programs and policies aimed at improving reproductive health outcomes.

102. The correct answer is:

(4) Bagassosis

Concept

Bagassosis is an occupational lung disease caused by the inhalation of dust from bagasse, which is the fibrous residue left after sugarcane is crushed to extract juice. It primarily affects workers involved in sugarcane processing and handling.

Important Points

- **Cause**: Bagassosis results from the inhalation of fungal spores present in dust from dried sugarcane fibers (bagasse).
- **Symptoms**: Symptoms may include cough, wheezing, chest tightness, and in severe cases, pulmonary fibrosis.

- **Prevention**: Prevention involves reducing exposure to bagasse dust through engineering controls, personal protective equipment (PPE), and proper ventilation.

Confusion Points

- **Other Occupational Diseases**:
  - **Anthracosis**: Also known as black lung disease, it results from the inhalation of coal dust.
  - **Silicosis**: Occurs due to inhalation of crystalline silica dust, commonly affecting miners, quarry workers, and those in construction industries.
  - **Farmer's lung**: An allergic reaction to mold spores present in agricultural environments, such as hay or grain.

Summary

Bagassosis is a specific occupational disease associated with the inhalation of sugarcane dust (bagasse). Workers in sugarcane mills and related industries are at risk, and preventive measures are essential to reduce exposure and protect workers' health.

103. The correct answer is:

(2) BCG

Explanation

BCG (Bacillus Calmette-Guérin) vaccine is sensitive to freezing and should be protected from sub-zero temperatures. BCG vaccine is used to prevent tuberculosis (TB) and is typically administered to infants shortly after birth in countries where TB is prevalent.

Details

- **Storage Requirements**: BCG vaccine must be stored and transported at the recommended temperature range (usually between 2°C to 8°C) to maintain its potency.
- **Freezing Sensitivity**: Exposure to freezing temperatures can damage the live attenuated bacteria in the vaccine, reducing its effectiveness.

Context

Ensuring proper storage conditions for vaccines, including protection from freezing, is critical to maintaining their efficacy and ensuring that vaccinated individuals receive the intended protection against diseases like tuberculosis.

104. **Correct Answer:** Peyer's patches are present in the (4) Ileum.

Concept: Peyer's patches are lymphoid follicles found in the ileum, which is part of the small intestine. They play a significant role in the immune response of the gastrointestinal tract.

Important Points:

- Peyer's patches are aggregations of lymphoid tissue located in the mucosa of the ileum.
- They are important for monitoring intestinal bacteria and initiating immune responses against pathogens that penetrate the intestinal mucosa.
- Peyer's patches are part of the gut-associated lymphoid tissue (GALT), which includes various components of the immune system strategically located in the digestive tract.

Confusion Points:

- Sometimes, confusion can arise between the locations of Peyer's patches and other lymphoid tissues in the gastrointestinal tract, such as those found in the stomach or colon. However, Peyer's patches specifically refer to those in the ileum.

105. **Correct Answer:** (2) Hinge joints

Concept: Hinge joints allow movement along a single axis, similar to the opening and closing of a door. They are found in joints where movement primarily occurs in one plane, such as the elbow and knee joints.

Important Points:

- Hinge joints are characterized by their ability to flex and extend along one axis.
- They are considered to be uniaxial joints because they allow movement primarily in one direction.
- Examples include the elbow, knee, and interphalangeal joints (between the bones of the fingers and toes).

Confusion Points:

- Other types of joints, like plane joints (which allow sliding movements in various directions) or ellipsoid joints (which allow two axes of movement), may be confused with hinge joints due to similarities in function. However, hinge joints specifically refer to those allowing movement primarily in one plane.

106. **Correct Answer:** (3) Incident report

Concept: An incident report is a document prepared whenever an unexpected event or error occurs in patient care within a hospital or healthcare setting. It is used to document details of the incident, including what happened, who was involved, and any actions taken.

Important Points:

- Incident reports are crucial for analyzing and improving patient safety and quality of care.
- They are not part of routine documentation but are specifically written in response to incidents or mistakes.
- Incident reports help healthcare institutions identify trends, implement corrective actions, and prevent future occurrences of similar incidents.

Confusion Points:

- Compliance reports typically document adherence or violations of regulations or standards.

- Hand-off reports provide essential information during transitions of patient care between healthcare providers.
- Clinical information reports generally refer to comprehensive medical records or specific clinical findings rather than incident documentation.

107. **Correct Answer:** (2) Decision making

Concept: Decision making refers to the process of selecting a course of action from several options based on criteria, regulations of the institution, and professional standards. It involves evaluating alternatives and choosing the best option to achieve a specific goal or solve a problem.

Important Points:

- Decision making is a critical skill in various professions, including healthcare, where decisions impact patient care outcomes.
- It involves gathering relevant information, assessing risks and benefits, considering ethical implications, and applying knowledge of regulations and standards.
- Effective decision making is essential for ensuring quality care and adherence to professional guidelines.

Confusion Points:

- Problem solving involves identifying and resolving issues or challenges through systematic thinking and analysis.
- Diagnostic reasoning is the process of analyzing clinical data to identify a patient's health problem or condition.
- Hypothesizing a solution involves formulating potential answers or explanations based on available information, often as part of problem-solving or diagnostic processes.

108. **Correct Answer:** (4) Likert-scale

Concept: A Likert scale is the most appropriate data collection tool to measure attitudes towards condom use. It allows respondents to indicate their agreement or disagreement with statements related to condom use on a scale, typically ranging from "strongly agree" to "strongly disagree."

Important Points:

- Likert scales are widely used in survey research to measure attitudes, opinions, and perceptions.
- They provide a quantitative measurement of attitudes by assigning numerical values to responses, which can then be analyzed statistically.
- Other options like checklists, Q sorts, and vignettes are useful for different types of data collection (e.g., listing items, sorting preferences, presenting hypothetical scenarios) but are not typically used to measure attitudes in the same manner as a Likert scale.

Confusion Points:

- Checklists are used to record the presence or absence of specific items or behaviors.

- Q sorts involve sorting items or statements based on predefined criteria or preferences.
- Vignettes present hypothetical scenarios to gather responses about how individuals might react or make decisions in those situations.

