CUET-UG Physical Education Sample Paper - 13

Duration: 1 Hour **Maximum Marks: 250**

Instructions

- This paper contains a total of 50 Multiple Choice Questions.
- Each correct answer carries **+5 marks**.
- Each incorrect answer carries **-1 mark**.
- No negative marking for unattempted questions.

Passage I

Read the passage below carefully. The questions that follow (Questions 1 to 5) are based on the information provided in this text. Choose the one best answer for each question.

"The National Rural Health Mission (NRHM) was launched to provide accessible, affordable, and quality health care to the rural population, especially the vulnerable groups. In the context of physical education and community health, the mission emphasizes nutritional security through schemes like the Mid-Day Meal (MDM). Physical educators play a pivotal role in identifying communicable diseases like Malaria or Tuberculosis and non-communicable ones like Diabetes and Hypertension within the student population. Furthermore, for Children with Special Needs (CWSN), inclusive strategies such as 'Adaptive Physical Education' are integrated to ensure they achieve physical literacy. The focus remains on primary healthcare, sanitation, and hygiene to reduce the disease burden. The synergy between school health programs and national missions ensures a holistic development of the youth, addressing both physical fitness and clinical health parameters."

Q1. Identify the primary objective of the Mid-Day Meal scheme mentioned in the context of school health.

(A) To provide professional sports training

(B) To ensure nutritional security and improve school attendance

(C) To conduct international sports exchange programs

(D) To replace the Physical Education curriculum

Q2. Based on the passage, which of the following is categorized as a Non-Communicable Disease (NCD)?

(A) Tuberculosis

(B) Malaria

(C) Diabetes

(D) Cholera

Q3. What strategy is suggested in the passage to integrate Children with Special Needs (CWSN) into physical activities?

(A) Exclusion from all physical tasks

(B) Adaptive Physical Education

(C) Providing only theoretical lessons

(D) Competitive sports with elite athletes

Q4. Which government mission is explicitly mentioned as the umbrella for rural health improvement in the text?

(A) Khelo India Mission

(B) Fit India Movement

(C) National Rural Health Mission (NRHM)

(D) Swachh Bharat Abhiyan

(E)

Q5. According to the passage, the synergy between school health programs and national missions focuses on:

(A) Purely academic excellence

(B) Professional athlete recruitment only

(C) Holistic development, addressing fitness and clinical health

(D) Constructing large-scale stadiums in rural areas

Passage II

Read the passage below carefully. The questions that follow (Questions 6 to 10) are based on the information provided in this text. Choose the one best answer for each question.

"Psychology in sports is the study of how psychological factors affect performance and how participation in sport and exercise affect psychological and physical factors. One of the most prominent areas is personality theory. Jung's classification focuses on Introverts and Extroverts, while Sheldon's Somatotypes focus on body types like Endomorph, Mesomorph, and Ectomorph. Additionally, the 'Big Five' theory provides a broader spectrum (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism). Understanding these helps coaches apply the right 'Motivation'—be it Intrinsic or Extrinsic. However, sports also witness 'Aggression', which can be 'Hostile' (intent to harm) or 'Instrumental' (intent to achieve a goal via force). Managing these psychological constructs is essential for peak performance. A mesomorph athlete might be naturally inclined toward power sports, but without high conscientiousness and intrinsic motivation, their potential may remain untapped."

Q6. Which personality theory classifies individuals based on body types (Somatotypes)?

(A) Jung's Theory

(B) The Big Five Theory

(C) Sheldon's Classification

(D) Freud's Psychoanalytic Theory

Q7. According to the passage, 'Instrumental Aggression' is characterized by:

(A) The sole intent to cause physical injury

(B) Behavior intended to achieve a goal through the use of force

(C) A state of relaxation and calm

(D) Verbal abuse directed at the referee

Q8. An athlete who competes primarily for the internal satisfaction and joy of the sport is exhibiting:

(A) Extrinsic Motivation

(B) Hostile Aggression

(C) Intrinsic Motivation

(D) Neuroticism

Q9. Which component of the 'Big Five' personality theory relates to being organized, dependable, and disciplined?

(A) Extraversion

(B) Conscientiousness

(C) Openness

(D) Neuroticism

Q10. Which somatotype, according to Sheldon's classification mentioned in the text, is typically associated with a muscular and athletic build?

(A) Ectomorph

(B) Endomorph

(C) Mesomorph

(D) Introvert

Q11. According to Jung's classification, individuals who are shy, quiet, and prefer working alone are known as:

(A) Extroverts

(B) Introverts

(C) Ambiverts

(D) Mesomorphs

Q12. The 'Big Five' personality trait that describes a person's level of emotional stability is:

(A) Agreeableness

(B) Openness

(C) Neuroticism

(D) Extraversion

Q13. Which of the following is an example of 'Hostile Aggression' in sports?

(A) A hard tackle in football to win the ball

(B) Punching an opponent out of anger after losing a point

(C) Using a loud voice to call for a pass

(D) Aggressive sprinting to finish a race

Q14. Extrinsic motivation in an athlete is best exemplified by:

(A) Playing for the love of the game

(B) Training hard to win a cash prize

(C) Exercising to feel mentally refreshed

(D) Improving technique for self-satisfaction

Q15. A person with a round body, soft tissues, and a tendency to gain fat easily is classified by Sheldon as an:

(A) Ectomorph

(B) Mesomorph

(C) Endomorph

(D) Ambivert

Q16. What are the standard dimensions of a Handball court?

(A) 40 m × 20 m

(B) 28 m × 15 m

(C) 18 m × 9 m

(D) 100 m × 50 m

Q17. In the game of Kabaddi, the term 'Cant' refers to:

(A) The technical name for a foul

(B) The continuous chanting of the word 'Kabaddi' by the raider

(C) The act of catching the raider

(D) A specific type of kick

Q18. The skill of 'Dribbling' and 'Hitting' are fundamental to which of the following games?

(A) Kho-Kho

(B) Hockey

(C) Volleyball

(D) Kabaddi

Q19. Which stage of Suryanamaskar involves the 'Ashtanga Namaskara' (eight-limbed salutation)?

(A) 4th stage

(B) 6th stage

(C) 2nd stage

(D) 12th stage

Q20. The 'Vrikshasana' (Tree Pose) is primarily beneficial for improving:

(A) Cardiovascular endurance

(B) Balance and focus

(C) Lung capacity

(D) Digestive speed

Q21. In Yogic 'Kriyas', the process of cleansing the nasal passage with water is known as:

(A) Dhauti

(B) Neti

(C) Nauli

(D) Kapalbhati

Q22. 'Sheetali' and 'Bhramari' are types of:

(A) Asanas

(B) Mudras

(C) Pranayama

(D) Kriyas

Q23. Which Kriya involves swallowing a long strip of cloth to cleanse the stomach?

(A) Vaman Dhauti

(B) Vastra Dhauti

(C) Trataka

(D) Basti

Q24. Which of the following is classified as a 'Micro-Nutrient'?

