

Note: Following Practice questions are based on our theory classes. Kindly study thoroughly our theory class before work out these questions.

**Previous Years' Paper
Railway Recruitment Board
RRB-Nursing Superintendent/Staff Nurse Recruitment Exam 2019
(Exam held on 21/07/2019, 1st Shift)**

1. What are the immediate side effects of Electroconvulsive therapy?

- A. Fractured and dislocated bone
- B. Temporary memory loss and confusion
- C. Myocardial infarction and cardiac arrest
- D. Permanent memory loss and brain damage

Answer: B

Rational: Electroconvulsive Therapy (ECT) is a medical treatment commonly used for severe depression, certain mood disorders, and some other mental health conditions when other treatments have not been effective. ECT involves passing a controlled electric current through the brain, which induces a brief seizure. This procedure is performed under general anesthesia and with the administration of muscle relaxants to minimize discomfort and prevent injury.

Temporary Memory Loss and Confusion:

This is the most common immediate side effect of ECT. After the procedure, patients may experience confusion, which can last from a few minutes to a few hours. Memory loss, particularly for events around the time of treatment, is also common. These effects are usually temporary, with most patients regaining their memory and orientation within hours to days after treatment.

2. The real executive of the Indian government is

- A. The President
- B. The Vice President

- C. The Speaker
- D. The Prime Minister

Answer: D

Rational: The real executive of the Indian government is the Prime Minister. While the President of India is the head of state and holds a ceremonial position, the Prime Minister is the head of the government and exercises the executive powers.

3. Down syndrome is also known as

- A. Monosomy 13
- B. Trisomy 21
- C. Trisomy 13
- D. Trisomy 18

Answer: B

Rational: Down syndrome, also known as Trisomy 21, is a genetic disorder caused by the presence of an extra copy of chromosome 21. This means that individuals with Down syndrome have three copies of chromosome 21 instead of the usual two. This extra genetic material affects the development of the body and brain, leading to the characteristic features and developmental challenges associated with the condition.

4. Which drug is preferred in urinary and genital infections?

- A. Ofloxacin
- B. Pefloxacin
- C. Norfloxacin
- D. Ciprofloxacin

Answer: C

Rational: Norfloxacin is a fluoroquinolone antibiotic that is commonly used to treat urinary tract infections (UTIs) and genital infections. It is particularly effective against bacteria commonly found in these infections, such as *Escherichia coli*.

Ofloxacin: Ofloxacin is also a fluoroquinolone and can be used to treat UTIs, but it is more commonly used for a broader range of infections, including respiratory, skin, and soft tissue infections.

Pefloxacin: Pefloxacin is another fluoroquinolone that can be used for urinary infections, but it is less commonly preferred compared to norfloxacin or ciprofloxacin.

Ciprofloxacin: Ciprofloxacin is a widely used fluoroquinolone that is effective for treating various infections, including urinary and genital infections. However, for specific uncomplicated urinary tract infections, norfloxacin is often the preferred choice due to its specific concentration in the urinary tract.

5. Which is a cause of Anuria?

- A. Appendicitis
- B. Renal failure
- C. Pyrexia
- D. Gastritis

Answer: B

Rational: Anuria is a condition characterized by the absence of urine output or a very low urine output (less than 100 mL per day). It is often caused by severe kidney problems where the kidneys fail to produce urine.

Renal failure is the most common cause of anuria. Renal failure can occur due to acute kidney injury (AKI) or chronic kidney disease (CKD), where the kidneys lose their ability to filter waste and produce urine.

6. Which AV block is also referred to as Mobitz-II?

- A. Third Degree AV Block
- B. Second Degree AV Block
- C. First Degree AV Block
- D. Complete Heart Block

Answer: B

Rational: Second Degree AV Block (Mobitz II) is a type of block characterized by intermittent non-conducted P waves (atrial impulses) that do not result in a QRS complex (ventricular response). The PR interval remains constant in conducted beats, but some beats are dropped without warning. Mobitz II is more serious than Mobitz I because it can progress to complete heart block and often requires a pacemaker.

7. A girl started to walk 2 km in North direction. She turned towards her right and walked 6 km and walked 3 km towards her left. Once again she took a left turn to walk 3 km before taking another left to walk 5 km. How far is she from the starting point?

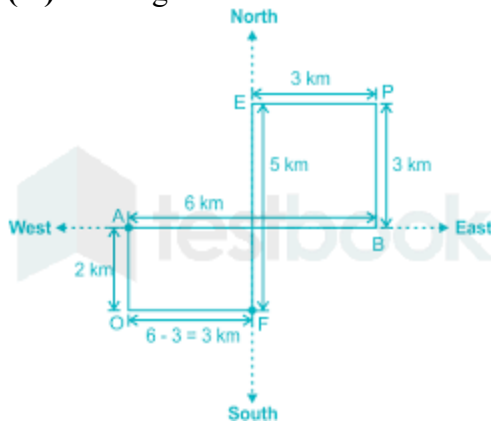
- A. 7 km
- B. 4 km
- C. 3 km
- D. 5 km

Answer: C

Rational:

Given:

- (i) A girl started to walk 2 km in North direction.
- (ii) She turned towards her right and walked 6 km and walked 3 km towards her left.
- (iii) Once again she took a left turn to walk 3 km before taking another left to walk 5 km.



Let's say the girl starts from point "O" and ends at point "F."
Now the distance between the initial and point "OF" will be 3 km.

8. What is the renal threshold value of glucose?

- A. 180 Mg/dl
- B. 188 Mg/dl
- C. 185 Mg/dl
- D. 182 Mg/dl

Answer: A

Rational: The renal threshold for glucose is the blood glucose level at which the kidneys start to excrete glucose into the urine. Normally, the kidneys reabsorb all the glucose from the filtrate back into the bloodstream. However, when blood glucose levels exceed the renal threshold, the renal tubules cannot reabsorb all of it, leading to the presence of glucose in the urine, a condition known as glycosuria. The renal threshold for glucose is typically around **180 mg/dl**. When blood glucose levels exceed this value, glucose begins to appear in the urine.

9. Find the next number in the series:

7, 9, 13, 21, 37, ?

- A. 63
- B. 55
- C. 57

D. 69

Answer: D

Rational: The pattern followed is:

$7 \rightarrow 9 \rightarrow 13 \rightarrow 21 \rightarrow 37 \rightarrow 69$

Rule: +2, +4, +8, +16, +32

10. In which condition oral pills should not be given to a women?

- A. Menstrual problems
- B. Vaginal infection
- C. Hypertension
- D. Asthma

Answer: C

Rational: Oral contraceptive pills, commonly known as birth control pills, are generally safe for most women. Women with uncontrolled high blood pressure (hypertension) should avoid taking oral contraceptive pills because these pills can potentially exacerbate hypertension or increase the risk of cardiovascular events, such as stroke or heart attack. For women with well-controlled hypertension, the use of oral contraceptives may be considered, but close monitoring by a healthcare provider is essential.

