CUET-UG Physical Education Sample Paper - 17

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.

"Health is not merely the absence of disease but a state of complete physical, mental, and social well-being. In India, the National Rural Health Mission (NRHM) was launched to provide accessible and affordable healthcare to the rural population. Parallel to this, the Mid-Day Meal scheme serves as a nutritional intervention to improve the health status of school-going children. However, the rise of Non-Communicable Diseases (NCDs) like Diabetes and Hypertension poses a new challenge compared to traditional Communicable diseases. Furthermore, inclusive education requires specific strategies for Children with Special Needs (CWSN). Adaptive Physical Education plays a vital role here. Strategies like the use of modified equipment, simplified rules, and professional assistance (Speech Therapists, Occupational Therapists) ensure that CWSN can participate effectively in physical activities. Creating a barrier-free environment is not just a legal requirement but a moral imperative for holistic development."

Q1. Which of the following is a primary objective of the NRHM as mentioned in the

context of rural healthcare?

(A) To provide high-end surgical facilities in urban metros

(B) To provide accessible, affordable, and quality healthcare to rural populations

(C) To eliminate the need for Mid-Day meals in schools

(D) To focus exclusively on Communicable diseases in cities

Q2. The Mid-Day Meal scheme is primarily categorized as what type of intervention?

(A) Political intervention

(B) Nutritional intervention

(C) Infrastructure intervention

(D) Religious intervention

Q3. Identify the Non-Communicable Disease (NCD) from the options provided below:

(A) Tuberculosis

(B) Malaria

(C) Hypertension

(D) Cholera

Q4. Which professional is responsible for helping CWSN improve their fine motor skills and daily living activities?

(A) Speech Therapist

(B) Occupational Therapist

(C) Psychologist

(D) Physiotherapist

Q5. In Adaptive Physical Education, what does the strategy of 'Modified Equipment' imply?

(A) Using international standard professional gear for beginners

(B) Changing the size, weight, or texture of balls to suit the child's ability

(C) Prohibiting CWSN from using any equipment

(D) Using only high-tech robotic equipment

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. Personality is a key determinant; Jung classified individuals into Introverts and Extroverts, while Sheldon focused on Somatotypes—Endomorph, Mesomorph, and Ectomorph. The 'Big Five' theory further categorizes personality into five broad dimensions. Motivation, the driving force behind action, can be Intrinsic or Extrinsic. While Intrinsic motivation comes from internal satisfaction, Extrinsic motivation involves external rewards like trophies or cash. In high-stakes competition, aggression is often observed. It can be 'Hostile Aggression' (intent to harm) or 'Instrumental Aggression' (behavior to achieve a goal without primary intent to harm). Distinguishing between these is crucial for sports ethics and coaching."

Q6. According to Sheldon's classification, a person with a muscular and athletic physique is categorized as a/an:

(A) Endomorph

(B) Ectomorph

(C) Mesomorph

(D) Introvert

Q7. If an athlete participates in a marathon purely for the personal joy and satisfaction of running, they are driven by:

(A) Extrinsic Motivation

(B) Intrinsic Motivation

(C) Hostile Aggression

(D) Social Pressure

Q8. Which of the following is NOT one of the 'Big Five' personality traits?

(A) Openness

(B) Neuroticism

(C) Aggression

(D) Conscientiousness

Q9. When a player uses physical force to win the ball in football, resulting in an accidental foul without the intent to injure, it is called:

(A) Hostile Aggression

(B) Instrumental Aggression

(C) Passive Aggression

(D) Assertive Behavior

Q10. Jung's classification of 'Extroverts' refers to individuals who are:

(A) Shy and reserved

(B) Socially active and outgoing

(C) Focused on internal thoughts

(D) Physically frail

Q11. A condition characterized by a persistent difficulty in social communication and interaction is often related to:

(A) Sensory Processing Disorder

(B) Autism Spectrum Disorder

(C) Physical Disability

(D) Cognitive Impairment

Q12. Which strategy is MOST effective for including a student with visual impairment in a PE class?

(A) Using bright colored balls with bells inside

(B) Asking them to sit in the dugout

(C) Using very small and light equipment

(D) Playing in a pitch-dark hall

Q13. The 'National Health Mission' aims to reduce which of the following?

(A) Literacy rates

(B) Maternal and Infant Mortality Rates

(C) Sports participation

(D) Employment opportunities

Q14. Physical activities for CWSN should be based on _____ principle.

(A) One-size-fits-all

(B) Maximum intensity

(C) Individualized Educational Program (IEP)

(D) Purely competitive

Q15. Which of the following is a communicable disease?