(A) Carbohydrates

(B) Proteins

(C) Fats

(D) Vitamins

Q25. A postural deformity where the knees touch each other in a normal standing position is called:

(A) Bow Legs

(B) Knock Knees

(C) Flat Foot

(D) Kyphosis

Q26. A 'Greenstick Fracture' is most commonly observed in:

(A) Elderly people

(B) Children

(C) Professional athletes

(D) Weightlifters

Q27. Which nutrient is known as the 'Building Block' of the human body?

(A) Vitamin C

(B) Protein

(C) Iron

(D) Carbohydrate

Q28. The postural deformity 'Lordosis' is characterized by an increased inward curve of the:

(A) Thoracic spine

(B) Cervical spine

(C) Lumbar spine (Lower back)

(D) Knees

Q29. What type of fracture occurs when a bone is broken into more than two fragments?

(A) Oblique Fracture

(B) Transverse Fracture

(C) Comminuted Fracture

(D) Stress Fracture

Q30. The 'Major Dhyan Chand Khel Ratna Award' is given for:

(A) Outstanding coaching over 20 years

(B) Spectacular performance in sports over a period of 4 years

(C) Lifetime contribution to sports development

(D) Winning a gold medal in a school tournament

Q31. Which award is specifically meant to honor eminent coaches in India?

(A) Arjuna Award

(B) Dronacharya Award

(C) Padma Shri

(D) Maulana Abul Kalam Azad Trophy

Q32. The minimum eligibility to become a Physical Education Teacher in a senior secondary school in India usually requires which degree?

(A) B.A. in History

(B) M.P.Ed / B.P.Ed

(C) Diploma in Yoga only

(D) B.Com

Q33. The 'Arjuna Award' was instituted in which year?

(A) 1951

(B) 1961

(C) 1985

(D) 1991

Q34. Exercises where the muscle length remains constant during contraction (e.g., pushing against a wall) are called:

(A) Isotonic Exercises

(B) Isometric Exercises

(C) Isokinetic Exercises

(D) Fartlek Exercises

Q35. The 'Fartlek Training' method is primarily used to develop:

(A) Explosive Power

(B) Speed

(C) Endurance

(D) Flexibility

Q36. 'PNF' (Proprioceptive Neuromuscular Facilitation) is a technique used to improve:

(A) Cardiovascular fitness

(B) Muscular strength

(C) Flexibility

(D) Agility

Q37. Which type of training involves movements at a constant speed throughout the full range of motion, usually requiring specialized machines?

(A) Isotonic

(B) Isokinetic

(C) Isometric

(D) Interval training

Q38. The 'Flamingo Balance Test' is designed to measure:

(A) Upper body strength

(B) Static Balance

(C) Speed

(D) Flexibility

Q39. The 'Rikli & Jones Test' is specifically designed for which population group?

(A) Children under 10

(B) Elite athletes

(C) Senior Citizens

(D) Pregnant women

Q40. Which fitness test is used to measure agility and speed by running between two lines 10 m apart?

(A) 600 m Run/Walk

(B) 4×10 m Shuttle Run

(C) Sit and Reach Test

(D) Push-ups

Q41. When a sprinter pushes against the starting blocks and the blocks push back with an equal force, which of Newton's Laws is being applied?

(A) Law of Inertia

(B) Law of Acceleration

(C) Law of Action and Reaction

(D) Law of Gravitation

Q42. In a 'Third Class Lever', where is the 'Effort' located?

(A) Between the Fulcrum and the Load

(B) At one end with the Fulcrum in the middle

(C) Under the Load

(D) At the Fulcrum point

Q43. Hypertrophy of muscles due to regular exercise refers to:

(A) Decrease in muscle size

(B) Increase in muscle size and strength

(C) Weakening of tendons

(D) Decrease in blood flow to muscles

Q44. Cardiac Output is calculated as:

(A) Stroke Volume ÷ Heart Rate

(B) Stroke Volume × Heart Rate

(C) Heart Rate + Blood Pressure

(D) Tidal Volume × Breathing Rate

Q45. Which of the following is a symptom of 'Greenstick Fracture'?

(A) Bone breaks into multiple pieces

(B) Bone bends and cracks but does not break completely

(C) Bone pierces through the skin

(D) Bone is crushed flat

Q46. The 'Big Five' trait 'Openness' refers to:

(A) Being talkative and energetic

(B) Curiosity and willingness to try new experiences

(C) Being organized and punctual

(D) Tendency to experience negative emotions

Q47. Which of the following is NOT a macro-nutrient?

(A) Protein

(B) Carbohydrate

(C) Calcium

(D) Fat

Q48. The term 'Isotonic' literally means:

(A) Same length

(B) Same tension

(C) Same speed

(D) Same volume

Q49. Which Asana is often referred to as the 'Mountain Pose' and is the starting position of Suryanamaskar?

(A) Tadasana

(B) Padahastasana

(C) Bhujangasana

(D) Ashwa Sanchalanasana

Q50. In the context of CWSN, 'Special Olympics' is primarily for individuals with:

(A) Physical disabilities only

(B) Intellectual disabilities

(C) Visual impairment only

(D) Hearing impairment only

Detailed Solutions

Q1.

Solution

Concept:

The Mid-Day Meal (MDM) scheme is a centrally sponsored school meal program in India which is designed to better the nutritional standing of school-age children nationwide. In the context of Physical Education and school health, it serves as a foundational pillar for "Nutritional Security." Without proper caloric and nutrient intake, a student cannot achieve physical literacy or participate effectively in physical activities.

Solution:

1. The passage explicitly links the Mid-Day Meal (MDM) to the concept of "nutritional security" within the student population.
2. Beyond just feeding, the primary objectives of this scheme are to protect children from hunger, increase school enrollment and attendance, and improve socialization among castes (by eating together).
3. In a school health program, the MDM ensures that students have the energy levels required for both academic concentration and physical education drills.
4. Option (A) is incorrect because MDM is a nutritional program, not a sports training academy.
5. Option (C) and (D) are irrelevant as the program is domestic and supports the curriculum rather than replacing it.
6. Therefore, based on the text and general health guidelines, the objective is to ensure nutrition and attendance.

Final Answer: To ensure nutritional security and improve school attendance.

Answer: (B)

Q2.

Solution

Concept:

Diseases are broadly classified into two categories: Communicable (Infectious) and Non-Communicable (NCDs/Chronic). Communicable diseases are spread through pathogens (bacteria, viruses, etc.) and can be transmitted from one person to another. Non-communicable diseases are generally long-lasting, result from a combination of genetic, physiological, environmental, and behavioral factors, and cannot be spread from person to person.

Solution:

1. Tuberculosis (A) is caused by bacteria and is spread through the air, making it a communicable disease.
2. Malaria (B) is caused by a parasite transmitted through mosquito bites; it is an infectious disease.
3. Diabetes (C) is a chronic metabolic disorder characterized by high blood sugar levels. It is caused by lifestyle factors or genetics and cannot be "caught" from someone else.
4. Cholera (D) is an acute diarrheal infection caused by ingestion of contaminated food or water, classifying it as communicable.
5. The passage lists Diabetes and Hypertension as examples of non-communicable diseases common in the modern youth population.
6. Thus, Diabetes is the correct classification for an NCD.

Final Answer: Diabetes is a Non-Communicable Disease.

Answer: (C)

Q3.