11. In domestic water sewage, which of the following things is not a part of 'Dissolved materials'?

- A. Calcium
- B. Nitrate
- C. Phosphate
- D. Sand

Answer: D

Rational: In domestic water sewage, “dissolved materials” refer to substances that are fully dissolved in the water and cannot be removed by simple filtration. They include various ions, compounds, and nutrients that are present in the water.

- **A. Calcium:** Calcium is a common dissolved ion in water, often found in the form of calcium carbonate or calcium sulfate.
- **B. Nitrate:** Nitrate is a dissolved ion that can come from fertilizers, waste, and other sources.
- **C. Phosphate:** Phosphate is another dissolved material that can come from detergents, fertilizers, and biological waste.

- **D. Sand:** Sand is a particulate matter and is not dissolved in water; it is suspended or settled out of the water and can be removed by filtration.

12. The ratio of number of girls to boys in a school of 4500 students is 49:51. How many more girls should be admitted to make the ratio 1:1?

- A. 90
- B. 88
- C. 92
- D. 86

Answer: A

Rational: Given:

The total students = 4500

The ratio of girls to boys of the school = 49 : 51

Concept:

If A and B are in ratio then:

$$A : B = \frac{A}{B}$$

Calculation:

Let us assume the girls and boys in the school be **35x** and **37x** respectively and number of girls admitted be **X**.

- The sum of the boys and girls = 4500
- $49x + 51x = 4500$
- $100x = 4500$
- $x = 45$

$$\Rightarrow \text{The number of girls} = 49x = 49 \times 45 = 2205$$

$$\Rightarrow \text{The number of boys} = 4500 - 2205 = 2295$$

$\Rightarrow$ Now, according to the question:

$$\frac{2205 + X}{2295} = \frac{1}{1}$$

$$\Rightarrow 2205 + X = 2295$$

$$\Rightarrow X = 2295 - 2205 = 90$$

$\Rightarrow$ The number of girls added = **90**

13. Osmotic pressure and Acid-base balance of body fluids are maintained by

- A. Sodium
- B. Magnesium
- C. Fluorine
- D. Zinc

Answer: A

Rational: Sodium is crucial in maintaining osmotic pressure and the acid-base balance of body fluids. It plays a key role in regulating fluid balance, blood pressure, and the pH of the blood by influencing the osmotic gradient in the body. Sodium ions are essential for the proper functioning of many physiological processes, including nerve impulse transmission and muscle function.

14. Which is the basis of ABC analysis in inventory control?

- A. Annual consumption value
- B. Criticality of items
- C. Unit cost of item
- D. Procurement difficulty of items

Answer: A

Rational: ABC analysis in inventory control is a method used to categorize inventory items based on their importance and usage. It is based on the principle that not all inventory items are equally valuable or critical, and prioritizing them can help manage them more effectively.

- **Annual consumption value:** This is the basis of ABC analysis. Items are classified into three categories (A, B, and C) based on their annual consumption value, which is calculated as the product of the unit cost and the annual usage quantity.
 - **A. items:** High-value items with low quantity, contributing the most to the total annual consumption value.
 - **B. items:** Moderate-value items with moderate consumption.
 - **C. items:** Low-value items with high quantity, contributing less to the total annual consumption value.

15. All green plants and bacteria which can synthesize their food by photosynthesis come under the category of

- A. Decomposers
- B. Food givers
- C. Producers
- D. Intakers

Answer: C

Rational: All green plants, algae, and certain bacteria that can synthesize their own food through the process of photosynthesis are classified as producers. Producers are organisms that produce organic compounds from inorganic substances using energy from sunlight (or, in some cases, chemical energy). They form the base of the food chain by converting light energy into chemical energy, which is then used by other organisms (consumers) for nutrition.

16. How many times can a person be elected as the President of India?

- A. Any number of times
- B. Five times only
- C. Two times only
- D. One time only

Answer: A

Rational: In India, there is no limit on the number of times a person can be elected as President. A person can be elected for multiple terms, provided they continue to be re-elected by the Electoral College. The only requirements are that the person must be eligible for the position and receive the necessary votes during each election.

17. By selling a CPU for ₹ 7935, a man makes a profit of 15%. At what price should he sell it to make a profit of 25%? (in ₹)

- A. 8725
- B. 8525
- C. 8825
- D. 8625

Answer: D

Rational: The selling price of the CPU = **7935**
The profit % = **15%**

Formula used:

$$P\% = \frac{SP-CP}{CP} \times 100 \quad \text{Where, P = The profit}$$

SP = The selling price, and CP = The cost price.

Calculation:

Let us assume the cost price of the CPU be XXX.

=> According to the question:

$$\Rightarrow X + 0.15X = 7935$$

$$\Rightarrow 1.15X = 7935$$

$$\Rightarrow X = 6900$$

$$\Rightarrow \text{The selling price of the CPU when it sells for 25\%} = 6900 + 1725 = 8625$$

18. What is a Bacille Calmette-Guérin (BCG)?

- A. Immunoglobulin
- B. Toxoid
- C. Killed vaccine
- D. Live attenuated vaccine

Answer: D

Rational: The Bacille Calmette-Guerin (BCG) vaccine is a **live attenuated vaccine** used primarily to prevent tuberculosis (TB). It is made from a weakened strain of *Mycobacterium bovis*, a bacterium closely related to *Mycobacterium tuberculosis*, which causes tuberculosis. The vaccine stimulates the immune system to recognize and fight TB bacteria if the person is exposed to them in the future..

19. Which structures act as wires of a telephone in the body?

- A. Veins
- B. Nerves
- C. Muscles
- D. Arteries

Answer: B

Rational: Nerves act as the wires of the body's telephone system, carrying electrical impulses between the brain and the rest of the body. Nerves, also known as neurons, are cord-like structures that transmit electrical impulses throughout the body. These impulses help you feel sensations, move your muscles, and maintain autonomic functions like breathing, sweating, and digesting food.

20. In this question, relationship between different elements is shown in the statement. This statement is followed by three conclusions. Assume the given statement to be true and choose the answer from the given options:

Statement: $W = O > R \geq I > E < D$

Conclusions:

- (i) $E < R$
- (ii) $I < O$
- (iii) $W > I$

- A. Only (ii) and (iii) follow
- B. Only (iii) follows
- C. All follow
- D. Only (i) and (ii) follow

Answer: C

Rational: Statement: $W=O>R\geq I>E<D$

Conclusions:

1. **$E < R$**
 - According to the statement, $E < R$ is directly indicated by the sequence $E < R$, so this conclusion follows.
2. **$I < O$**
 - From the statement, $O > R \geq I$ This implies I is less than or equal to R , and R is less than or equal to O . Hence, I is less than O , so this conclusion also follows.
3. **$W > I$**
 - From the statement, $W=O$ and $O > R \geq I$ Therefore, W (which is equal to O) is greater than I , so this conclusion follows as well.

Since all three conclusions are consistent with the given statement.