109. **Correct Answer:** (2) Independent

Explanation:

- In experimental research, the independent variable is the variable that is manipulated or controlled by the researcher. It is what the researcher changes or varies to observe its effect on the dependent variable.
- In this case, the "motivation-focused intervention" is the independent variable because it is the intervention being applied or manipulated by the researcher to see how it affects the adolescents' self-esteem (the dependent variable).

Confusion Points:

- **Dependent variable:** This would be the variable (self-esteem of adolescents) that is expected to change in response to variations in the independent variable (motivation-focused intervention).
- **Confounding variable:** This is a variable that influences both the independent and dependent variables, potentially leading to a false association between them.
- **Extraneous variable:** This refers to any variable other than the independent and dependent variables that may affect the outcome of the study but is not the focus of investigation.

110. **Correct Answer:** (2) Phenomenology

Explanation:

- Phenomenology is a qualitative research approach focused on exploring and describing individuals' lived experiences of a particular phenomenon. It seeks to understand how individuals perceive and make sense of their experiences.
- In this case, the researcher is studying the lived experiences of caregivers of patients with Dementia, which aligns with the goals of phenomenological research to uncover the essence of these experiences from the caregivers' perspectives.

Confusion Points:

- **Ethnography:** This involves studying cultures and social phenomena within a specific group over time, focusing on understanding the culture's shared beliefs, behaviors, and practices.
- **Case study:** This involves an in-depth exploration of a specific case or small number of cases, often focusing on understanding unique aspects or contexts.
- **Grounded theory:** This is a qualitative research method used to develop theories from data, often through systematic data collection and analysis to generate concepts or theories grounded in the data itself.

111. **Correct Answer:** (3) Perfect positive correlation

Explanation:

- A perfect positive correlation means that as one variable increases, the other variable also increases proportionally. In a scatter plot diagram, this would be represented by a straight line sloping upwards from left to right, where all data points fall precisely along this line.
- This pattern indicates that there is a consistent relationship between the two variables, with no variability around the trendline.

Confusion Points:

- **Weak negative correlation:** This would be represented by a scatter plot with points scattered in a generally downward direction, but not tightly clustered.
- **Strong negative correlation:** This would show a clear downward trend in the scatter plot, with points tightly clustered around a line sloping downwards.
- **Moderate positive correlation:** This would show a trend where points are generally sloping upwards, but with some variability around the trendline.

112. **Correct Answer:** (3) 3 1 4 2

Concept:

- **Empirical phase:** Involves collecting the data (Step 3).
- **Design and Planning phase:** Includes deciding a sampling plan (Step 1).
- **Dissemination phase:** Involves utilizing the findings (Step 4).
- **Analytic phase:** Includes interpreting the results (Step 2).

Important Points:

- Each phase of the research process involves specific steps that contribute to the overall research process.
- Understanding the sequence of steps helps in conducting research systematically and effectively.

Confusion Points:

- Ensure clarity between the phases and their respective steps to avoid mixing up the sequence during research execution.

113. **Correct Answer:** (2) Test-retest reliability

Concept:

- Test-retest reliability involves administering the same measure to the same group of individuals on two different occasions to assess the consistency of the results over time.

Important Points:

- It is used to determine the stability or consistency of a measurement instrument over time.

- Commonly used in fields such as psychology, education, and sociology to assess the reliability of questionnaires, tests, or scales.

Confusion Points:

- Ensure understanding the difference between test-retest reliability (same measure administered at different times) and other types like inter-rater reliability (consistency across different raters) and intra-rater reliability (consistency within the same rater).

114. **Correct Answer:** (3) Bacterial vaginosis

Concept:

- Bacterial vaginosis is characterized by a change in the normal vaginal flora, resulting in a fishy odor and a creamy white or gray vaginal discharge.
- It typically does not cause itching, which helps differentiate it from other vaginal infections.

Important Points:

- Candidiasis (Option 1) typically presents with itching and a cottage cheese-like discharge.
- Chlamydial infection (Option 2) may present with discharge, but often has other symptoms like pelvic pain and painful urination.
- Leucoderma (Option 4) refers to loss of skin pigmentation and is not related to vaginal symptoms.

Confusion Points:

- Understanding the characteristic symptoms and signs of different vaginal infections is crucial for accurate diagnosis and management.

115. **Correct Answer:** (2) 3 4 1 2

Explanation:

- **Threatened abortion (A):** USG diagnostic feature is retroplacental hemorrhage (Option 3).
- **Missed abortion (B):** USG diagnostic feature is uterine cavity empty (Option 2).
- **Incomplete abortion (C):** USG diagnostic feature is products of conception partly retained (Option 4).
- **Complete abortion (D):** USG diagnostic feature is fetus without cardiac activity (Option 1).

Therefore, the correct mapping is:

- A: 3 (Retroplacental hemorrhage)
- B: 4 (Uterine cavity empty)
- C: 1 (Products of conception partly retained)
- D: 2 (Fetus without cardiac activity)

116. **Correct Answer:** (3) 1.5 – 2.0 mg

Concept:

- During pregnancy and lactation, there is an increased demand for calcium to support fetal growth, bone development, and milk production.
- The daily requirement of calcium during pregnancy and lactation is higher compared to non-pregnant and non-lactating women.

Important Points:

- Option (3) represents the range of daily calcium requirement (1.5 - 2.0 mg) during pregnancy and lactation.
- Adequate calcium intake is essential to prevent maternal bone loss and ensure optimal fetal and infant bone mineralization.

Confusion Points:

- Ensure differentiation between the calcium requirements during different life stages (e.g., pregnancy, lactation, non-pregnant, non-lactating) to provide appropriate dietary recommendations.

117. **Correct Answer:** (4) Endometriosis

Concept:

- Endometriosis is a condition where endometrial-like tissue (tissue similar to the lining of the uterus) grows outside the uterus in locations such as the ovaries, fallopian tubes, and other pelvic organs.
- This tissue responds to hormonal changes during the menstrual cycle, leading to inflammation, pain, and sometimes the formation of scar tissue.

Important Points:

- Endometriosis is a common gynecological condition affecting women of reproductive age.
- Symptoms may include pelvic pain, menstrual irregularities, and infertility.
- Diagnosis often involves imaging studies like ultrasound and sometimes laparoscopy for confirmation.

Confusion Points:

- Differentiate between endometriosis and other conditions affecting the uterus or nearby tissues, such as adenomyosis (where endometrial tissue grows into the muscular wall of the uterus) or uterine polyps (benign growths attached to the inner wall of the uterus).