Solution

Concept:

Inclusive education in physical activity involves modifying environments and instructions to accommodate all learners. Children with Special Needs (CWSN) require specific methodologies to participate alongside their peers. This field is specialized and known as 'Adaptive Physical Education' (APE).

Solution:

1. The passage mentions that for CWSN, inclusive strategies are integrated to ensure they achieve physical literacy.
2. 'Adaptive Physical Education' is defined as a diversified program of developmental activities, games, and rhythms suited to the interests, capacities, and limitations of students with disabilities.
3. Option (A) is the opposite of inclusion (Exclusion).
4. Option (C) suggests only theoretical lessons, which denies the child the benefits of physical movement.
5. Option (D) might be dangerous or demotivating if the level is not adapted to the child's specific needs.
6. The specific terminology used in the passage and the standard PE syllabus is "Adaptive Physical Education."

Final Answer: Adaptive Physical Education.

Answer: (B)

Q4.

Solution

Concept:

Government missions provide the framework for public service delivery. Understanding which mission governs which sector is a frequent topic in CUET General Awareness and Physical Education sections.

Solution:

1. The passage begins by stating: "The National Rural Health Mission (NRHM) was launched to provide accessible, affordable, and quality health care to the rural population..."
2. While 'Fit India' and 'Khelo India' are real missions related to sports and fitness, they are not the ones identified in the text as the primary vehicle for rural health care delivery.
3. 'Swachh Bharat Abhiyan' focuses on sanitation, which is mentioned in the passage as a focus area, but it is not the "umbrella" mission named for rural health.
4. The abbreviation NRHM is clearly linked to the health status of the vulnerable groups in the provided text.
5. Therefore, according to the specific content provided, NRHM is the answer.

Final Answer: National Rural Health Mission (NRHM).

Answer: (C)

Q5.

Solution

Concept:

Holistic development refers to the development of the "whole" person—physically, mentally, and socially. In a school setting, the integration of health checks and physical fitness ensures that a student is not just "fit" in terms of muscle, but also "healthy" in terms of clinical markers (blood pressure, absence of disease).

Solution:

1. The final lines of the passage state: "The synergy... ensures a holistic development of the youth, addressing both physical fitness and clinical health parameters."
2. Option (A) is too narrow as it ignores the physical and clinical aspects.
3. Option (B) focuses on "elite" recruitment, which is not the goal of a general rural health mission.
4. Option (D) mentions infrastructure (stadiums), which, while helpful, is not the "synergy" or "holistic focus" described in the passage regarding health and education.
5. "Holistic development" as a concept always seeks to balance various aspects of human well-being, which aligns with the text's mention of fitness and clinical health.

Final Answer: Holistic development, addressing fitness and clinical health.

Answer: (C)

Q6.

Solution

Concept:

Somatotypes are a set of body types categorized by American psychologist William Herbert Sheldon. He proposed that body types are linked to personality traits. This classification is widely used in Physical Education to identify the suitability of an individual for specific sports based on their natural physical build.

Solution:

1. The passage explicitly states: "Sheldon's Somatotypes focus on body types like Endomorph, Mesomorph, and Ectomorph."
2. Jung's Theory (A) is based on psychological orientations like Introversion and Extraversion, not physical build.
3. The Big Five Theory (B) focuses on five broad dimensions of personality (OCEAN) and is purely psychological.
4. Sheldon's classification uses three specific terms: Endomorph (round/fat), Mesomorph (muscular/athletic), and Ectomorph (slim/thin).
5. Since the question asks for the theory based on body types (Somatotypes), Sheldon's Classification is the only correct fit.

Final Answer: Sheldon's Classification is the theory that identifies body types.

Answer: (C)

Q7.

Solution

Concept:

Aggression in sports is often categorized into Hostile Aggression and Instrumental Aggression. While 'Hostile' is driven by anger and the intent to harm, 'Instrumental' is a learned behavior where the primary goal is to achieve a positive outcome (like winning or gaining an advantage) through the use of force, without the primary intent being to injure the opponent.

Solution:

1. According to the text, 'Instrumental' aggression is defined as the "intent to achieve a goal via force."
2. Unlike hostile aggression, the motive here is functional; for example, a defender in soccer using their body weight to legally but forcefully push a striker off the ball to prevent a goal.
3. Option (A) describes Hostile Aggression.
4. Option (C) describes a state of "Arousal" or "Relaxation," which is the opposite of aggression.
5. Option (D) is a form of verbal aggression but does not meet the goal-oriented definition of 'Instrumental.'
6. Therefore, the behavior intended to achieve a goal via force is the correct definition.

Final Answer: Instrumental aggression is behavior intended to achieve a goal through force.

Answer: (B)

Q8.

Solution

Concept:

Motivation is the driving force behind an athlete's actions. It is classified into two types: Intrinsic (internal) and Extrinsic (external). Intrinsic motivation comes from within the individual, while extrinsic motivation involves external rewards like money, trophies, or fame.

Solution:

1. The passage refers to 'Intrinsic' and 'Extrinsic' motivation.
2. An athlete who plays for the "internal satisfaction and joy" is driven by personal enjoyment and the challenge of the activity itself.
3. This self-driven desire is the hallmark of Intrinsic Motivation.
4. Extrinsic motivation (A) would involve playing for a prize or to avoid punishment.
5. Hostile Aggression (B) and Neuroticism (D) are personality/behavioral traits, not types of motivation.
6. Therefore, internal satisfaction is synonymous with intrinsic motivation.

Final Answer: Playing for internal joy is Intrinsic Motivation.

Answer: (C)

Q9.

Solution

Concept:

The 'Big Five' model (also known as the Five-Factor Model or OCEAN) is a taxonomy for personality traits. The five factors are Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. Each represents a range between two extremes.

Solution:

1. The passage identifies the Big Five theory and mentions the trait of "Conscientiousness."
2. Conscientiousness involves tendencies to be organized, dependable, disciplined, and focused on achieving goals.
3. Extraversion (A) refers to sociability; Openness (C) refers to creativity; and Neuroticism (D) refers to emotional instability.
4. In a sports context, a highly conscientious athlete is more likely to follow a strict training regimen and stick to a diet.
5. Thus, the trait relating to organization and discipline is Conscientiousness.

Final Answer: Conscientiousness is the trait relating to being organized and disciplined.

Answer: (B)

Q10.

Solution

Concept:

Sheldon's Somatotypes categorize human physiques into three distinct groups. Each group is associated with different physical characteristics and potential for success in various sporting disciplines.

Solution:

1. The passage mentions Mesomorph as one of the three body types.
2. An Ectomorph (A) is typically lean, thin, and has long limbs (suited for long-distance running).
3. An Endomorph (B) has a rounder body with more body fat (suited for power events like shotput).
4. A Mesomorph (C) is characterized by a large bone structure, large muscles, and an overall athletic physique. These individuals usually find it easy to gain or lose weight and excel in strength and power sports.
5. Introvert (D) is a psychological term from Jung's theory, not a body type.
6. Therefore, the muscular and athletic build corresponds to the Mesomorph.

Final Answer: Mesomorph is associated with a muscular and athletic build.

Answer: (C)

Q11.