21. Life-threatening condition due to rapid loss of blood or body fluids is known as

- A. Anaphylactic shock
- B. Septic shock
- C. Neurogenic shock
- D. Hypovolemic shock

Answer: D

Rational: Hypovolemic shock occurs when the body loses a significant amount of blood or fluids, leading to insufficient blood flow to vital organs. This can be caused by factors such as severe bleeding, dehydration, or burns.

22. Which is a macromineral that the body needs to work properly?

- A. Lead
- B. Calcium
- C. Gold
- D. Silver

Answer: B

Rational: Calcium is a macromineral essential for proper body function. It plays a crucial role in bone health, muscle function, nerve transmission, and blood clotting.

23. Which is called as Non-probability sampling?

- A. Quota sampling
- B. Stratified random sampling
- C. Cluster sampling
- D. Systematic sampling

Answer: A

Rational: Non-probability sampling is a method of selecting samples for the study when all the samples are not having equal chances to get selected for the study.

Types of Non-Probability Sampling are:

- 1. Quota Sampling
- 2. Snowball Sampling
- 3. Judgment Sampling
- 4. Dimensional Sampling
- 5. Convenience Sampling

24. What is called the time required for the satellite to complete one rotation?

- A. Period of momentum
- B. Period of motion
- C. Period of force
- D. Period of revolution

Answer: D

Rational: The **Period of Revolution** is the time it takes for a satellite or any celestial object to complete one full orbit around another body. In the context of satellites orbiting Earth, it refers to the duration it takes for the satellite to return to the same point in its orbit relative to Earth.

25. Pyridoxine is otherwise called as

- A. Vitamin B12
- B. Vitamin B1
- C. Vitamin B2
- D. Vitamin B6

Answer: D

Rational: Pyridoxine is one of the forms of Vitamin B6, which is essential for various body functions.

Vitamin B6 is a collective term for a group of six related compounds, including pyridoxine, pyridoxal, and pyridoxamine. These compounds are involved in numerous biochemical processes in the body, such as amino acid metabolism, neurotransmitter synthesis, and the production of hemoglobin. Pyridoxine is the most common form of Vitamin B6 found in supplements and foods. It is a precursor that the body converts into the active forms of Vitamin B6, which are pyridoxal phosphate and pyridoxamine phosphate.

26. Which is the most suitable position for giving an enema?

- A. Lithotomy position
- B. Prone position
- C. Left lateral position
- D. Right lateral position

Answer: C

Rational: The most suitable position for giving an enema is the **Left lateral position**. In this position, the patient lies on their left side with their knees drawn up towards their chest. This position helps to facilitate the flow of the enema solution into the rectum and colon, as the anatomical orientation of the colon makes it easier for the solution to travel from the rectum towards the sigmoid colon and descending colon.

27. HML analysis means

- A. High, Medium and Low Estimates
- B. Heaping, Moulding and Lowering Estimates
- C. Hierarchy, Moderate and Low Estimates
- D. High Medical Laboratory Inventory

Answer: A

Rational: HML Analysis is a method used to categorize and prioritize items, risks, or components based on their relative importance or value. The acronym stands for High, Medium, and Low Estimates. Here's how it works:

1. **High Estimates (H):** These are items, risks, or components considered to be of high importance or high value. In inventory management, for example, these might be high-value items that are crucial to the operation and need close monitoring and control.
2. **Medium Estimates (M):** These are of moderate importance or value. They are not as critical as high estimates but still require some level of attention and management.
3. **Low Estimates (L):** These items, risks, or components are considered to be of low importance or value. They may be less critical and require less frequent monitoring or management.

28. A diet high in saturated fats can be linked to

- A. Bulimia
- B. Anorexia
- C. Kidney failure
- D. Cardiac / heart diseases

Answer: D

Rational: A diet high in saturated fats can increase the risk of heart disease. Saturated fats can raise cholesterol levels, which can contribute to the formation of plaque in the arteries. This plaque can lead to heart attacks and strokes.

29. Who won the Australian Open 2019 Men's singles title?

- A. Andy Murray
- B. Novak Djokovic
- C. Rafael Nadal
- D. Roger Federer

Answer: B

30. Which causes Klinefelter syndrome?

- A. Xo
- B. Xx
- C. Xyy
- D. Xxy

Answer: D

Rational: Klinefelter syndrome is a genetic condition that occurs in males when they have an extra X chromosome, leading to a total of 47 chromosomes instead of the usual 46. The most common karyotype for this condition is 47, XXY. This karyotype is indicative of Klinefelter syndrome, where males have an extra X chromosome, leading to a total of 47 chromosomes (XXY). This condition can result in symptoms such as reduced testosterone levels, infertility, and physical features such as taller stature and less muscular development.

31. In India, which of the following States has the highest number of National Parks?

- A. Madhya Pradesh
- B. Tamil Nadu
- C. Punjab
- D. Tripura

Answer: A

Rational: Madhya Pradesh has the highest number of national parks in India, with 11 national parks. Madhya Pradesh is also known as the “Tiger State” of India.

32. The word emotion etymologically means

- A. To test
- B. To express
- C. To cry
- D. To stir up

Answer: D

Rational: The term “emotion” comes from the Latin word “removere,” which means “to move out” or “to stir up.” It is derived from “e” (a variant of “ex-,” meaning “out”) and “movere” (meaning “to move”). This reflects that emotions are states that stir up or move internally.

33. The optimal head circumference will be 45 cms at

- A. 12 months of age
- B. 8 months of age
- C. 4 months of age
- D. 6 months of age

Answer: A

Rational: Head circumference is an important measure of an infant’s growth and development. It helps to assess the development of the brain and overall health. Here’s a detailed explanation of head circumference growth at different ages:

- **At Birth:** The average head circumference of a newborn is about 35 cm (13.8 inches).
- **At 4 Months of Age:** By this time, an infant’s head circumference has typically increased to about 40 cm (15.7 inches). The growth rate is relatively rapid during the first few months.
- **At 6 Months of Age:** By six months, the average head circumference is around 42 cm (16.5 inches). Growth continues at a steady pace, though it starts to slow compared to rapid increase seen in the early months.
- **At 8 Months of Age:** The head circumference at this age is generally close to 43 cm (16.9 inches). The growth continues at a moderate pace but slowing down compared to earlier months.
- **At 12 Months of Age:** By the first birthday, the average head circumference of an infant is about 45 cm (17.7 inches). This represents a significant but steady increase from earlier months, and head growth begins to approach its rate for older children and adults.

34. Which is a chronic inflammatory and autoimmune disease affecting peripheral synovial joints of bone?

- A. Rheumatoid
- B. Ankylosing
- C. Osteoarthritis
- D. Polyarthritis

Answer: A

Rational: Rheumatoid arthritis is a chronic inflammatory and autoimmune disease that primarily affects the peripheral synovial joints of the body. It is characterized by inflammation of the synovium, the tissue that lines the joints. This inflammation can lead to joint damage, pain, swelling, and stiffness.