118. **Correct Answer:** (4) Centchroman

Concept:

- Centchroman (also known as Ormeloxifene) is a non-steroidal compound with potent antiestrogenic properties.
- It is used for oral contraception and also has uses in the treatment of dysfunctional uterine bleeding and prevention of osteoporosis.

Important Points:

- Progestin-only pills (Option 1) and Levonorgestrel (Option 2) are progestin-based contraceptives.
- Desogestrel (Option 3) is a third-generation progestin used in combined oral contraceptives.

Confusion Points:

- Understand the different mechanisms and uses of various contraceptive methods to select the appropriate option based on the question context.

119. **Correct Answer:** (1) Administration of oxytocin 10 units IM

Concept:

- Active management of the third stage of labor involves interventions aimed at reducing the risk of postpartum hemorrhage (PPH).
- It typically includes administering uterotonic medications promptly after the delivery of the baby but before the delivery of the placenta.

Important Points:

- Oxytocin is the preferred uterotonic for active management of the third stage of labor.
- Crede's expression (Option 2) involves manual compression of the uterus to assist placental delivery but is not considered part of active management.
- Carboprost (Option 3) and misoprostol (Option 4) are alternative uterotonics but are not typically used in routine active management protocols.

Confusion Points:

- Ensure clarity on the sequence and components of active management of the third stage of labor to prevent complications such as PPH effectively.

120. **Correct Answer:** (3) Bicornuate uterus

Concept:

- Secondary dysmenorrhea refers to painful menstrual cramps that are due to an underlying reproductive system disorder. It typically begins later in life compared to primary dysmenorrhea, which is not associated with any identifiable pelvic pathology.

Important Points:

- **Endometriosis (Option 1):** Causes secondary dysmenorrhea due to the presence of endometrial tissue outside the uterus, leading to pain and inflammation.
- **Adenomyosis (Option 2):** Causes secondary dysmenorrhea due to endometrial tissue growing into the muscular wall of the uterus.
- **Pelvic adhesions (Option 4):** Can cause secondary dysmenorrhea by leading to pain and restricted movement of pelvic organs.

Confusion Points:

- **Bicornuate uterus (Option 3):** While it is a congenital uterine anomaly that can cause reproductive issues such as recurrent pregnancy loss or preterm birth, it is not a typical cause of secondary dysmenorrhea. Secondary dysmenorrhea is more commonly associated with conditions that cause inflammation, pain, or abnormal tissue growth within the pelvic region.

121. **Correct Answer**

(4) Avolition

Concept

Avolition is a term used in psychology and psychiatry to describe the withdrawal and inability to initiate and persist in goal-directed activity. It is often seen in various mental health conditions, most notably in schizophrenia. Avolition refers to a lack of motivation to engage in activities that have an end goal, which is different from simply being lazy or uninterested.

Important Points

- **Apathy:** General lack of interest, enthusiasm, or concern. It is broader than avolition and does not necessarily involve the inability to initiate actions.
- **Anhedonia:** Inability to feel pleasure. It is more about the emotional experience and lack of enjoyment rather than the drive to initiate activities.
- **Avoidance:** Deliberately staying away from certain activities, situations, or stimuli, often due to fear or anxiety.
- **Avolition:** Specific to the reduction or inability to start and complete goal-oriented tasks, commonly seen in severe mental disorders like schizophrenia.

Confusion Points

- **Apathy vs. Avolition:** Both involve a lack of motivation, but apathy is a broader concept that includes lack of interest or concern, whereas avolition specifically refers to difficulty in initiating and sustaining goal-directed activities.
- **Anhedonia vs. Avolition:** Anhedonia is about the inability to experience pleasure, whereas avolition is about the inability to begin and maintain purposeful activities.
- **Avoidance vs. Avolition:** Avoidance is a conscious effort to evade certain situations, while avolition is an inherent lack of motivation to engage in goal-directed behavior, regardless of conscious intent.

122. **Correct Answer**

(3) Reminiscence

Concept

Reminiscence is a therapeutic strategy that involves recalling and discussing past experiences. For the elderly, this can be an important and effective way to maintain self-esteem and support the natural healing process of life review. By reflecting on their life achievements, challenges, and memories, older adults can find meaning and satisfaction, which contributes to their overall mental health and well-being.

Important Points

- **Reminiscence Therapy:** Involves guided recall and discussion of past experiences, which can help older adults reconnect with their sense of identity and worth.
- **Bibliotherapy:** The use of books and reading materials as a therapeutic intervention. While beneficial, it is not specifically focused on life review and self-esteem in the elderly.
- **Token Economy:** A behavior modification system that uses tokens as rewards for desired behaviors. This method is more commonly used in settings like schools or psychiatric hospitals and is not typically aimed at enhancing self-esteem or life review in the elderly.
- **Milieu Therapy:** A therapeutic approach involving the creation of a supportive social environment. This can be beneficial but is broader in scope and not specifically targeted at life review or self-esteem in the elderly.

Confusion Points

- **Reminiscence vs. Bibliotherapy:** While both involve the use of personal or written experiences, reminiscence specifically focuses on discussing personal memories to enhance self-esteem and support life review.
- **Token Economy vs. Reminiscence:** Token economy is a system of behavior modification using rewards, which is not directly related to enhancing self-esteem or facilitating life review.
- **Milieu Therapy vs. Reminiscence:** Milieu therapy involves the therapeutic environment as a whole and is not specifically designed to focus on individual life review or self-esteem, although it can be a supportive context for various therapeutic activities, including reminiscence.

123. **Correct Answer**

(2) Atypical antipsychotic

Concept

Olanzapine is classified as an atypical antipsychotic, also known as a second-generation antipsychotic. These medications are used primarily to treat psychiatric conditions such as schizophrenia and bipolar disorder. Atypical antipsychotics generally have a different side effect profile compared to typical antipsychotics and are often preferred due to a lower risk of certain side effects, such as extrapyramidal symptoms (movement disorders).

Important Points

- **Typical Antipsychotic:** Also known as first-generation antipsychotics, these are older antipsychotic medications, such as haloperidol, that primarily target dopamine receptors.
- **Atypical Antipsychotic:** Second-generation antipsychotics like olanzapine, risperidone, and quetiapine, which target a broader range of neurotransmitter receptors and tend to have fewer movement-related side effects.
- **Antidepressant:** Medications used to treat depression, such as selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants, and others.