Solution

Concept:

Carl Jung was a Swiss psychiatrist who proposed a theory of personality based on how individuals interact with the world. He classified people into two primary types: Introverts and Extroverts. This classification helps in understanding how athletes process information and their preference for individual versus team environments.

Solution:

1. Introverts are individuals who direct their energy inward. They are typically shy, quiet, and reserved.
2. They often prefer solitary activities and may feel exhausted after prolonged social interaction.
3. In sports, an introvert might prefer individual sports like archery, long-distance running, or chess, where they can focus internally.
4. Extroverts (A) are the opposite; they are outgoing and thrive in social settings.
5. Ambiverts (C) fall in the middle of the spectrum, while Mesomorphs (D) refer to a physical body type, not a psychological trait.
6. Therefore, the description of being shy and preferring to work alone defines an Introvert.

Final Answer: Introverts are shy, quiet individuals who prefer working alone.

Answer: (B)

Q12.

Solution

Concept:

Neuroticism is one of the five dimensions of the Big Five personality traits. It is a measure of emotional stability and an individual's tendency to experience negative emotions such as anxiety, anger, or depression.

Solution:

1. Individuals who score high in Neuroticism are more likely to experience emotional instability and are prone to stress and mood swings.
2. Individuals who score low in Neuroticism are generally more emotionally resilient, calm, and stable under pressure.
3. Agreeableness (A) refers to how kind or cooperative a person is.
4. Openness (B) refers to creativity and being open to new experiences.
5. Extraversion (D) refers to how social and talkative an individual is.
6. Since the question asks about the level of emotional stability, Neuroticism is the correct psychological dimension.

Final Answer: Neuroticism is the Big Five trait describing emotional stability.

Answer: (C)

Q13.

Solution

Concept:

Aggression in sports is divided into Hostile and Instrumental. Hostile Aggression is reactive and impulsive. Its primary goal is to cause physical or psychological harm to another person, usually triggered by anger or frustration.

Solution:

1. For an action to be 'Hostile Aggression', there must be an intent to harm that is not necessarily linked to the tactical goals of the game.
2. Punching an opponent out of anger (B) is a clear case of wanting to cause injury or pain due to an emotional outburst.
3. A hard tackle (A) is usually 'Instrumental' if the goal is to get the ball, even if it is forceful.
4. Using a loud voice (C) or sprinting (D) are assertive or vigorous actions but lack the intent to harm an opponent.
5. Therefore, the act of punching an opponent is the only example of hostile aggression.

Final Answer: Punching an opponent out of anger is an example of Hostile Aggression.

Answer: (B)

Q14.

Solution

Concept:

Extrinsic motivation refers to behavior that is driven by external rewards. These rewards can be tangible (money, medals, trophies) or intangible (praise, social status, or avoiding punishment). The athlete performs the task not for the task itself, but for what they get out of it.

Solution:

1. When an athlete trains specifically to win a cash prize (B), the motivation is coming from an external source—the money.
2. Playing for the love of the game (A), exercising for mental refreshment (C), and improving for self-satisfaction (D) are all examples of Intrinsic Motivation.
3. Extrinsic motivation is often useful for short-term goals but can sometimes decrease intrinsic interest over time.
4. In competitive sports, the drive for scholarships, fame, or awards is a common extrinsic factor.
5. Thus, the cash prize incentive is the correct example of extrinsic motivation.

Final Answer: Training hard to win a cash prize is Extrinsic Motivation.

Answer: (B)

Q15.

Solution

Concept:

Under Sheldon's Somatotypes, the Endomorph body type is characterized by a predominance of body fat and a rounder appearance. These individuals are often seen as having a "viscerotonic" personality—relaxed, sociable, and fond of comfort.

Solution:

1. An Endomorph is physically characterized by a round shape, soft body, and underdeveloped muscles. They usually have a high capacity for fat storage.
2. Ectomorphs (A) are thin and lean with low body fat.
3. Mesomorphs (B) are muscular and athletic.
4. Ambivert (D) is a psychological term, not a physical one.
5. In sports, endomorphs might find success in activities where bulk and a low center of gravity are advantageous, such as certain positions in wrestling or shot put.
6. Based on the description of having a round body and soft tissues, Endomorph is the correct answer.

Final Answer: A person with a round body and soft tissues is an Endomorph.

Answer: (C)

Q16.

Solution

Concept:

Standard field and court dimensions are a critical part of the 'Basics of Games' syllabus. Each international sports federation (like the IHF for Handball) sets specific dimensions to ensure uniformity in competition globally.

Solution:

1. A standard International Handball court is a rectangular area measuring 40 m in length and 20 m in width.
2. The court is divided by a center line, and it includes a goal area (the 6-meter line) where only the goalkeeper is allowed.
3. Option (B) 28 m $\times$ 15 m represents a standard Basketball court.
4. Option (C) 18 m $\times$ 9 m is the standard dimension for a Volleyball court.
5. Knowing these specific measurements is essential for competitive play and officiating.
6. Therefore, the correct dimensions for a Handball court are 40 m $\times$ 20 m.

Final Answer: The dimensions of a Handball court are 40 m $\times$ 20 m.

Answer: (A)

Q17.

Solution

Concept:

Every sport has specific technical terminology. In Kabaddi, the 'Cant' is the soul of the game, differentiating it from other tag-based sports. It tests the respiratory endurance and lung capacity of the raider.

Solution:

1. The 'Cant' is defined as the continuous, clear, and audible chanting of the word 'Kabaddi' by the raider during their raid into the opponent's half.
2. This must be done in a single breath. If the raider loses their 'Cant' (stops chanting or takes a fresh breath) while in the opponent's territory, they are declared 'out'.
3. It serves as a natural timer for the raid, although modern professional matches also use a 30-second clock.
4. Option (C) refers to 'Antis' or catching techniques like the 'Ankle Hold'.
5. Option (D) refers to specific skills like the 'Toe Touch' or 'Mule Kick'.
6. Thus, 'Cant' is strictly the rhythmic chanting of the word 'Kabaddi'.

Final Answer: 'Cant' refers to the continuous chanting of the word 'Kabaddi'.

Answer: (B)

Q18.

Solution

Concept:

Fundamental skills are the basic movements required to play a sport effectively. Identifying which skill belongs to which game is a high-frequency area in physical education exams.

Solution:

1. 'Dribbling' in Hockey involves controlling the ball with the flat side of the stick while moving. Unlike basketball, it is done on the ground.
2. 'Hitting' is the act of striking the ball forcefully with the stick to pass long distances or score a goal.
3. In Kho-Kho (A), the fundamental skills are 'Dodging', 'Diving', and 'Tapping'.
4. In Volleyball (C), the skills are 'Serving', 'Setting', and 'Spiking'.
5. In Kabaddi (D), the skills are 'Raiding', 'Touching', and 'Escaping'.
6. Because the stick and ball are the primary equipment for hitting and dribbling in this context, Hockey is the correct answer.

Final Answer: Dribbling and Hitting are fundamental to Hockey.

Answer: (B)

Q19.

Solution

Concept:

Suryanamaskar (Sun Salutation) is a sequence of 12 powerful yoga poses. Each pose has a specific name and health benefit. 'Ashtanga Namaskara' is the most technically distinct pose in the series as it involves touching eight parts of the body to the floor.