(A) Diabetes

(B) Cancer

(C) Influenza (Flu)

(D) Asthma

Q16. The 'Big Five' personality trait 'Agreeableness' refers to being:

(A) Organized and disciplined

(B) Kind, sympathetic, and cooperative

(C) Curious and imaginative

(D) Easily stressed or anxious

Q17. Which somatotype is typically characterized by a round body shape and a tendency to gain fat easily?

(A) Mesomorph

(B) Ectomorph

(C) Endomorph

(D) Ambivert

Q18. Positive self-talk and visualization are techniques used to enhance:

(A) Physical Strength

(B) Psychological Motivation

(C) Aggression

(D) Body Weight

Q19. In sports sociology, 'Social Cohesion' refers to:

(A) Individual performance

(B) The degree to which team members work together

(C) Rivalry between teams

(D) Spectator behavior

Q20. A person who is highly creative and likes to try new things would score high on which Big Five dimension?

(A) Extraversion

(B) Openness to Experience

(C) Agreeableness

(D) Neuroticism

Q21. The standard length of a Cricket pitch (between the wickets) is:

(A) 20.12 meters

(B) 22.12 meters

(C) 18.12 meters

(D) 25.12 meters

Q22. How many players are on the court at one time for a single team in a standard Handball match?

(A) 11

(B) 9

(C) 7

(D) 5

Q23. The skill 'Cant' is fundamentally associated with which of the following sports?

(A) Hockey

(B) Football

(C) Kabaddi

(D) Basketball

(E)

Q24. Which of the following is the fourth stage of 'Suryanamaskar'?

(A) Pranamasana

(B) Ashwa Sanchalanasana

(C) Parvatasana

(D) Padahastasana

Q25. The Yoga Kriya used for cleaning the nasal passage using a thread or water is:

(A) Kapalbhati

(B) Neti

(C) Dhauti

(D) Nauli

Q26. Which 'Asana' is performed in a standing position and resembles the shape of a tree?

(A) Tadasana

(B) Vrikshasana

(C) Bhujangasana

(D) Vajrasana

Q27. What is 'Pranayama' primarily concerned with?

(A) Physical postures

(B) Regulation of breath

(C) Cleansing of stomach

(D) Concentration on an object

Q28. Which asana is known for its benefits in improving digestive health and is the only asana that can be performed after meals?

(A) Shavasana

(B) Chakrasana

(C) Vajrasana

(D) Halasana

Q29. Which of the following is considered a 'Macro Nutrient'?

(A) Vitamin A

(B) Iron

(C) Carbohydrates

(D) Calcium

Q30. A fracture where the bone bends and cracks, but does not break completely into two pieces, common in children, is called:

(A) Comminuted Fracture

(B) Greenstick Fracture

(C) Stress Fracture

(D) Transverse Fracture

Q31. The postural deformity where the knees touch each other in a normal standing position is known as:

(A) Bow Legs

(B) Flat Foot

(C) Knock Knees

(D) Kyphosis

Q32. Which vitamin is essential for blood clotting?

(A) Vitamin C

(B) Vitamin D

(C) Vitamin K

(D) Vitamin B12

Q33. An 'Oblique Fracture' is characterized by a break that is:

(A) Parallel to the bone's long axis

(B) Curved or circular

(C) At an angle to the bone's long axis

(D) Shattered into many fragments

Q34. The highest sporting honor in India, given for spectacular and outstanding performance over a period of four years, is:

(A) Arjuna Award

(B) Dronacharya Award

(C) Major Dhyan Chand Khel Ratna Award

(D) Padma Shri

Q35. The 'Dronacharya Award' is presented to which category of sports professionals?

(A) Players

(B) Coaches

(C) Referees

(D) Sports Administrators

Q36. What is the minimum educational qualification required to enroll in a B.P.Ed (Bachelor of Physical Education) course in most Indian universities?

(A) 10^{th} Pass

(B) 12^{th} Pass / Graduation (depending on course duration)

(C) PhD

(D) M.P.Ed

Q37. The Arjuna Award was instituted in the year:

(A) 1951

(B) 1961

(C) 1985

(D) 1991

Q38. In which type of exercise does the length of the muscle remain constant while tension is developed?

(A) Isotonic

(B) Isometric

(C) Isokinetic

(D) Plyometric

Q39. Fartlek training is primarily used to develop which physical fitness component?