- **Mood Stabilizer:** Medications used to treat mood disorders, particularly bipolar disorder, such as lithium, valproate, and lamotrigine.

Confusion Points

- **Typical vs. Atypical Antipsychotic:** Both are used to treat similar psychiatric conditions, but atypical antipsychotics like olanzapine have a broader mechanism of action and generally fewer motor side effects.
- **Antipsychotic vs. Antidepressant:** While both classes of drugs can be used in the treatment of certain overlapping conditions (e.g., bipolar disorder), they target different symptoms and have different mechanisms of action.
- **Antipsychotic vs. Mood Stabilizer:** Although some atypical antipsychotics can have mood-stabilizing properties and may be used in the treatment of bipolar disorder, their primary classification is based on their antipsychotic properties. Mood stabilizers specifically target mood swings in bipolar disorder.

124. **Correct Answer**

(1) Test judgement

Concept

When a nurse asks a patient, "If a house were on fire, what would you do?", they are assessing the patient's ability to make sound and reasonable decisions in hypothetical situations, which is a test of judgement. This type of question helps to evaluate the patient's practical reasoning and problem-solving skills.

Important Points

- **Test Judgement:** Assesses the ability to make appropriate decisions in hypothetical or real-life situations. This helps to determine the patient's capability to reason and act logically.
- **Social Judgement:** Refers to the ability to make decisions in social contexts, understanding social norms and behaviors. While related, it is more about interactions and social appropriateness.
- **Insight:** Involves the patient's awareness and understanding of their own condition or situation. Insight is about recognizing and accepting one's own mental health status.
- **Abstract Thinking:** The ability to understand concepts that are not concrete or directly observable, such as metaphors, analogies, and complex ideas. It involves thinking beyond the literal.

Confusion Points

- **Test Judgement vs. Social Judgement:** Test judgement focuses on decision-making in general scenarios, while social judgement specifically involves social interactions and appropriateness.
- **Test Judgement vs. Insight:** Judgement assesses decision-making capabilities, whereas insight pertains to self-awareness and understanding of one's own condition.
- **Test Judgement vs. Abstract Thinking:** Judgement is about practical decision-making, while abstract thinking deals with the ability to understand and think about complex, non-concrete ideas.

125. **Correct Answer**

(1) Delirium tremens

Concept

Opioid overdose typically presents with a set of symptoms that include severe central nervous system depression, which can lead to respiratory depression, stupor, and coma. These symptoms are a result of the opioids' action on the brain and body. Delirium tremens, on the other hand, is associated with alcohol withdrawal rather than opioid overdose.

Important Points

- **Respiratory Depression:** A critical and common symptom of opioid overdose, where breathing becomes inadequate, potentially leading to hypoxia and death if not treated.
- **Stupor:** A state of near-unconsciousness or insensibility, where the patient is difficult to arouse and has minimal response to stimuli, commonly seen in opioid overdose.
- **Coma:** A state of deep unconsciousness that can occur in severe cases of opioid overdose, requiring immediate medical intervention.

Confusion Points

- **Delirium Tremens vs. Opioid Overdose Symptoms:** Delirium tremens is a severe form of alcohol withdrawal characterized by tremors, confusion, hallucinations, and seizures, and is not a symptom of opioid overdose.
- **Respiratory Depression, Stupor, Coma:** These are all direct effects of opioids on the central nervous system, leading to decreased consciousness and impaired autonomic functions.

126. **Correct Answer**

(2) Cognitive Behaviour Therapy

Concept

Cognitive Behaviour Therapy (CBT) is a highly structured psychotherapeutic method that aims to alter distorted beliefs and problem behaviors. This is achieved by identifying and replacing negative, inaccurate thoughts with more realistic and positive ones, and by changing the rewards for behavior. CBT combines cognitive and behavioral techniques to help individuals manage their thoughts, emotions, and behaviors more effectively.

Important Points

- **Behaviour Therapy:** Focuses on changing specific behaviors through various techniques such as reinforcement, punishment, and exposure therapy. It does not primarily address cognitive distortions.
- **Cognitive Behaviour Therapy (CBT):** Integrates cognitive and behavioral approaches. It involves identifying and challenging negative thought patterns and beliefs, and altering behaviors through reinforcement and other techniques.

- **Solution-Focused Brief Therapy:** A short-term goal-focused therapeutic approach that helps clients find solutions to their problems by emphasizing their strengths and resources. It does not specifically focus on altering cognitive distortions.
- **Motivational Enhancement Therapy:** A counseling approach designed to help individuals increase their motivation to change behaviors, particularly related to substance use. It is more about enhancing motivation rather than altering cognitive distortions.

Confusion Points

- **CBT vs. Behaviour Therapy:** While behavior therapy focuses purely on modifying behavior, CBT addresses both the thoughts (cognitions) and behaviors that contribute to psychological issues.
- **CBT vs. Solution-Focused Brief Therapy:** Solution-focused brief therapy is future-oriented and aims to quickly identify solutions rather than focusing on the thought patterns and behaviors that contribute to problems.
- **CBT vs. Motivational Enhancement Therapy:** Motivational enhancement therapy focuses on building motivation for change, whereas CBT focuses on changing thought patterns and behaviors.

127. **Correct Answer**

(3) Serotonin

Concept

Serotonin is an excitatory neurotransmitter that is diffusely distributed within the cerebral cortex, limbic system, and basal ganglia of the central nervous system (CNS). It plays a significant role in regulating emotions, cognition, and sensory perceptions. Serotonin impacts mood, anxiety, and happiness, among other functions.

Important Points

- **Histamine:** Primarily known for its role in immune response, wakefulness, and gastric acid secretion. It also acts as a neurotransmitter but is not primarily associated with emotions, cognition, and sensory perceptions.
- **GABA (Gamma-Aminobutyric Acid):** The main inhibitory neurotransmitter in the CNS. It reduces neuronal excitability throughout the nervous system and is not excitatory.
- **Serotonin:** An excitatory neurotransmitter involved in mood regulation, cognition, sensory perception, and other critical functions.
- **Glycine:** An inhibitory neurotransmitter mainly found in the spinal cord, brainstem, and retina, involved in the processing of motor and sensory information.