Solution:

1. The sequence starts with Pranamasana (1st stage) and moves through various stretches.
2. The 6th stage is 'Ashtanga Namaskara' (Salute with eight parts). The eight parts are: two feet, two knees, two hands, the chest, and the chin/forehead.
3. This pose strengthens the leg and arm muscles and increases the flexibility of the back and neck.
4. The 4th stage is Ashwa Sanchalanasana (Equestrian pose).
5. The 12th stage is the final Tadasana/Pranamasana.
6. Therefore, according to the standard 12-step sequence, the 6th stage is the correct answer.

Final Answer: Ashtanga Namaskara is the 6th stage of Suryanamaskar.

Answer: (B)

Q20.

Solution

Concept:

Asanas are physical postures designed to improve health. 'Vrikshasana' or the Tree Pose is a standing balancing asana. It requires the practitioner to stand on one leg while the other foot is placed on the inner thigh of the standing leg.

Solution:

1. Because Vrikshasana requires maintaining a steady posture on a single point of contact (one foot), its primary physical benefit is the improvement of 'Static Balance'.
2. It also helps in improving neuromuscular coordination and mental focus/concentration.
3. While it might slightly affect lung capacity (C) due to the overhead arm stretch, that is not its "primary" benefit.
4. It does not significantly target cardiovascular endurance (A), which is better served by dynamic sequences like Suryanamaskar or running.
5. The pose strengthens the ligaments and tendons of the feet and tones the leg muscles.
6. Thus, balance and focus are the key outcomes of this Asana.

Final Answer: Vrikshasana is primarily beneficial for Balance and Focus.

Answer: (B)

Q21.

Solution

Concept:

The Shatkarmas, or the six purificatory techniques in Hatha Yoga, are designed to cleanse the internal organs. 'Neti' specifically focuses on the upper respiratory tract and the nasal passages to ensure smooth breathing and prevent allergies.

Solution:

1. Neti is the practice of cleansing the nasal path. The most common form is 'Jala Neti', where lukewarm saline water is poured into one nostril using a special pot and allowed to flow out through the other.
2. Dhauti (A) is the practice of cleansing the digestive tract, primarily the stomach.
3. Nauli (C) involves the massage and strengthening of the abdominal organs through the manipulation of the abdominal muscles.
4. Kapalbhati (D), while often considered a Pranayama, is technically a Shuddhi Kriya that cleanses the frontal brain and the respiratory system through forceful exhalations.
5. Since the question specifically identifies the nasal passage and the use of water, Neti is the correct terminology.

Final Answer: The process of cleansing the nasal passage with water is Neti.

Answer: (B)

Q22.

Solution

Concept:

Pranayama is the practice of breath control. It involves three phases: Puraka (Inhalation), Kumbhaka (Retention), and Rechaka (Exhalation). Different types of Pranayama have different cooling or heating effects on the body.

Solution:

1. Sheetali is a "cooling" Pranayama where the tongue is rolled into a tube and air is sucked through it, which helps lower body temperature and calm the mind.
2. Bhramari, also known as the "Humming Bee Breath," involves making a low-pitched humming sound during exhalation, which is highly effective for reducing stress and anxiety.
3. Asanas (A) are physical postures, and Mudras (B) are symbolic hand gestures or body seals.
4. Kriyas (D) are cleansing techniques, and while Kapalbhati is a Kriya, Sheetali and Bhramari are strictly categorized under Pranayama.
5. Therefore, based on the classification of yogic breathing techniques, these are types of Pranayama.

Final Answer: Sheetali and Bhramari are types of Pranayama.

Answer: (C)

Q23.

Solution

Concept:

Vastra Dhauti is one of the more advanced internal cleansing techniques in Yoga. It involves the physical cleaning of the esophagus and the stomach using a sterilized muslin cloth.

Solution:

1. In Vastra Dhauti, a strip of fine cotton cloth (about 6 – 7 cm wide and several meters long) is gradually swallowed with the help of warm water.
2. Once the cloth reaches the stomach, it is gently pulled back out, bringing along mucus and impurities from the stomach lining.
3. Vaman Dhauti (A) involves drinking a large amount of saline water and then vomiting it out (also known as Kunjal Kriya).
4. Trataka (C) is a cleansing technique for the eyes involving steady gazing at a candle flame.
5. Basti (D) is a technique for cleansing the colon (similar to an enema).
6. Given that the question describes the use of a "strip of cloth," Vastra Dhauti is the only appropriate match.

Final Answer: Vastra Dhauti involves swallowing a strip of cloth to cleanse the stomach.

Answer: (B)

Q24.

Solution

Concept:

Nutrients are divided into two main categories: Macro-nutrients (required in large quantities) and Micro-nutrients (required in very small quantities). While macro-nutrients provide energy, micro-nutrients are essential for biochemical reactions and preventing deficiency diseases.

Solution:

1. Macro-nutrients include Carbohydrates, Proteins, and Fats. These are measured in grams and provide the bulk of our energy and tissue-building material.
2. Micro-nutrients include Vitamins and Minerals. These are measured in milligrams or micrograms.
3. In the given options, Carbohydrates (A), Proteins (B), and Fats (C) are all macro-nutrients.
4. Vitamins (D) do not provide calories but are vital for maintaining immunity, bone health, and cell function.
5. Therefore, Vitamins are the correct example of a micro-nutrient.

Final Answer: Vitamins are classified as Micro-Nutrients.

Answer: (D)

Q25.

Solution

Concept:

Postural deformities are deviations in the skeletal alignment. These often occur due to poor habits, weak muscles, or malnutrition. 'Genu Valgum' is the clinical term for a common lower-limb deformity.

Solution:

1. 'Knock Knees' (Genu Valgum) is a condition where the legs curve inward, causing the knees to touch or "knock" against each other while the person is standing with their feet slightly apart.
2. Bow Legs (A) is the opposite condition (Genu Varum), where the knees stay wide apart even when the ankles are touching.
3. Flat Foot (C) is the disappearance of the longitudinal arch of the foot.
4. Kyphosis (D) is an exaggerated forward rounding of the upper back (hunchback).
5. Because the question specifies the knees touching in a normal standing position, Knock Knees is the correct identification.

Final Answer: The deformity where the knees touch each other is Knock Knees.

Answer: (B)

Q26.

Solution

Concept:

Fractures are categorized based on the nature of the break and the population they most frequently affect. A 'Greenstick Fracture' is a unique type of partial fracture that occurs because the bones of certain individuals are softer and more flexible than those of adults.

Solution:

1. A Greenstick fracture occurs when a bone bends and cracks, instead of breaking completely into separate pieces.
2. This is very similar to what happens when you try to break a "green" or young branch from a tree—it splinters but stays connected.
3. This type of injury is most commonly observed in children (B) because their bones are not yet fully mineralized; they are more cartilaginous and flexible.
4. Elderly people (A) are more prone to "Comminuted" or "Stress" fractures due to bone brittleness (Osteoporosis).
5. While athletes (C) and weightlifters (D) suffer many injuries, they usually experience complete fractures (like transverse or oblique) because their mature bones are harder.
6. Therefore, the flexibility required for a greenstick fracture is a characteristic of a child's skeletal structure.