35. “Splitting” by the client with borderline personality disorder denotes

- A. Evidence of precocious development
- B. A primitive defence mechanism in which the client sees objects as all good or all bad
- C. Two distinct personalities within the borderline client
- D. A brief psychotic episode in which the client loses contact with reality

Answer: B

Rational: “Splitting” in the context of borderline personality disorder (BPD) refers to a primitive defense mechanism in which the client sees objects as all good or all bad.

Splitting is a defense mechanism where individuals with BPD perceive people, events, or situations in black-and-white terms, either as entirely positive or entirely negative, without recognizing the complexities and nuances of these experiences. This can lead to unstable relationships and shifting views of others, contributing to the emotional instability characteristic of the disorder.

36. The Brodmann area number that corresponds to the primary visual cortex is

- A. Seventeen
- B. Three
- C. Forty one
- D. Four

Answer: A

Rational: Brodmann areas are regions of the cerebral cortex defined based on their cytoarchitecture, or cellular composition. Each area has distinct functions and is associated with different types of sensory and motor processing.

Brodmann Area 17 (Primary Visual Cortex): Located in the occipital lobe, is primarily responsible for processing visual information. It is often referred to as the primary visual cortex (V1) and is the first cortical area to receive and process visual signals from the retina via the thalamus. It plays a crucial role in basic visual perception, including detecting edges, contrast, and motion

37. Which theory was developed by a nurse?

- A. Hierarchy Of Need Theory
- B. Social Cognitive Theory
- C. Uncertainty In Illness Theory
- D. Job Satisfaction Theory

Answer: C

Rational: Uncertainty in Illness Theory was developed by Merle Mishel, a nurse and researcher. It addresses the experience of uncertainty that patients often face when dealing with illness, particularly when the diagnosis, treatment, or prognosis is unclear..

38. By which one of the following measures the human immunodeficiency virus does not spread?

- A. Blood transfusions
- B. Shaking hands
- C. Use of intoxicant drugs
- D. Sexual contact

Answer: B

Rational: The human immunodeficiency virus (HIV) does not spread through shaking hands. HIV is primarily spread through direct contact with certain bodily fluids, such as blood, semen, vaginal fluids, and breast milk. It can be transmitted through:

- **Blood transfusions:** If the blood is not properly screened for HIV, it can transmit the virus.
- **Use of intoxicant drugs:** Sharing needles or other drug paraphernalia that has been contaminated with HIV-infected blood can transmit the virus.
- **Sexual contact:** Unprotected sexual contact with an infected person can spread HIV through the exchange of bodily fluids.

39. Facial palsy is also known as

- A. Klumpke's palsy
- B. Bell's palsy
- C. Brachial palsy

D. Erb's palsy

Answer: B

Rational: Bell's palsy is a condition characterized by sudden, unilateral facial weakness or paralysis, which typically affects the muscles on one side of the face. It is often caused by inflammation of the facial nerve (cranial nerve VII).

40. In which stage of labour the placenta is delivered?

- A. 3rd stage
- B. 1st stage
- C. 2nd stage
- D. 4th stage

Answer: A

Rational: The third stage of labor is when the placenta is delivered. After the baby is born, the uterus contracts to expel the placenta and fetal membranes. This typically occurs within 30 minutes of the baby's birth.

The stages of labor are as follows:

1. **1st Stage:** This stage begins with the onset of labor contractions and ends when the cervix is fully dilated to 10 centimeters. It is divided into the latent and active phases.
2. **2nd Stage:** This stage begins when the cervix is fully dilated and ends with the delivery of the baby. It involves the actual process of pushing and birthing the baby.
3. **3rd Stage:** This stage starts after the birth of the baby and ends with the delivery of the placenta. It involves the separation and expulsion of the placenta from the uterine wall.
4. **4th Stage:** This is the period of recovery immediately following the delivery of the placenta, where maternal and newborn monitoring and care are emphasized.

41. On dividing a number by 483, we get 68 as remainder. On dividing the same number by 69, what will be the remainder?

- A. 48
- B. 68
- C. 38
- D. 58

Answer: B

Rational: Divisor (D) = 483
Remainder (R) = 68

Divisor two ($D2D_2D2$) = 69
Let Quotient be “Q”

Formula used:

Dividend = $D \times Q + R$

Dividend = $483 \times Q + 68$

Now, divide whole equation by “69”

Dividend = $(483Q/69) - (68/69)$
 $= 7Q + (68/69)$

Hence, the remainder will “68”

42. Which function is transmission of sound vibrations to the internal ear?

- A. Vestibule
- B. Eustachian tube
- C. Tympanic membrane
- D. Auricle

Answer: C

Rational: The tympanic membrane, also known as the eardrum, is a thin membrane that vibrates in response to sound waves. These vibrations are then transmitted to the middle ear bones, which in turn transmit them to the inner ear. This process allows us to hear sound.

43. The establishment of personal relationship and affection takes place in the stage of group dynamics is termed as

- A. Performing
- B. Storming
- C. Forming
- D. Norming

Answer: D

Rational: In the norming stage of group dynamics, group members establish personal relationships and affection. They begin to trust each other and develop a sense of belonging. This stage is characterized by increased cooperation, reduced conflict, and the development of group norms and expectations.

44. Who discovered the antibiotic penicillin?

- A. Alexander Fleming

- B. Edward Jenner
- C. Waksman
- D. None of these

Answer: A

Rational: In 1928, Alexander Fleming, a Scottish bacteriologist, discovered penicillin when he observed that a mold (*Penicillium notatum*) had antibacterial properties and could kill bacteria. This discovery marked the beginning of modern antibiotics.

45. Which one of the following is the emergency management of burn injury in the first 24 hours?

- A. Dressing
- B. Antibiotic Therapy
- C. Fluid Resuscitation
- D. Plastic Surgery

Answer: C

Rational: Fluid resuscitation is a medical treatment used to restore and maintain adequate blood volume and hydration in a patient who has lost a significant amount of fluid. It is especially crucial in the management of severe conditions like burns, trauma, or dehydration. Here's a detailed explanation:

Purpose of Fluid Resuscitation:

1. **Restore Blood Volume:** To replace lost fluids and maintain adequate blood volume, which is essential for proper circulation and organ function.
2. **Maintain Blood Pressure:** To prevent or treat hypotension (low blood pressure) that can result from fluid loss.
3. **Improve Tissue Perfusion:** To ensure that organs and tissues receive sufficient oxygen and nutrients.

46. Which conventions are followed for spherical mirrors and lens?

- A. New Newton Sign
- B. New Huygens Sign
- C. New Einstein Sign
- D. New Cartesian Sign

Answer: D

Rational: The New Cartesian Sign Convention is a set of rules used to assign positive and negative signs to the image distance, object distance, focal length, and magnification for

spherical mirrors and lenses. This convention helps in determining the nature, size, and position of images formed by these optical components.