Confusion Points

- **Histamine vs. Serotonin:** While both act as neurotransmitters, histamine is more involved in immune responses and alertness, whereas serotonin is more involved in mood and cognitive functions.
- **GABA vs. Serotonin:** GABA is inhibitory and primarily reduces neuronal activity, contrasting with the excitatory role of serotonin.

- **Glycine vs. Serotonin:** Glycine is inhibitory and primarily acts in the spinal cord and brainstem, whereas serotonin is excitatory and distributed throughout the CNS.

128. **Correct Answer**

(1) Acceptance

Concept

The nurse's response, "I would like to hear about it. It's okay to discuss it with me," demonstrates acceptance. Acceptance is a communication technique that conveys a nonjudgmental and open attitude, encouraging the patient to share their thoughts and feelings without fear of criticism or rejection. This approach helps build trust and rapport between the patient and the nurse, fostering a safe environment for the patient to express themselves.

Important Points

- **Acceptance:** Encourages open communication by showing that the nurse is willing to listen without judgment, creating a safe space for the patient to share their feelings and experiences.
- **Confrontation:** Involves addressing discrepancies or inconsistencies in the patient's statements or behaviors. It is a more direct approach that is not reflected in the nurse's response.
- **Reflection:** The nurse mirrors the patient's feelings or thoughts to help them understand and process their emotions. The nurse's response here does not mirror the patient's statement but rather invites further discussion.
- **Validation:** Acknowledging and affirming the patient's feelings or experiences as real and important. While related to acceptance, validation specifically focuses on confirming the patient's emotions or thoughts.

Confusion Points

- **Acceptance vs. Confrontation:** Acceptance involves nonjudgmental listening, while confrontation addresses inconsistencies. The nurse's response here does not challenge or address any discrepancy but rather invites the patient to share more.
- **Acceptance vs. Reflection:** Reflection involves restating or mirroring the patient's statements to help them gain insight, whereas acceptance encourages open discussion without judgment.
- **Acceptance vs. Validation:** Validation confirms the patient's feelings or experiences as legitimate, whereas acceptance focuses on creating a nonjudgmental space for open communication. The nurse's response here primarily aims to make the patient feel comfortable sharing their thoughts.

129. **Correct Answer:** (2) 4 2 3 1

Concept:

- Flurazepam is a Benzodiazepine hypnotic.
- Zolpidem is a Nonbenzodiazepine hypnotic.
- Ramelteon is a Melatonergic hypnotic.
- Hydroxyzine is an Antihistamine.

Important Points:

- Understanding the classifications of drugs based on their mechanisms of action is crucial for prescribing and understanding their effects.
- Benzodiazepine and Nonbenzodiazepine hypnotics differ in their chemical structures and often in their side effect profiles.
- Melatonergic hypnotics work by targeting melatonin receptors in the brain to induce sleep.
- Antihistamines can have sedative effects and are sometimes used for their sleep-inducing properties.

Confusion Points:

- Differentiating between Benzodiazepine and Nonbenzodiazepine hypnotics can be confusing due to their similar therapeutic actions but different chemical structures and side effect profiles.

130. **Correct Answer:** (3) Catatonic behaviour

Concept:

- Major Depressive Disorder (MDD) is characterized by a cluster of symptoms that affect mood, cognition, and physical well-being.
- The core symptoms include depressed mood and markedly diminished interest or pleasure in activities (anhedonia).
- Fatigue is also commonly associated with MDD, as it affects energy levels and motivation.

Important Points:

- Catatonic behavior typically refers to a state of immobility or unusual motor activity extremes (like excessive movement or complete lack thereof), which is more commonly associated with other psychiatric disorders like Catatonic Schizophrenia rather than MDD.
- Understanding the specific symptoms of MDD is crucial for accurate diagnosis and appropriate treatment planning.

Confusion Points:

- It's important to differentiate between symptoms of different psychiatric disorders to ensure correct diagnosis and treatment.

131. **The patient owns his/her environment**: This assumption implies that the patient is considered capable of influencing and being influenced by their surroundings, which is a fundamental aspect of Milieu therapy.

1. **The patient takes responsibility for his/her behavior**: This assumption suggests that the patient is expected to acknowledge and take ownership of their actions and their consequences within the therapeutic environment.
2. **Inappropriate behavior needs to be corrected**: This assumption implies that there is an expectation within Milieu therapy that inappropriate behaviors will be addressed and corrected within the therapeutic community.

3. **Peer pressure has no role to play**: This statement contradicts the principles of Milieu therapy, which emphasizes the therapeutic influence of peers and the therapeutic community in shaping behavior and fostering change.

Correct Answer: (2) 1, 2 and 3

Explanation:

- Option 1 is correct because Milieu therapy involves the patient interacting with and influencing their environment.
- Option 2 is correct because Milieu therapy expects the patient to take responsibility for their actions.
- Option 3 is correct because addressing and correcting inappropriate behavior is a key aspect of Milieu therapy.

Note:

- Option 4 is incorrect because Milieu therapy does acknowledge the role of peer influence and interactions in the therapeutic process.

132. **Correct Answer:** According to S.I.U. staffing norms for nurses working in Central government hospitals, the normal/general ward should have one nurse/nursing sister for every seven beds.

Concept: The concept here revolves around understanding the staffing norms in hospitals, particularly the ratio of nurses to beds in general wards.

Important Points:

- The staffing norms ensure adequate nursing care for patients in general wards.
- These norms are crucial for maintaining quality healthcare delivery and patient safety.
- Compliance with staffing norms can vary between different types of hospitals and healthcare facilities.

Confusion Points:

- Some confusion may arise regarding the specific ratios if norms differ between different types of hospitals or if there are recent updates to the guidelines.

133. **Correct Answer**

(1) Intradepartmental deployment

Concept

Intradepartmental deployment refers to the temporary reassignment of nurses within the same department to cover shortages, especially during critical shifts like evenings and nights. This strategy is employed by supervisors to ensure adequate staffing levels and maintain the quality of patient care without the need for external hires or transfers from other departments.

Important Points

- **Temporary Placement**: Intradepartmental deployment is typically for a short duration, often 12 hours or less.
- **Internal Solution**: This strategy involves utilizing existing staff within the same department.
- **Coverage for Shortages**: It is mainly used to address staffing shortages, particularly during off-peak hours such as evening and night shifts.
- **Supervisor's Role**: The decision to reassign nurses is made by supervisors who oversee staffing and ensure optimal patient care.