Final Answer: Greenstick fractures are most common in children.

Answer: (B)

Q27.

Solution

Concept:

Proteins are essential macro-nutrients. They are composed of amino acids, which are the fundamental components required for the growth, repair, and maintenance of all body tissues, including muscles, skin, and organs.

Solution:

1. Proteins are often called the "Building Blocks" of life because they are responsible for the structural framework of the body.
2. While Carbohydrates (D) are the primary "fuel" or energy source, and Fats are for energy storage and insulation, Proteins focus on "repair."
3. Vitamin C (A) is a micro-nutrient responsible for immunity and collagen synthesis, and Iron (C) is a mineral responsible for oxygen transport in the blood.
4. In physical education, protein intake is highlighted for athletes to ensure muscle recovery and hypertrophy after intense training.
5. Without adequate protein, the body cannot heal micro-tears in muscle fibers or grow new tissue.
6. Thus, Protein is the nutrient specifically recognized as the building block.

Final Answer: Protein is known as the Building Block of the body.

Answer: (B)

Q28.

Solution

Concept:

Lordosis is a common postural deformity related to the curvature of the spine. While the human spine has natural curves, Lordosis refers to an "exaggerated" curve that can lead to pain and restricted movement.

Solution:

1. The human spine is divided into the Cervical (neck), Thoracic (upper back), Lumbar (lower back), and Sacral regions.
2. Lordosis is the inward curvature of the Lumbar spine (C). It is often referred to as "Swayback" because the pelvis tilts forward, making the abdomen stick out.
3. Kyphosis, on the other hand, is the outward curvature of the Thoracic spine (A).
4. Scoliosis is a lateral (sideways) curvature of the spine.
5. Lordosis is often caused by weak abdominal muscles and tight hip flexors, commonly seen in individuals with sedentary lifestyles or excessive body weight.
6. Therefore, the lumbar spine is the specific area affected by Lordosis.

Final Answer: Lordosis is the inward curve of the Lumbar spine.

Answer: (C)

Q29.

Solution

Concept:

A comminuted fracture is a severe bone injury. The classification of fractures depends on the number of fragments and the direction of the break line.

Solution:

1. An Oblique Fracture (A) is a slanted break across the bone.
2. A Transverse Fracture (B) is a straight break horizontally across the bone.
3. A Comminuted Fracture (C) occurs when the bone is shattered, crushed, or splintered into three or more pieces (fragments).
4. This usually happens during high-impact trauma, such as a serious vehicular accident or a fall from a significant height.
5. A Stress Fracture (D) is a small crack in the bone caused by repetitive stress or overuse.
6. Since the question asks about a bone broken into "more than two fragments," Comminuted is the correct technical term.

Final Answer: A Comminuted Fracture results in more than two bone fragments.

Answer: (C)

Q30.

Solution

Concept:

The Major Dhyan Chand Khel Ratna Award (formerly Rajiv Gandhi Khel Ratna) is the highest sporting honor in India. The Ministry of Youth Affairs and Sports awards it annually based on specific performance criteria.

Solution:

1. The Khel Ratna is awarded for the "most spectacular and outstanding performance in the field of sports" by a sportsperson.
2. The current criteria look at the athlete's performance over a period of the previous four years at the international level (Olympic Games, World Championships, etc.).
3. Option (A) describes the Dronacharya Award (Life-time category), which honors coaches.
4. Option (C) describes the Dhyan Chand Award for Lifetime Achievement, which is different from the Khel Ratna.
5. Winning a school-level tournament (D) is not sufficient for this prestigious national award.
6. Therefore, the 4-year performance window for spectacular international results is the correct criteria.

Final Answer: The Khel Ratna is for spectacular performance over a 4-year period.

Answer: (B)

Q31.

Solution

Concept:

The Dronacharya Award is a prestigious honor presented by the Government of India to recognize excellence in sports coaching. It is named after 'Drona', the legendary coach from the Indian epic Mahabharata. The award acknowledges that a sportsperson's success is often the result of the tireless guidance and technical expertise of their mentor.

Solution:

1. The Arjuna Award (A) is given to athletes for outstanding performance, not to coaches.
2. The Dronacharya Award (B) is specifically designed to honor coaches who have enabled their trainees to achieve excellence in international sports events.
3. The Padma Shri (C) is a general civilian award for distinguished service in various fields, though sportspeople sometimes receive it.
4. The Maulana Abul Kalam Azad (MAKA) Trophy (D) is awarded to the overall top-performing university in inter-university tournaments.
5. There are two categories for Dronacharya: 'Regular' and 'Lifetime Achievement'.
6. Therefore, the Dronacharya Award is the correct answer for honoring eminent coaches.

Final Answer: The Dronacharya Award is meant to honor eminent coaches.

Answer: (B)

Q32.

Solution

Concept:

To maintain professional standards in education, specific academic and professional qualifications are mandated. In India, the National Council for Teacher Education (NCTE) sets these standards for Physical Education Teachers (PETs).

Solution:

1. A general degree like a B.A. in History (A) or B.Com (D) does not provide the specialized training in kinesiology, anatomy, or sports training required for the role.
2. A Diploma in Yoga (C) is a specialized certification but is usually not sufficient on its own for a full-time school PET position.
3. The Bachelor of Physical Education (B.P.Ed) or Master of Physical Education (M.P.Ed) (B) are the professional degrees recognized for this career path.
4. B.P.Ed is usually a 2-year professional course after graduation, or a 4-year integrated course after class 12.
5. For Senior Secondary (Class 11-12) positions, an M.P.Ed is often preferred or required.
6. Thus, M.P.Ed/B.P.Ed is the standard requirement.

Final Answer: M.P.Ed / B.P.Ed is the standard degree for a PE Teacher.

Answer: (B)

Q33.

Solution

Concept:

The Arjuna Award is one of the oldest and most prestigious sports awards in India. It was established to recognize consistent outstanding performance at the international level, combined with qualities of leadership, sportsmanship, and a sense of discipline.

Solution:

1. The award was instituted by the Government of India in the year 1961.
2. At that time, it was the highest national sports honor (before the Khel Ratna was introduced in 1991).
3. Option (A) 1951 is too early (the year of the first Asian Games).
4. Option (C) 1985 is the year the Dronacharya Award was instituted.
5. Option (D) 1991 is when the Khel Ratna was introduced.
6. Knowing the timeline of national awards is a frequent requirement in the CUET syllabus under the 'Awards and Career' section.

Final Answer: The Arjuna Award was instituted in 1961.

Answer: (B)

Q34.

Solution

Concept:

Muscular contractions are classified based on changes in muscle length and tension. 'Iso' means same, and 'metric' means length. These exercises are often used in rehabilitation or when space/equipment is limited.

Solution:

1. In Isometric Exercises (B), the muscle generates tension, but there is no visible movement at the joint, and the muscle length does not change.
2. An example is pushing against a sturdy wall or holding a plank position. The work done in a physical sense is zero ($W = F \times 0$), but the physiological effort is high.
3. Isotonic Exercises (A) involve a change in muscle length (eccentric or concentric) and visible joint movement (e.g., bicep curls).
4. Isokinetic Exercises (C) involve movement at a constant speed, usually requiring specialized machinery.
5. Fartlek (D) is a type of endurance training, not a specific muscle contraction type.
6. Therefore, "constant length" defines Isometric exercises.