47. 2450 boys and 1750 girls are examined in a test; 42% of the boys and 36% of the girls pass the test. The percentage of the total who failed is

- A. 62.5
- B. 60.5
- C. 61.5
- D. 63.5

Answer: B

Rational: Number of boys passed:

$$= \frac{2450 \times 42}{100} = 1029$$

∴ Number of failed boys:

$$= 2450 - 1029 = 1421$$

Number of girls passed:

$$= \frac{1750 \times 36}{100} = 630$$

Number of failed girls:

$$= 1750 - 630 = 1120$$

Number of failed students:

$$= 1120 + 1421 = 2541$$

Thus, percentage of failed students:

$$\frac{2541}{4200} \times 100 = 60.5$$

48. The lack of oxygen in the tissue is called

- A. Anorexia
- B. Anoxia
- C. Cyanosis
- D. Hypoxia

Answer: D

Rational: Hypoxia refers to the condition where there is a lack of oxygen in the tissues. This can be caused by various factors, such as reduced blood flow, decreased oxygen in the blood, or impaired oxygen diffusion at the cellular level.

49. What is the symbol of the element Gallium?

- A. G
- B. Gm
- C. Ga
- D. Gl

Answer: C

Rational: The chemical symbol for Gallium is Ga. Gallium is a chemical element with the atomic number 31. It is a post-transition metal that is found in the periodic table under the group 13 elements.

50. _____ is also known as Ascorbic acid.

- A. Vitamin A
- B. Vitamin C
- C. Vitamin D
- D. Vitamin E

Answer: B

Rational: Vitamin C is also known as Ascorbic acid. It is a water-soluble vitamin that is essential for many bodily functions, including immune system health, collagen production, and iron absorption.

51. What is cardinal sign of meningitis?

- A. Trousseau's Sign
- B. Chvostek's Sign
- C. Kernig Sign
- D. Ortolani Sign

Answer: C

Rational: The Kernig sign is tested by having the patient lie on their back with the hip flexed at a 90-degree angle and then attempting to extend the knee. In a person with meningitis, this action causes pain or resistance due to the irritation of the meninges (the protective membranes covering the brain and spinal cord). This sign is used to help diagnose meningitis, as it indicates meningeal irritation or inflammation.

52. Which one of the following includes the immediate step in resuscitation of the new born?

- A. Routinely giving sodium bicarbonate

- B. Squeezing the chest to remove secretions from the airway
- C. Clearing the oral and nasal airway
- D. Suction of the baby's stomach

Answer: C

Rational: Clearing the oral and nasal airway: This is a crucial initial step in newborn resuscitation to ensure that the airway is free of secretions, which can obstruct breathing. It is done by gently suctioning the mouth and nose to remove any mucus or amniotic fluid that may be blocking the airway.

53. Two bells ring at intervals of 59 seconds and 70 seconds. If they both ring at 10 O'clock in the morning together, after how many seconds will they ring together again?

- A. 4330
- B. 4130
- C. 4030
- D. 4230

Answer: B

Rational: The intervals are 59 seconds and 70 seconds. To find the LCM:

1. **Find the prime factorization:**
 - 59 is a prime number, so its prime factorization is 59.
 - 70 can be factored into $2 \times 5 \times 7$
2. **List the highest powers of all prime factors:**
 - The prime factors involved are 2, 5, 7, and 59.
 - Highest power of 2 is 2^1
 - Highest power of 5 is 5^1
 - Highest power of 7 is 7^1
 - Highest power of 59 is 59^1
3. **Multiply these highest powers to get the LCM:**
 $LCM = 2^1 \times 5^1 \times 7^1 \times 59^1 = 2 \times 5 \times 7 \times 59$
4. **Calculate the product:**
 $2 \times 5 = 10$
 $10 \times 7 = 70$
 $70 \times 59 = 4130$

So, the two bells will ring together again after 4130 seconds.

54. Antipsychotic drugs are prescribed to decrease the psychotic symptoms by

- A. Inhibiting production of the enzyme Monoamine oxidase inhibitors
- B. Depressing the central nervous system
- C. Blocking the action of dopamine in the brain

D. Blocking reuptake of norepinephrine and serotonin

Answer: C

Rational: Antipsychotic drugs primarily work by blocking the action of dopamine, a neurotransmitter that plays a crucial role in the brain's reward system and motor function. Excessive dopamine activity is believed to contribute to psychotic symptoms, such as hallucinations and delusions. By blocking dopamine receptors, antipsychotic drugs help to reduce these symptoms.

55. The Schick test is done for the diagnosis of

- A. Mumps
- B. Diphtheria
- C. Rubella
- D. Measles

Answer: B

Rational: Schick Test is a skin test used to determine an individual's susceptibility to diphtheria. It involves injecting a small amount of diphtheria toxin into the skin. If the person is not immune to diphtheria (i.e., they have not been vaccinated or have not had the disease), they will develop a reaction (a redness or swelling at the site of injection). If they are immune, there will be no reaction.

56. Which is the earliest sign of rickets?

- A. Craniotabes
- B. Bow Legs
- C. Harrison's Groove
- D. Rickety Rosary

Answer: A

Rational: Craniotabes is the earliest sign of rickets. Craniotabes refers to the softening of the skull bones, particularly the parietal and frontal bones. This softening occurs due to a deficiency in vitamin D, which is essential for calcium absorption and bone mineralization.

57. Dandiya is the traditional folk dance of

- A. Karnataka
- B. Uttar Pradesh
- C. Gujarat
- D. Sikkim

Answer: C

Rational: Dandiya: This is a traditional dance performed during the Navratri festival in Gujarat. It involves rhythmic movements with sticks (dandiyas) and is typically performed in a circle.

58. Effective approach in preventing pulmonary embolism is to prevent

- A. Diabetes Mellitus
- B. Deep Vein Thrombosis
- C. Chronic Obstructive Pulmonary Disease
- D. Heart Disease

Answer: B

Rational: Pulmonary embolism (PE) often occurs as a complication of DVT. DVT involves the formation of blood clots in the deep veins of the legs or other part of the body. If these clots break loose, they can travel to the lungs and cause a pulmonary embolism. Therefore, preventing DVT is crucial in reducing the risk of PE.

59. Which is not a therapeutic communication technique?

- A. Reflection
- B. Informing
- C. Humour
- D. Automatic response

Answer: D

Rational: Automatic response: This refers to reacting to a situation with pre-programmed or habitual responses without genuine engagement or thought. It is not considered a therapeutic communication technique because it does not facilitate meaningful interaction or understanding.

60. The number of new cases occurring in a defined population during a specified period of time is called

- A. Incidence
- B. Prevalence
- C. Morbidity
- D. Point Prevalence

Answer: A

Rational: Incidence refers to the number of new cases of a disease that occur in a defined population during a specified period of time. It is a measure of how quickly a disease is spreading within a population.

Prevalence, on the other hand, refers to the total number of cases of a disease present in a population at a specific point in time. It includes both new and existing cases.

Morbidity refers to the state of being ill or diseased. Point prevalence is the number of cases of a disease present in a population at a specific point in time.

61. Which is the process of assigning specific duties?

- A. Communication
- B. Supervision
- C. Coordination
- D. Delegation

Answer: D

Rational: Delegation is the process of assigning specific duties to others. It involves entrusting tasks to others while maintaining accountability for the outcomes. Delegation is an important skill for leaders and managers, as it can help to improve efficiency, productivity, and employee development.