Confusion Points

- **Terminology**: The terms "interdepartmental" and "interlocation" may cause confusion. "Interdepartmental" refers to movement between different departments within the same facility, while "interlocation" implies movement between different physical locations or facilities.
- **Duration**: The key aspect of intradepartmental deployment is its temporary nature, which differentiates it from more permanent staffing solutions.
- **Scope of Deployment**: Understanding that intradepartmental deployment is limited to within the same department helps clarify its specific use case compared to broader deployment strategies.

134. **Correct Answer**

(4) SDX analysis

Concept

Inventory control involves various techniques used to manage and optimize the inventory levels of an organization. These techniques help in classifying inventory items based on different criteria to ensure efficient stock management, reduce holding costs, and avoid stockouts.

Important Points

- **ABC Analysis**: This technique categorizes inventory into three categories (A, B, and C) based on their importance, value, or usage frequency. 'A' items are the most valuable, 'B' items are moderately valuable, and 'C' items are the least valuable.
- **VED Analysis**: This technique classifies inventory into Vital, Essential, and Desirable categories based on their criticality to operations. Vital items are crucial and must always be in stock, essential items are important but not critical, and desirable items are least critical.
- **XYZ Analysis**: This technique sorts inventory based on the variability of their demand. 'X' items have a stable and predictable demand, 'Y' items have moderate variability, and 'Z' items have highly variable and unpredictable demand.

Confusion Points

- **SDX Analysis**: There is no widely recognized inventory control technique known as SDX analysis. This option is likely included as a distractor.

135. **Correct Answer**

(3) Transfer

Concept

Major penalties for employees are typically enforced in cases of serious misconduct to ensure discipline and uphold organizational standards. These penalties aim to provide corrective measures and discourage inappropriate behavior.

Important Points

- **Loss of Privileges**: This penalty involves revoking certain benefits or rights that an employee may have previously enjoyed, such as access to specific resources or special allowances.
- **Demotion**: This penalty involves reducing an employee's rank, job title, or position within the organization as a consequence of their serious misconduct.
- **Withholding Increments**: This penalty involves delaying or stopping the periodic salary increases that an employee would otherwise be entitled to, as a punitive measure for their actions.

Confusion Points

- **Transfer**: While transfer involves moving an employee to a different location or department, it is not typically considered a major penalty for serious misconduct. Transfers are often used for operational needs or as a management tool rather than a punitive measure. Misunderstanding this distinction can lead to confusion about the severity and intent behind different disciplinary actions.

136. **Correct Answer**

(1) A-4, B-3, C-2, D-1

Concept

Uterine prolapse occurs when the muscles and ligaments supporting the uterus weaken, causing the uterus to descend into or outside of the vaginal canal. It is classified into degrees based on the extent of the descent.

Important Points

- **First Degree Prolapse (A-4)**: The uterus descends from its normal anatomical position, but the external os (opening of the cervix) remains above the vaginal introitus (entrance).
- **Second Degree Prolapse (B-3)**: The external os protrudes outside the vaginal introitus, but the uterine body remains inside the vagina.
- **Third Degree Prolapse (C-2)**: The uterine cervix, body, and the fundus descend outside the introitus.
- **Procidentia (D-1)**: The uterus prolapses with the eversion of the entire vagina, resulting in the most severe form of uterine prolapse.

Confusion Points

- **Degrees of Prolapse**: The specific degrees can be confusing due to the varying terminology used to describe the extent of the descent.
- **Clinical Features**: Each degree of prolapse is characterized by distinct clinical features, which can be difficult to remember without a clear understanding of the anatomy involved.

137. **Correct Answer**

(1) Androgen producing tumours

Concept

Menorrhagia refers to abnormally heavy or prolonged menstrual bleeding. It can result from various gynecological conditions, hormonal imbalances, and structural abnormalities of the uterus.

Important Points

- **Pelvic Endometriosis**: This condition involves the presence of endometrial tissue outside the uterus, which can cause heavy and painful menstrual bleeding.
- **Adenomyosis**: This is a condition where the endometrial tissue grows into the muscular wall of the uterus, often leading to heavy and prolonged menstrual bleeding.
- **Granulosa Cell Tumour of the Ovary**: These are estrogen-producing tumors, and the excess estrogen can lead to heavy menstrual bleeding.

Confusion Points

- **Androgen Producing Tumours**: These tumors produce male hormones (androgens), which typically do not cause heavy menstrual bleeding. Instead, they might lead to symptoms such as hirsutism (excess hair growth) and amenorrhea (absence of menstrual periods). This is why androgen producing tumors are not considered a cause of menorrhagia.

138. **Correct Answer**

(3) Around the brain

Concept

Brown fat (or brown adipose tissue) in neonates plays a crucial role in thermogenesis, helping to maintain body temperature by generating heat. It is found in specific locations in the body.

Important Points

- **Around the Heart**: Brown fat is present around the heart, contributing to the protection and insulation of this vital organ.
- **In the Axillae**: Brown fat is located in the axillae (armpit area), aiding in the regulation of body temperature.
- **Around the Kidney**: Brown fat is found around the kidneys, providing insulation and helping with thermoregulation in neonates.

Confusion Points

- **Around the Brain**: Brown fat is not typically found around the brain. The presence of brown fat in neonates is more focused on areas that require substantial heat generation to maintain body temperature, and the brain is not one of these primary sites.

139. **Correct Answer**

(2) 30-60 breaths per minute

Concept

Normal respiratory rate is an important vital sign that indicates the breathing pattern and overall respiratory health of a newborn. It is essential for assessing the infant's adaptation to extrauterine life and identifying any potential respiratory distress or abnormalities.

Important Points

- **Normal Range**: For newborns, a normal respiratory rate ranges from 30 to 60 breaths per minute. This rate supports their higher metabolic needs and ensures adequate oxygenation.
- **Monitoring**: It is crucial to monitor the respiratory rate of newborns regularly to detect any signs of respiratory distress or other health issues.
- **Variability**: While slight variations in respiratory rate can be normal, consistently higher or lower rates may require further evaluation and medical attention.