(A) Explosive Strength

(B) Endurance

(C) Flexibility

(D) Speed

Q40. 'PNF Stretching' is a technique used to improve:

(A) Muscular Strength

(B) Flexibility

(C) Cardiovascular Endurance

(D) Reaction Time

Q41. Exercises performed on specially designed machines that provide variable resistance at a constant speed are called:

(A) Isotonic

(B) Isometric

(C) Isokinetic

(D) Aerobic

Q42. The 'Flamingo Test' is used to measure which component of fitness?

(A) Static Balance

(B) Power

(C) Speed

(D) Agility

Q43. The Rikli & Jones Senior Citizen Fitness Test includes which item to measure upper body flexibility?

(A) Chair Stand Test

(B) Back Scratch Test

(C) 8-Foot Up and Go

(D) Arm Curl Test

Q44. The 4×10 meter Shuttle Run is used to evaluate:

(A) Endurance

(B) Strength

(C) Agility and Speed

(D) Flexibility

Q45. According to Newton's Second Law of Motion, Acceleration is directly proportional to:

(A) Mass

(B) Force

(C) Velocity

(D) Friction

Q46. In a Class 1 Lever, which component is located in the middle?

(A) Force (Effort)

(B) Load (Resistance)

(C) Fulcrum

(D) Axis of rotation

Q47. What is the effect of long-term regular exercise on the 'Stroke Volume' of the heart?

(A) It decreases

(B) It remains unchanged

(C) It increases

(D) It fluctuates randomly

Q48. Which type of lever is most common in the human body, where the effort is applied between the fulcrum and the load (e.g., Biceps curl)?

(A) Class 1

(B) Class 2

(C) Class 3

(D) Class 4

Q49. Hypertrophy of muscles due to exercise refers to:

(A) Decrease in muscle size

(B) Increase in muscle size and fiber thickness

(C) Weakening of tendons

(D) Loss of muscle coordination

Q50. The law of Inertia is also known as:

(A) Newton's First Law

(B) Newton's Second Law

(C) Newton's Third Law

(D) Law of Conservation of Energy

Detailed Solutions

Q1.

Solution

Concept: The National Rural Health Mission (NRHM) was established as a strategic initiative by the Government of India to address the systemic inequalities in the healthcare sector, particularly focusing on the rural-urban divide. Historically, quality medical care was centralized in urban hubs, leaving the rural population—the backbone of the country—with minimal access to life-saving services. The mission's philosophy centers on "communitization," which involves making healthcare a shared responsibility between the state and the local community. The core pillars of the NRHM are to provide health services that are equitable, accessible, affordable, and of high quality, ensuring that even the most marginalized sections of society are brought into the fold of the national health system.

Solution: 1. The passage explicitly mentions that the NRHM was "launched to provide accessible and affordable healthcare to the rural population." This statement directly defines the mission's scope and target audience.

2. Analyzing Option (B), we see it incorporates three critical dimensions of healthcare: 'Accessible' (geographical reach), 'Affordable' (financial feasibility), and 'Quality' (clinical effectiveness).

3. Option (A) is logically excluded as the NRHM specifically targets rural sectors, whereas "high-end surgical facilities in urban metros" refers to tertiary urban care.

4. Option (C) is a distractor; while the Mid-Day Meal scheme and NRHM coexist, one does not replace or eliminate the need for the other.

5. Option (D) is incorrect because the mission is not limited to communicable diseases; it addresses holistic health in rural areas, not cities.

6. Based on the textual evidence and the socio-economic context of Indian public health policy, the mission's primary goal is to bridge the rural health gap.

Final Answer: The primary objective of NRHM is to provide accessible, affordable, and quality healthcare to rural populations.

Answer: (B)

Q2.

Solution

Concept: A "nutritional intervention" is a targeted public health strategy designed to improve the physical well-being and development of a specific population by addressing dietary deficiencies. In the context of school education, the Mid-Day Meal scheme serves as a bridge between health and learning. It is based on the scientific premise that cognitive development is intrinsically linked to physical nourishment. A child suffering from "classroom hunger" or chronic malnutrition cannot maintain the focus required for academic success. By providing a hot, cooked, and balanced meal, the government directly intervenes in the biological growth process, ensuring children receive the necessary calories and proteins required for their age group, thus tackling malnutrition at its roots.

Solution: 1. The passage identifies the Mid-Day Meal scheme as a "nutritional intervention" aimed at improving the "health status of school-going children."

2. The term "Nutritional" is used because the core objective of the program is the intake of food and nutrients. It addresses the physiological needs of the body to support growth and immunity.

3. Option (A) is incorrect because "Political intervention" refers to actions taken for power or governance structures, whereas this is a health-focused mandate.