62. Which one of the following is the last part of the small intestine?

- A. Jejunum
- B. Ileum
- C. Appendix
- D. Duodenum

Answer: B

Rational: The small intestine is divided into three sections: the duodenum, the jejunum, and the ileum. The ileum is the final section and is responsible for absorbing nutrients and vitamins that were not absorbed in the previous sections.

The ileum is the final section of the small intestine, located between the jejunum and the large intestine (specifically, the cecum). The ileum continues the process of nutrient absorption, particularly for vitamin B12 and bile acids. It is also involved in absorbing remaining nutrients not absorbed by the jejunum. The ileum ends at the ileocecal valve, which controls the passage of digested material into the large intestine.

63. Where does the fertilization take place?

- A. Infundibulum
- B. Isthmus
- C. Ampulla

D. Ovary

Answer: C

Rational: The ampulla is the widest and longest part of the fallopian tube, located between the infundibulum and the isthmus. This is the most common site for fertilization. The ampulla provides a suitable environment for sperm to meet the egg. Once the sperm meets the egg, fertilization occurs, forming a zygote.

64. An individual expressing his failures and difficulties by blaming others is known as

- A. Sublimation
- B. Denial
- C. Projection
- D. Repression

Answer: C

Rational: Projection is a defense mechanism where individuals attribute their own undesirable traits, feelings, or failures to other people. By blaming others for their own shortcomings or problems, they avoid confronting their own issues.

65. What nutrient deficiency causes goiter?

- A. Carbohydrate
- B. Protein
- C. Iodine
- D. Calcium

Answer: C

Rational: Goiter is an abnormal enlargement of the thyroid gland, which can occur due to inadequate levels of iodine in the diet. Iodine is essential for the production of thyroid hormones, which regulate metabolism and other bodily functions. When there is insufficient iodine, the thyroid gland cannot produce enough thyroid hormones, leading to an enlargement of the gland in an attempt to compensate.

66. Standards of mental health practices are published by

- A. Trained Nurses Association of India
- B. State Nursing Council
- C. American Nurses Association
- D. Indian Nursing Council

Answer: C

Rational: American Nurses Association (ANA) is a professional organization that provides guidelines and standards for nursing practice, including mental health practices. They publish standards that guide the practice of mental health nursing and the delivery of mental health care.

67. Which of the following is a biodegradable material?

- A. Plastic bag
- B. Wood
- C. Nuclear waste
- D. Aluminium

Answer: B

Rational: Wood is biodegradable. It naturally decomposes over time through the action of microorganisms like bacteria and fungi. When wood decomposes, it breaks down into organic matter that can be reused by the environment.

68. Which of the following metals is in liquid state at room temperature?

- A. Mercury
- B. Sulphur
- C. Sodium
- D. Coal

Answer: A

Rational: Mercury is unique among metals due to its liquid state at room temperature. It has a melting point of approximately 38.83°C(-37.89°F), which means it remains liquid at temperatures well above the freezing point. Historically, mercury has been used in thermometers, barometers, and various scientific instruments. It is also found in some electrical switches and batteries. Due to its toxicity, the use of mercury is now more regulated.

69. Which one of the following is the process of urination resulting from voluntary and involuntary muscles?

- A. Glomerular process
- B. Prostate process
- C. Kidney process
- D. Micturition process

Answer: D

Rational: Micturition, also known as urination, is the process of expelling urine from the body. It involves both voluntary and involuntary muscles. The involuntary muscles, such as the detrusor muscle of the bladder, contract to expel urine. The voluntary muscles, such as the pelvic floor muscles, help to control the flow of urine.

70. How many drops per minute would you administer when the doctor's order states that the client should receive 1000 cc of fluid for 8 hours and the IV set delivers 20 gtts per cc?

- A. 51 gtts
- B. 48 gtts
- C. 42 gtts
- D. 31 gtts

Answer: C

Rational: 1. Calculate the total number of drops to be administered:

- The IV set delivers 20 drops per cc.
- Total fluid to be administered: 1000 cc.
- Total number of drops = Total fluid (cc) × Drops per cc
- Total number of drops = $1000 \text{ cc} \times 20 \text{ gtts/cc} = 20,000 \text{ gtts}$

2. Determine the total time in minutes:

- The total time for administration is 8 hours.
- Convert hours to minutes: $8 \text{ hours} \times 60 \text{ minutes/hour} = 480$

3. Calculate the number of drops per minute:

- Drops per minute = Total number of drops / Total time in minutes
- Drops per minute = $20,000 \text{ gtts} / 480 \text{ minutes} = 41.67 \text{ gtts/min}$

71. Wermer's syndrome is considered as

- A. MEN II
- B. MEN IV
- C. MEN I
- D. MEN III

Answer: C

Rational: Verner's Syndrome is another name for **Multiple Endocrine Neoplasia Type 1 (MEN I)**. MEN I is characterized by a triad of endocrine disorders:

- **Primary Hyperparathyroidism:** Often due to hyperplasia or tumors of the parathyroid glands.
- **Pancreatic Endocrine Tumors:** Tumors such as gastrinomas, insulinomas, or VIPomas found in the pancreas.
- **Pituitary Adenomas:** Tumors of the pituitary gland that can cause various hormonal imbalances.

MEN II: This type is divided into MEN IIA (Sipple syndrome) and MEN IIB, characterized by different combinations of endocrine tumors, including medullary thyroid carcinoma, pheochromocytomas, and primary hyperparathyroidism (MEN IIA), or mucosal neuromas and a marfanoid habitus (MEN IIB).

72. Bile salts are important for digestion of

- A. Protein
- B. Iron
- C. Fat
- D. Carbohydrate

Answer: C

Rational: Bile salts are produced by the liver and stored in the gallbladder. They are released into the small intestine where they emulsify dietary fats. This means they break down large fat globules into smaller droplets, increasing the surface area available for pancreatic lipase (an enzyme) to act. This emulsification process is essential for the efficient digestion and absorption of fats.

73. Which drug is used to treat HIV/AIDS?

- A. Ampicillin
- B. Streptomycin
- C. Zidovudine
- D. Dexamethasone

Answer: C

Rational: Zidovudine (AZT) is an antiretroviral medication used in the treatment of HIV/AIDS. It belongs to a class of drugs known as **nucleoside reverse transcriptase inhibitors (NRTIs)**. Zidovudine works by inhibiting the reverse transcriptase enzyme, which is crucial for the replication of HIV. This helps to reduce the viral load in the body and slow down the progression of the disease.

74. Which one of the following aspects is not considered as an indicator of a hospital system?

- A. Quality of Care
- B. Machinery
- C. Patient Satisfaction
- D. Public Relations

Answer: B

Rational: Machinery is not considered as an indicator of a hospital system. While machinery is certainly an important component of a hospital, it is not a direct indicator of the overall quality or effectiveness of the hospital system. The quality of care, patient satisfaction, and public relations are all key factors that contribute to the overall success and reputation of a hospital system. Machinery can be a tool to assist in providing care, but it is not a substitute for skilled healthcare professionals, effective processes, and a patient-centered approach.