Final Answer: Isometric Exercises involve constant muscle length during contraction.

Answer: (B)

Q35.

Solution

Concept:

The Fartlek training method, developed by Gösta Holmér, translates to "Speed Play" in Swedish. It is a unique training system that blends continuous training with interval training, utilizing natural terrain rather than a track.

Solution:

1. Fartlek training involves varying the pace of a run spontaneously, alternating between fast sprints and slow recovery jogs over uneven ground (forests, hills, or beaches).
2. Because it is a continuous activity of varying intensity, it primarily improves the aerobic and anaerobic systems, which build 'Endurance' (C).
3. It is less structured than traditional interval training, allowing the athlete to "play" with their speed based on how they feel.
4. While it may help speed (B) slightly, its main purpose is to increase the body's ability to sustain prolonged physical activity.
5. Explosive power (A) is usually trained through plyometrics, and Flexibility (D) through stretching.
6. Thus, Fartlek is a core method for endurance development.

Final Answer: Fartlek training is primarily used to develop Endurance.

Answer: (C)

Q36.

Solution

Concept:

Proprioceptive Neuromuscular Facilitation (PNF) is considered one of the most advanced and effective forms of flexibility training. It involves both the stretching and contracting of the muscle group being targeted to achieve maximum static flexibility.

Solution:

1. PNF stretching was originally developed for rehabilitation, but it is now widely used by athletes to increase their range of motion (ROM).
2. It typically involves a partner-assisted stretch where the muscle is stretched, then contracted isometrically against resistance, and then stretched again further.
3. Cardiovascular fitness (A) is improved through aerobic activities like swimming or cycling.
4. While it involves muscle contraction, its primary goal is not building "strength" (B) but rather lengthening the muscle.
5. Agility (D) refers to the ability to change direction quickly and is trained through drills like the shuttle run.
6. Therefore, the specific outcome of PNF techniques is the enhancement of Flexibility.

Final Answer: PNF is a technique used to improve Flexibility.

Answer: (C)

Q37.

Solution

Concept:

Isokinetic exercises are a specific type of strength training. The term comes from the Greek 'iso' (same) and 'kinetic' (motion/speed). This method ensures that the muscle encounters maximum resistance at every angle of the movement.

Solution:

1. In Isokinetic training, the speed of the movement is pre-set and remains constant regardless of how much force the athlete exerts.
2. This requires specialized equipment like Cybex or Biodex machines, which adjust the resistance to match the force applied by the user.
3. Isotonic (A) involves constant tension but variable speed (e.g., free weights).
4. Isometric (C) involves no movement at all.
5. Interval training (D) is a method of cardiovascular conditioning, not a type of muscle contraction.
6. Because the question specifies "constant speed" and "specialized machines," Isokinetic is the only correct answer.

Final Answer: Isokinetic training involves constant speed and specialized machinery.

Answer: (B)

Q38.

Solution

Concept:

The Flamingo Balance Test is a widely recognized test for assessing 'Static Balance'. It is part of the Eurofit Physical Fitness Test Battery and is used to monitor an individual's ability to maintain equilibrium while standing on a narrow base.

Solution:

1. During the test, the subject stands on one leg on a metal beam (of specific dimensions) while bending the other leg and holding it with the hand on the same side (resembling a flamingo).
2. The goal is to maintain this position for one minute. The score is the number of falls or loss of balance incidents within that minute.
3. Upper body strength (A) would be measured by push-ups or pull-ups.
4. Speed (C) is measured by sprints, and Flexibility (D) by the 'Sit and Reach' test.
5. Since the test involves maintaining a single-legged posture, it is a measure of Static Balance.

Final Answer: The Flamingo Balance Test measures Static Balance.

Answer: (B)

Q39.

Solution

Concept:

The Rikli & Jones Senior Citizen Fitness Test (also known as the Fullerton Functional Fitness Test) is a battery of simple tests used to assess the functional fitness of older adults.

Solution:

1. As people age, their physical needs and risks change. Standard fitness tests for athletes can be dangerous or irrelevant for the elderly.
2. The Rikli & Jones test includes items like the 'Chair Stand Test' (lower body strength), 'Arm Curl Test' (upper body strength), and 'Chair Sit and Reach' (lower body flexibility).
3. It is specifically designed for the 60+ age group to evaluate their ability to perform activities of daily living (ADLs).
4. It is not intended for children (A), elite athletes (B), or specifically for pregnant women (D).
5. Thus, it is the gold standard for testing Senior Citizens.

Final Answer: The Rikli & Jones Test is designed for Senior Citizens.

Answer: (C)

Q40.

Solution

Concept:

Agility is the ability to move quickly and change direction with ease. The 4×10 m Shuttle Run is a classic assessment tool used to measure this component of physical fitness.

Solution:

1. In this test, two parallel lines are drawn 10 m apart. The participant runs from the start line to the other line, picks up a block (or touches the line), and runs back. This is repeated to complete four lengths.
2. The constant turning and accelerating/decelerating test the athlete's 'Agility' and 'Speed'.
3. A 600 m Run/Walk (A) is a test for cardiovascular endurance.
4. Sit and Reach (C) measures flexibility.
5. Push-ups (D) measure muscular endurance/strength.
6. The 4×10 m structure is the definitive shuttle run for agility measurement in school-level fitness batteries.

Final Answer: The 4×10 m Shuttle Run measures agility and speed.

Answer: (B)

Q41.

Solution

Concept:

Newton's Third Law of Motion, often called the Law of Action and Reaction, states that for every action, there is an equal and opposite reaction. In sports, this law explains how athletes generate movement by interacting with the ground or equipment.

Solution:

1. When a sprinter is in the starting blocks, they exert a powerful backward and downward force against the blocks (Action).
2. According to Newton's Third Law, the blocks exert an equal and opposite force forward and upward against the sprinter's feet (Reaction).
3. It is this reaction force that propels the sprinter forward out of the blocks.
4. The Law of Inertia (A) relates to an object's resistance to change in motion.
5. The Law of Acceleration (B) states that $F = ma$.
6. Since the scenario specifically describes two forces acting in opposite directions between two bodies, it is a clear application of the Law of Action and Reaction.

Final Answer: The scenario describes Newton's Law of Action and Reaction.

Answer: (C)

Q42.

Solution

Concept:

Levers are rigid bars used to exert force. In the human body, bones act as levers, joints act as fulcrums, and muscles provide the effort. There are three classes of levers based on the relative positions of the Fulcrum (F), the Load (L), and the Effort (E).

Solution:

1. In a First Class Lever, the Fulcrum is in the middle (L-F-E).
2. In a Second Class Lever, the Load is in the middle (F-L-E).
3. In a Third Class Lever, the Effort is applied between the Fulcrum and the Load (F-E-L).
4. Most movements in the human body are third-class levers (e.g., bicep curls), which are designed for speed and range of motion rather than mechanical advantage.
5. Therefore, the Effort is located between the Fulcrum and the Load in a third-class lever system.