Confusion Points

- **Different Age Groups**: Respiratory rates vary significantly with age. Rates that are normal for older children or adults (such as 14-18 breaths per minute or 20-30 breaths per minute) are not applicable to newborns.
- **Temporary Changes**: Newborns may experience brief periods of irregular breathing, which can be normal. However, consistent deviation from the normal range warrants closer observation.

140. **Correct Answer**

(2) Respiratory acidosis

Concept

Respiratory acidosis occurs when there is a persistent rise in the partial pressure of carbon dioxide (PCO_2) and a corresponding decrease in blood pH. This condition is caused by inadequate ventilation, leading to the accumulation of CO_2 in the blood.

Important Points

- **PCO_2**: An increase in PCO_2 indicates that carbon dioxide is not being adequately expelled from the body, typically due to respiratory issues.

- **pH Level**: A decrease in pH signifies that the blood is becoming more acidic, which is a hallmark of acidosis.
- **Causes in Newborns**: Respiratory acidosis in newborns can result from various conditions, including respiratory distress syndrome, congenital diaphragmatic hernia, or any other condition that impairs effective ventilation.

Confusion Points

- **Metabolic Acidosis**: This is characterized by a decrease in pH due to an accumulation of acids or loss of bicarbonate, but it is not associated with an elevated PCO_2.
- **Respiratory Alkalosis**: This condition involves a decrease in PCO_2 and an increase in pH, often due to hyperventilation.
- **Metabolic Alkalosis**: This involves an increase in pH due to a loss of acids or an increase in bicarbonate, without an elevated PCO_2.

141. **Correct Answer**

(3) Accepts the artificial nipple but refuses the mother's nipple

Concept

Nipple confusion occurs when an infant has difficulty transitioning between breastfeeding and bottle feeding due to differences in the sucking technique required for each. This often results in the infant preferring the artificial nipple over the mother's nipple.

Important Points

- **Cause**: Nipple confusion is usually caused by introducing a bottle or pacifier to the infant too early, before they have fully established breastfeeding.
- **Mechanism**: The sucking technique for a bottle nipple is different from that for a breast nipple, and infants may find the bottle nipple easier or more rewarding, leading to a preference for the bottle.
- **Impact**: This can lead to difficulties in breastfeeding, decreased milk supply for the mother, and potential nutritional issues for the infant.

Confusion Points

- **Acceptance**: Unlike nipple confusion, some infants may accept both the mother's nipple and the artificial nipple without any issues, but this is not termed nipple confusion.
- **Rejection**: Infants who reject the bottle but accept the mother's nipple or refuse to feed entirely do not exhibit nipple confusion. These scenarios may stem from other feeding or health issues.

142. **Correct Answer**

(3) Postcoital bleeding

Concept

Invasive cervical cancer often presents with various symptoms, but one of the classical and early signs is postcoital bleeding, which means bleeding after sexual intercourse.

Important Points

- **Postcoital Bleeding**: This is considered a hallmark symptom of cervical cancer because it indicates that there may be cervical lesions or abnormalities that bleed during or after sexual activity.
- **Other Symptoms**: While postcoital bleeding is significant, other symptoms of cervical cancer can include abnormal vaginal bleeding (between periods or after menopause), pelvic pain, pain during intercourse, and unusual vaginal discharge.
- **Diagnostic Importance**: Any postcoital bleeding should prompt a thorough evaluation by a healthcare provider to rule out cervical cancer or other gynecological issues.

Confusion Points

- **Other Symptoms**: Hematuria (blood in urine), back pain, and anemia are associated with various conditions but are not typically considered classical symptoms of invasive cervical cancer. They may occur in advanced stages or due to complications but are not specific to cervical cancer.

143. **Correct Answer**

(2) Spalding sign

Concept

Spalding sign refers to the irregular overlapping of the cranial bones in a fetus due to the presence of craniosynostosis or the softening and liquefaction of the brain matter. This sign is typically observed in cases of intrauterine fetal demise.

Important Points

- **Cranial Overlapping**: The bones of the fetal skull can overlap irregularly due to reduced pressure within the skull and the softening of the brain tissue.
- **Indication**: Spalding sign is often indicative of fetal demise or stillbirth, although it can also occur in certain conditions where there is early intrauterine death and subsequent changes in the fetal skull.
- **Differential Diagnosis**: It is essential to differentiate Spalding sign from other signs like Jacquemier's sign (softening of the uterus in pregnancy), Piskacek's sign (asymmetry of the uterus in pregnancy), and Robert's sign (softening of the lower uterine segment in pregnancy).

Confusion Points

- **Similar Signs**: Jacquemier's sign, Piskacek's sign, and Robert's sign are all related to changes observed during pregnancy but are distinct from Spalding sign, which specifically pertains to changes in the fetal skull due to intrauterine conditions.

144. **Correct answer:** (2) 29.1

Concept: Body Mass Index (BMI) is calculated using the formula: BMI=weight in kg/(height in meters)^2 BMI=weight in kg/(height in meters)^2

To convert height from centimeters to meters, divide by 100: Height in meters=155 cm100=1.55 mHeight in meters=100155 cm=1.55 m

Given:

- Weight = 70 kg
- Height = 155 cm = 1.55 m

Calculate BMI: BMI=70/(1.55)^2 BMI=70/(1.55)^2 BMI=70/2.4025 BMI=2.402570
BMI≈29.1
BMI≈29.1

Important Points:

- BMI is a measure of body fat based on height and weight.
- It is calculated as weight in kilograms divided by the square of height in meters.
- BMI categories typically classify:
    - Underweight: <18.5
    - Normal weight: 18.5–24.9
    - Overweight: 25–29.9
    - Obesity: ≥30

Confusion Points:

- Ensure to convert height to meters before calculating BMI.
- Sometimes, the interpretation of BMI may vary based on factors like muscle mass versus fat mass.

145. **Correct answer:** (1) 1.42 per 1000 per year

Concept: Incidence rate is a measure of the frequency with which new cases of illness occur in a population over a specified period of time. It is typically expressed per 1000 individuals per year. The formula for calculating the incidence rate is: Incidence Rate=(Number of new casesPopulation at risk)×1000Incidence Rate=(Population at riskNumber of new cases)×1000

Given:

- Number of new cases = 500
- Population at risk = 30,000

Calculate the incidence rate: Incidence Rate=(500/30000)×1000

Incidence Rate=(500/30000)×1000

Incidence Rate=(500/30000)×1000=(5/300)×1000=(1/60)×1000Incidence Rate=(500/30000)×1000=(5/300)×1000=(1/60)×1000

Incidence Rate≈16.67

Important Points:

- Incidence rate is a measure of how quickly new cases of a disease occur in a population.
- It helps in understanding the risk of contracting the disease within a specific time period.
- The incidence rate is expressed per 1000 or 100,000 individuals to standardize the measure.