75. A framework for quality care does not include:

- A. Critical Thinking
- B. Professional Standards
- C. Mission, Values
- D. Care Guidelines

Answer: A

Rational: Critical Thinking is not typically listed as a framework component for quality care. **Critical Thinking**, while essential for healthcare professionals to make informed decisions and problem-solve effectively, is more of a skill or process rather than a structural component of a quality care framework. It is a tool used within the framework to help achieve the standards and guidelines set by the framework.

76. The three-tier system of Panchayati Raj was recommended by

- A. Balwant Rai Mehta Committee
- B. Jai Prakash Narain Committee
- C. Kaka Kalelkar Committee
- D. Simon Commission

Answer: A

Rational: The Balwant Rai Mehta Committee, appointed in 1957, was tasked with evaluating the functioning of the Panchayat Raj system and making recommendations for its improvement. The committee is credited with recommending the three-tier system of Panchayat Raj, which includes:

1. **Gram Panchayat:** The village level.
2. **Panchayat Samiti:** The block level.

3. **Zila Parishad:** The district level.

77. Which sampling could be effective during a sampling frame is difficult to identify in research?

- A. Snowball
- B. Convenient
- C. Purposive
- D. Quota

Answer: A

Rational: Snowball Sampling is a non-probability sampling technique where existing study subjects recruit future subjects from their acquaintances. This method is particularly useful when dealing with hard-to-reach or hidden populations, where a comprehensive sampling frame is difficult to identify. It allows researchers to leverage existing networks to find participants.

78. The normal IQ level of human beings is

- A. 110 to 120
- B. 80 to 100
- C. 120 and above
- D. 90 to 110

Answer: D

Rational: The normal IQ level of human beings is considered to be 90 to 110. This range is within one standard deviation from the mean. It includes the majority of the population (about 68%). People with IQ scores in this range are considered to have average cognitive abilities.

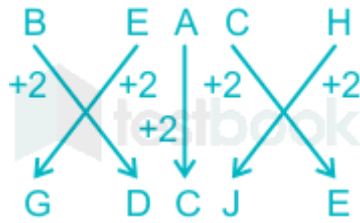
79. In a certain code language, if BEACH is coded as GDCJE, then how is FLUID coded in that language?

- A. GLXOI
- B. HNWKF
- C. NHWFK
- D. UOLRW

Answer: C

Rational: The pattern followed is:

BEACH: GDCJE



As the obtained code is “NHFWK.”

80. Which of the following is termed as the fetal blood vessel lying over the internal os, in front of the presenting part?

- A. Vasa previa
- B. Cord Prolapse
- C. Cord Presentation
- D. Occult Cord Prolapse

Answer: A

Rational: Vasa previa refers to a condition where the fetal blood vessels, which are part of the umbilical cord or placenta, lie over the internal cervical os (the opening of the cervix) in front of the presenting part of the fetus. This situation can be dangerous because if these vessels rupture during labour, it can lead to severe fetal bleeding and compromised oxygen supply.

81. The memory disorder that affects older adults is

- A. Dystrophy
- B. Insomnia
- C. Dyspnoea
- D. Dementia

Answer: D

Rational: Dementia is a broad term used to describe a range of progressive neurological disorders that lead to a decline in cognitive function, including memory, reasoning, and the ability to perform daily activities. It is most commonly seen in older adults and includes conditions such as Alzheimer’s disease.

82. In which condition the projectile vomiting is seen?

- A. Megacolon
- B. Intussusception
- C. Duodenal atresia
- D. Pyloric stenosis

Answer: D

Rational: Pyloric stenosis is a condition in infants where the pylorus, the muscular valve that connects the stomach to the small intestine (duodenum), becomes abnormally thickened and narrowed. This narrowing obstructs the passage of food from the stomach into the small intestine. One of the hallmark symptoms of pyloric stenosis is projectile vomiting, which occurs shortly after feeding. The vomiting is forceful and can shoot out several feet from the infant's mouth. This is due to the stomach's inability to effectively empty because of the obstruction.

83. The Pong dam is built on which of the following rivers?

- A. Beas
- B. Ravi
- C. Chenab
- D. Sutlej

Answer: A

Rational: The Pong dam is built on the Beas river in Himachal Pradesh, India. The dam was built as part of the Beas Project, and construction began in 1961 and was completed in 1974.

84. Which disease is Fatal brain disorders that are caused by the prion protein?

- A. Mad Cow Disease
- B. Creutzfeldt-Jakob Disease
- C. Lewy Body Disease
- D. Pick's Disease

Answer: B

Rational: Creutzfeldt-Jakob disease (CJD) is a fatal brain disorder caused by prion proteins. Early symptoms include memory problems, behavioural changes, poor coordination, and visual disturbances. Symptoms get worse quickly, usually within several weeks to a few months. CJD is caused by an abnormal infectious protein in the brain called a prion.

Prions are misfolded proteins that can cause other proteins to misfold, leading to a chain reaction that damages brain tissue.

Mad Cow Disease (Bovine Spongiform Encephalopathy, BSE) is a prion disease that affects cattle and can be transmitted to humans through contaminated meat. In humans, it can lead to a condition called variant Creutzfeldt-Jakob disease (vCJD).

85. The term “Leg Before Wicket” is associated with which game/sport?

- A. Baseball

- B. Cricket
- C. Volley Ball
- D. Football

Answer: B

Rational: Leg Before Wicket (LBW): This term is a specific rule in cricket. It occurs when a batsman is out because a ball that would have hit the stumps is intercepted by any part of the batsman's body (usually the legs) before the ball hits the bat or the bat is used to block it. For LBW to be given, the ball must be on a trajectory to hit the stumps and not have been influenced by the bat or be outside the designated area where the batsman can play.

86. Which is the main characteristic of scientific research?

- A. Historical Research
- B. Experimental Research
- C. Theoretical Research
- D. Empirical Research

Answer: D

Rational: Empirical Research is a core characteristic of scientific research. It involves collecting data through observation, experimentation, or experience to answer specific research questions or test hypotheses. Empirical research is based on measurable evidence and aims to produce reliable and valid results that can be tested and verified.

87. In which year the CSSM Programme was initiated?

- A. 1982
- B. 1992
- C. 1990
- D. 1986

Answer: B

Rational: The Child Survival and Safe Motherhood (CSSM) Programme was launched in India on August 20, 1992. The program was supported by the World Bank, UNICEF, and other donors. The CSSM Programme's goals were to:

- Improve the health of women and children.
- Reduce mortality rates for mothers, infants, and children.
- Achieve nine of the 17 goals set out in the 1983 national health policy for maternal and child health.

The CSSM Programme combined interventions for child survival and maternal health. The child survival component included: Immunization, Control of diarrheal diseases, Acute respiratory infections, Vitamin A, and Essential newborn care.

The maternal health component included antenatal care and deliveries in institutions.