Final Answer: In a Third Class Lever, the Effort is between the Fulcrum and the Load.

Answer: (A)

Q43.

Solution

Concept:

Physiological adaptation to exercise refers to the changes the body undergoes due to regular physical training. Muscle hypertrophy is a specific structural change in the muscular system.

Solution:

1. Hypertrophy is the increase in the cross-sectional area of muscle fibers. This occurs when the muscle is subjected to overload (like weightlifting), leading to the repair and thickening of fibers.
2. This results in an overall increase in muscle size and strength (B).
3. Atrophy (A) is the opposite—the wasting away or decrease in muscle size due to lack of use.
4. Regular exercise also improves the efficiency of tendons and increases blood flow (capillarization), making (C) and (D) incorrect.
5. Therefore, hypertrophy is technically defined as the growth of muscle tissue.

Final Answer: Hypertrophy refers to the increase in muscle size and strength.

Answer: (B)

Q44.

Solution

Concept:

Cardiac Output (Q) is the volume of blood pumped by the heart (specifically the left ventricle) per minute. It is a key indicator of cardiovascular efficiency and aerobic capacity.

Solution:

1. Cardiac Output is determined by two variables: Stroke Volume and Heart Rate.
2. Stroke Volume (SV) is the amount of blood pumped per beat.
3. Heart Rate (HR) is the number of beats per minute.
4. The formula is: $CardiacOutput = StrokeVolume \times HeartRate$.
5. For an average adult at rest, 70 ml/beat $\times$ 72 beats/min $\approx$ 5 liters/min. During intense exercise, this can increase to $20 - 35$ liters/min.
6. Division (A) or addition (C) does not represent the physiological relationship between these variables.

Final Answer: Cardiac Output is Stroke Volume multiplied by Heart Rate.

Answer: (B)

Q45.

Solution

Concept:

Bone injuries are classified by the pattern of the break. As discussed in Question 26, a 'Greenstick Fracture' is a partial break that is distinct from complete or compound fractures.

Solution:

1. In a Greenstick fracture, the bone is not broken all the way through. Instead, one side of the bone breaks while the other side bends.
2. This is common in children because their bones are "green" (more flexible and soft).
3. A bone breaking into multiple pieces (A) is a Comminuted fracture.
4. A bone piercing the skin (C) is a Compound or Open fracture.
5. A bone being crushed (D) is usually a Compression fracture.
6. Therefore, bending and partial cracking is the defining symptom of a Greenstick fracture.

Final Answer: A Greenstick fracture involves the bone bending and cracking partially.

Answer: (B)

Q46.

Solution

Concept:

The 'Big Five' personality model includes 'Openness to Experience' as one of its core dimensions. This trait distinguishes imaginative, creative people from down-to-earth, conventional people. In a sports context, an athlete high in openness might be more willing to experiment with new training techniques or tactical changes.

Solution:

1. Openness refers to an individual's willingness to try new things and their level of imagination and insight.
2. People high in this trait tend to have a broad range of interests and are curious about the world and other people.
3. Option (A) refers to Extraversion.
4. Option (C) refers to Conscientiousness.
5. Option (D) refers to Neuroticism.
6. Therefore, curiosity and the willingness to explore new experiences is the defining characteristic of Openness.

Final Answer: Openness refers to curiosity and willingness to try new experiences.

Answer: (B)

Q47.

Solution

Concept:

Nutrients are categorized into Macro-nutrients and Micro-nutrients based on the quantity required by the body. Macro-nutrients (Carbohydrates, Proteins, and Fats) provide the energy and structural components, while Micro-nutrients (Vitamins and Minerals) support metabolic processes.

Solution:

1. Carbohydrates, Proteins, and Fats are needed in large amounts (grams) and are the primary energy-yielding nutrients.
2. Minerals, such as Calcium, Iron, and Zinc, are required in much smaller amounts (milligrams or micrograms).
3. Calcium is a mineral essential for bone health and muscle contraction, but because it is needed in small quantities compared to fats or proteins, it is classified as a micro-nutrient.
4. Option (A), (B), and (D) are all macro-nutrients.
5. Thus, Calcium is the only option listed that is NOT a macro-nutrient.

Final Answer: Calcium is not a macro-nutrient; it is a mineral (micro-nutrient).

Answer: (C)

Q48.

Solution

Concept:

The classification of muscular exercises (Isometric, Isotonic, and Isokinetic) is based on the Greek language. Understanding these linguistic roots helps athletes and coaches identify the primary physical effect of the exercise.

Solution:

1. 'Iso' is a Greek prefix meaning "same" or "equal."
2. 'Tonic' comes from 'tonos', meaning "tension."
3. Therefore, an 'Isotonic' contraction is one where the 'tension' remains constant while the length of the muscle changes (shortening or lengthening).
4. This is distinct from 'Isometric' (same length) and 'Isokinetic' (same speed).
5. Common weight-lifting movements like a bench press or a squat are isotonic because the weight (tension) remains relatively constant throughout the range of motion.

Final Answer: Isotonic literally means same tension.

Answer: (B)

Q49.

Solution

Concept:

Suryanamaskar (Sun Salutation) begins and ends with specific foundational postures. These postures prepare the body for the sequence and help in centering the mind.

Solution:

1. Tadasana (Mountain Pose) is the foundational standing posture. In the context of the 12-step Suryanamaskar, the very first position is Pranamasana (Prayer Pose), which is performed while standing in Tadasana.
2. Tadasana helps in improving posture, strengthening thighs, knees, and ankles, and firming the abdomen and buttocks.
3. Padahastasana (B) is the forward bend (3rd and 10th stages).
4. Bhujangasana (C) is the cobra pose (7th stage).
5. Ashwa Sanchalanasana (D) is the equestrian pose (4th and 9th stages).
6. Therefore, Tadasana is the starting standing alignment for the sequence.

Final Answer: Tadasana is the starting position of Suryanamaskar.

Answer: (A)

Q50.

Solution

Concept:

Sports organizations for Children with Special Needs (CWSN) are divided based on the type of disability they serve. The Special Olympics, the Paralympics, and the Deaflympics are the three major international organizations.

Solution:

1. The Special Olympics was founded by Eunice Kennedy Shriver to provide year-round sports training and competition for children and adults with 'Intellectual Disabilities'.
2. This includes individuals with Down Syndrome, Autism, or other cognitive delays.
3. The Paralympics (A) is the primary competition for athletes with physical disabilities (mobility impairments, amputations, etc.) and visual impairments.
4. The Deaflympics (D) is specifically for athletes with hearing impairments.
5. Therefore, the distinguishing factor for the Special Olympics is the focus on intellectual disability.

Final Answer: Special Olympics is for individuals with intellectual disabilities.

Answer: (B)

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	C	3	B	4	C	5	C
6	C	7	B	8	C	9	B	10	C
11	B	12	C	13	B	14	B	15	C
16	A	17	B	18	B	19	B	20	B
21	B	22	C	23	B	24	D	25	B
26	B	27	B	28	C	29	C	30	B
31	B	32	B	33	B	34	B	35	C
36	C	37	B	38	B	39	C	40	B
41	C	42	A	43	B	44	B	45	B
46	B	47	C	48	B	49	A	50	B