Confusion Points:

- Ensure to use the correct population at risk, which includes only those who are susceptible to the disease.
- The period over which new cases are measured should be clearly specified (e.g., per year).
- Distinguish between incidence rate and prevalence rate; the former measures new cases, while the latter measures existing cases in a population at a given time.

146. **Correct answer:** (1) Brown rice

Concept: The Glycemic Index (GI) is a measure that ranks foods according to their effect on blood sugar levels. Foods with a high GI increase blood sugar levels quickly, while foods with a low GI have a slower, more gradual effect on blood sugar.

High glycemic index foods generally have a GI of 70 or above, medium GI foods have a GI of 56-69, and low GI foods have a GI of 55 or less.

Important Points:

- **Brown rice** has a lower GI compared to other options listed, typically falling into the medium to low GI category.
- **Corn flakes**, **baked potatoes**, and **white bread** all have high GIs and cause a rapid spike in blood sugar levels.

Confusion Points:

- Different types of rice can have different GIs; for example, white rice typically has a higher GI than brown rice.
- The GI of foods can be influenced by factors such as preparation method, ripeness, and processing.
- It's important to differentiate between glycemic index and glycemic load, which takes into account the quantity of carbohydrate in a serving.

147. **Correct answer:** (4) Severe acute malnutrition

Concept: The Z-score is a statistical measure that describes a value's relationship to the mean of a group of values, measured in terms of standard deviations from the mean. In the context of child growth standards, the World Health Organization (WHO) uses Z-scores to assess undernutrition.

A Z-score below -3 standard deviations (SD) from the median WHO child growth standards indicates severe malnutrition.

Important Points:

- **Severe acute malnutrition (SAM)** is indicated by a Z-score below -3SD for weight-for-height or height-for-age according to WHO standards.
- **Underweight** is indicated by a Z-score below -2SD for weight-for-age.
- **Stunting** is indicated by a Z-score below -2SD for height-for-age.
- **Wasting** is indicated by a Z-score below -2SD for weight-for-height.

Confusion Points:

- Understanding the difference between various forms of undernutrition (underweight, stunting, wasting) and severe acute malnutrition (SAM) can be challenging.
- The Z-score threshold for severe acute malnutrition is specifically -3SD, while -2SD is the threshold for other forms of undernutrition.
- SAM is a more critical condition that requires urgent medical intervention.

148. **Correct answer:** (4) Disability-adjusted life years

Concept: Disability-Adjusted Life Years (DALYs) is a measure used to quantify the overall burden of disease. DALYs represent the total number of years lost due to ill-health, disability, or early death within a given population. It combines the years of life lost (YLL) due to premature mortality and the years lived with disability (YLD) to provide a comprehensive assessment of the impact of health problems.

The formula for DALYs is: DALYs=YLL+YLDDALYs=YLL+YLD

Important Points:

- **Health-adjusted life expectancy (HALE)** measures the average number of years that a person can expect to live in "full health" by adjusting for time spent in poor health.
- **Quality-adjusted life years (QALYs)** measure the value of health outcomes by considering both the quantity and quality of life lived.
- **Disability-free life expectancy (DFLE)** measures the number of years a person can expect to live without disability.
- **Disability-adjusted life years (DALYs)** measure the burden of disease by combining years of life lost due to premature death and years lived with disability.

Confusion Points:

- Understanding the difference between DALYs and QALYs: DALYs focus on the burden of disease, while QALYs consider both the quality and quantity of life.
- Differentiating between DALYs and HALE/DFLE: HALE and DFLE focus on life expectancy adjusted for health, whereas DALYs measure the negative impact of diseases and conditions on population health.

- DALYs are often used in global health to assess the impact of various diseases and to prioritize health interventions.

149. **Correct answer:** (1) 28 days of life

Concept: Neonatal mortality rate (NMR) measures the number of deaths of infants within the first 28 days of life per 1,000 live births in a given year. It is an important indicator of the overall health and well-being of newborns and the effectiveness of health care systems.

The formula for calculating the neonatal mortality rate is:

NMR=(Number of neonatal deaths within 28 days of life) /(Total number of live births)×1000

Important Points:

- The numerator for NMR is the number of neonatal deaths within the first 28 days of life.
- The denominator is the total number of live births during the same period.
- NMR provides insights into the quality of maternal and neonatal care.

Confusion Points:

- Differentiating between neonatal mortality rate and infant mortality rate: NMR focuses on the first 28 days of life, while the infant mortality rate includes deaths within the first year of life.
- Understanding the significance of the 28-day period, which is considered critical for newborn survival and health interventions.
- Ensuring accurate data collection and reporting for both neonatal deaths and live births to calculate the NMR correctly.

150. **Correct answer:** (2) Primaquine

Concept: In the treatment of malaria, certain drugs are contraindicated during pregnancy due to potential adverse effects on the fetus. Primaquine is specifically contraindicated in pregnancy because it can cause hemolytic anemia in the fetus, especially in those with glucose-6-phosphate dehydrogenase (G6PD) deficiency.

Important Points:

- **Chloroquine** is generally considered safe for use in pregnancy and is commonly used for the treatment and prevention of malaria in pregnant women.
- **Primaquine** is contraindicated in pregnancy due to its potential to cause hemolytic anemia in the fetus.
- **Quinine** can be used during pregnancy, but with caution and usually under medical supervision, especially in the treatment of severe malaria.
- **Sulfadoxine + Pyrimethamine** is also used in pregnancy, particularly in intermittent preventive treatment in pregnancy (IPTp), but it should be used with caution and only after the first trimester.

Confusion Points:

- Differentiating between the safety profiles of various antimalarial drugs in pregnancy can be challenging, as some are safe, others are contraindicated, and some need to be used with caution.
- Understanding the specific risks associated with each drug, such as the potential for hemolytic anemia with Primaquine, is crucial for making informed treatment decisions.