88. Which of the following develops a tough coat and is gradually converted into a seed in plants?

- A. Ovule
- B. Pollen grains
- C. Embryo
- D. Zygote

Answer: A

Rational: The ovule is the structure in plants that, after fertilization, develops into a seed. It undergoes a process where it develops a tough coat and eventually becomes a seed, containing the embryo and stored nutrients necessary for the growth of the new plant.

89. How much population is covered by a community health centre?

- A. 20000 to 30000
- B. 3000 to 5000
- C. 80000 to 12000
- D. 15000 to 45000

Answer: C

Rational: The healthcare system of the country involves a three-tier system with Sub Health Centre (Rural), Primary Health Centre (Urban and Rural), and Community Health Centre (Urban and Rural) as the three pillars of Primary Health Care System in India.

As per established norms, in rural areas a Sub Health Centre for a population of 5,000 (in plain) and 3,000 (in hilly and tribal areas), a Primary Health Centre for a population of 30,000 (in plains) and 20,000 (in hilly and tribal areas), and Community Health Centre for a population of 1,20,000 (in plains) and 80,000 (in hilly and tribal areas) is suggested. Further, for urban areas one Urban Health Wellness Centre is recommended for a urban population of 15,000 to 20,000, one U-PHC for a urban population of 30,000 to 50,000, and one U-CHC for every 2.5 lakh population in non-metro.cities (above 3 lakh population)and one U-CHC te every 5 lakh population in the metro cities. further, District Hospital (DH), Sub District Hospital (SDH) and First Referral Unit provide secondary care services for rural & urban area

90. Which one of the following is an example of the risk for infection in nursing diagnosis?

- A. Actual Nursing Diagnosis
- B. Wellness Nursing Diagnosis
- C. Diagnostic Nursing Diagnosis
- D. Risk Nursing Diagnosis

Answer: D

Rational: Risk Nursing Diagnosis: This type of diagnosis identifies potential problems that a patient may be at risk of developing due to specific actions or factors. For example, “risk for infection” is a risk nursing diagnosis because it indicates that the patient is at an increased risk of developing an infection based on their current health status or medical conditions.

91. The maternal mortality ratio is expressed in terms of

- A. 1000 live births
- B. 100000 live births
- C. 10000 live births
- D. 100 live births

Answer: B

Rational: The maternal mortality ratio (MMR) is a measure of the number of maternal deaths per 100,000 live births. It is used to assess the health care system’s effectiveness in preventing maternal deaths and to monitor trends in maternal health over time. This ratio helps highlight the risk of maternal mortality relative to the number of live births, providing a more standardized and comparable measure across different populations and time periods.

92. Which department issues PAN number?

- A. Revenue
- B. Economic Affairs
- C. Income Tax
- D. Financial Affairs

Answer: C

Rational: The Income Tax Department in India is responsible for issuing PAN (Permanent Account Number) cards. This unique 10-digit alphanumeric code is required for various financial transactions in India, including income tax filing, bank account opening, and property transactions.

93. What is the frictional force exerted by the fluids also called?

- A. Effort
- B. Drag

- C. Core
- D. Slag

Answer: B

Rational: Drag is the frictional force exerted by fluids (such as air or water) that opposes the motion of an object moving through the fluid. It is a critical factor in various applications, including aerodynamics and hydrodynamics, where it affects the performance and efficiency of vehicles, aircraft, and other objects moving through fluids.

94. A train passes a station platform in 65 seconds and a man standing on the platform in 49 seconds. If the speed of the train is 29 m/s, what is the length of the platform? (meter)

- A. 464
- B. 494
- C. 474
- D. 484

Answer: A

Rational: Given:

- Speed of the train = 29 m/s
- Time taken to pass the platform = 65 seconds

1. Time taken to pass a man = 49 seconds:

The length of the train is:

Length of the train = $29 \text{ m/s} \times 49 \text{ s} = 1421 \text{ meters}$

2. The total distance to pass the platform:

Total distance = $29 \text{ m/s} \times 65 \text{ s} = 1885 \text{ meters}$

3. Therefore, the length of the platform is:

Length of the platform = $1885 \text{ m} - 1421 \text{ m} = 464 \text{ meters}$

95. The ancient Harappan city of Lothal is located in the state of

- A. Gujarat
- B. Uttar Pradesh
- C. Rajasthan
- D. Punjab

Answer: A

Rational: Lothal is one of the southernmost cities of the ancient Indus Valley Civilization, also known as the Harappan Civilization. It is located in the modern state of **Gujarat, India**, near the Gulf of Khambhat.

96. Nominal variables are also known as

- A. categorical variable
- B. ordinal variable
- C. confounding variable
- D. discrete variable

Answer: A

Rational: Nominal variables are a type of categorical variable used to label or name categories without implying any order or ranking among them. Examples include gender, color, or types of fruits. These variables are purely qualitative and represent different groups or categories that do not have a numerical or ordered relationship.

97. Which one of the following is a function of the liver?

- A. Concentration of bile
- B. Elimination of carbohydrates
- C. Secretion of cholecystokinin
- D. Synthesis of plasma protein

Answer: D

Rational: The liver plays a crucial role in the synthesis of plasma proteins such as albumin, which helps maintain the osmotic pressure of blood; fibrinogen and clotting factors, which are essential for blood clotting; and other proteins that are vital for transporting substances in the blood. This is a primary function of the liver and highlights its role in maintaining various bodily functions, especially related to the circulatory system.

98. What is the SI unit of electric field strength?

- A. Henry/Coulomb
- B. Newton/Coulomb
- C. Coulomb/Newton
- D. Joules/Coulomb

Answer: B

Rational: The electric field strength (E) is defined as the force (F) experienced by a charge (q) per unit charge.

Mathematically, it is expressed as:

$$E = \frac{F}{q}$$

- The SI unit of force (F) is the Newton (N).
- The SI unit of charge (q) is the Coulomb (C).

Therefore, the SI unit of electric field strength is:

$$\text{Unit of } E = \frac{\text{Newton}}{\text{Coulomb}} \text{ (N/C)}$$

99. Which assessment method will be used after the client has been discharged?

- A. Concurrent Evaluation
- B. Auditing
- C. Retrospective Evaluation
- D. Quality Assurance

Answer: C

Rational: Retrospective evaluation is the most appropriate assessment method after a client has been discharged. It involves reviewing the client's medical records and other relevant information to assess the quality and effectiveness of the care provided. This method allows for a comprehensive analysis of the client's experience and outcomes.

100. Which one of the following is the major cause of postpartum haemorrhage?

- A. Incoordinate Uterine Action
- B. Pre-Eclampsia
- C. Atonic Uterus
- D. Thrombin

Answer: C

Rational: Atonic Uterus is the major cause of postpartum hemorrhage (PPH), accounting for about 70-80% of cases. An atonic uterus occurs when the uterus fails to contract adequately after delivery, leading to excessive bleeding.

The normal contraction of the uterus after childbirth helps to compress the blood vessels and reduce bleeding. When the uterus remains relaxed and does not contract effectively, it results in heavy bleeding, which can be life-threatening if not managed promptly.



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