4. Option (C) is incorrect because "Infrastructure" pertains to physical assets like buildings and roads; food provision is a recurring service for human development.

5. Option (D) is incorrect as the program is a secular state initiative with no religious basis.

6. Following the direct terminology of the passage and the functional nature of providing dietary support to combat malnutrition, the scheme is fundamentally a nutritional intervention.

Final Answer: The Mid-Day Meal scheme is primarily categorized as a nutritional intervention.

Answer: (B)

Q3.

Solution

Concept: Epidemiology classifies diseases into two broad categories: Communicable and Non-Communicable. Communicable diseases are infectious and spread through pathogens like bacteria, viruses, or parasites. Examples include Tuberculosis (airborne), Malaria (vector-borne), and Cholera (waterborne). Conversely, Non-Communicable Diseases (NCDs) are non-infectious and usually have a slow progression and long duration. They are often called "lifestyle diseases" because they are frequently triggered by factors such as poor diet, lack of physical activity, smoking, or genetic predisposition. Hypertension, or high blood pressure, is a condition where the long-term force of the blood against artery walls is high enough that it may eventually cause heart disease. It cannot be transmitted from one person to another.

Solution: 1. The question requires identifying the disease that does not spread through infection or transmission.

2. Tuberculosis (Option A) is caused by the Mycobacterium tuberculosis bacteria and is highly communicable.

3. Malaria (Option B) is a communicable disease transmitted through the bite of infected female Anopheles mosquitoes.

4. Cholera (Option D) is an acute infection caused by the ingestion of contaminated food or water.

5. Hypertension (Option C) is a physiological state involving arterial pressure; it is a chronic condition that is managed over time and is not contagious.

6. The passage explicitly contrasts NCDs like "Diabetes and Hypertension" with "traditional Communicable diseases," providing a clear textual basis for classifying Hypertension as an NCD.

Final Answer: Hypertension is identified as the Non-Communicable Disease (NCD).

Answer: (C)

Q4.

Solution

Concept: Occupational Therapy is a branch of healthcare that helps people of all ages who have physical, sensory, or cognitive problems. For Children with Special Needs (CWSN), an Occupational Therapist (OT) focuses on the "occupations" of childhood, which include playing, learning, and self-care. A significant portion of this work involves developing fine motor skills—the small, precise movements of the hands and fingers. These skills are essential for activities of daily living (ADL) such as writing, using scissors, tying shoelaces, or zipping a jacket. While other therapists might focus on speech or large muscle movements, the OT is specifically trained to help the child master the functional tasks required for independence in their daily routines.

Solution: 1. The question asks for the professional who deals with "fine motor skills" and "daily living activities."

2. A Speech Therapist (Option A) is incorrect as their focus is on communication, swallowing, and language disorders.

3. A Psychologist (Option B) is incorrect because they address the mental, emotional, and behavioral aspects of a child's life rather than physical motor skills.

4. A Physiotherapist (Option D) focuses on "gross motor skills" like walking, posture, and large limb movements, whereas the question specifies fine motor skills.

5. An Occupational Therapist (Option B) is the correct match because their primary clinical goal is to enable the child to perform functional hand-based tasks and achieve autonomy in daily life.

6. The passage lists Occupational Therapists alongside Speech Therapists as professional assistants for CWSN, and their specific domain within this group is the refinement of motor coordination for daily tasks.

Final Answer: The Occupational Therapist is responsible for helping CWSN improve fine motor skills and daily living activities.

Answer: (B)

Q5.

Solution

Concept: Adaptive Physical Education (APE) is a modified program of physical activities designed to meet the unique needs of individuals with disabilities. The goal is to provide an inclusive environment where every child, regardless of their physical or cognitive limitations, can participate and succeed. "Modification" is the cornerstone of this field. Modifying equipment involves altering the physical characteristics of sports gear to accommodate various impairments. For example, a child with visual impairment might use a ball that makes a sound (textured or bell-filled), or a child with cerebral palsy might use a larger, lighter racket that is easier to swing. These changes remove the barrier of standardized equipment, allowing the child to engage in the therapeutic and social benefits of exercise.

Solution: 1. Modification of equipment is a strategy mentioned in the passage to "ensure that CWSN can participate effectively."

2. Option (A) is incorrect because "international standard professional gear" is designed for elite athletes and is often the exact opposite of what a child with special needs requires for accessibility.

3. Option (C) is incorrect because the entire premise of APE is to include children, not to prohibit them from using the tools of the sport.

4. Option (D) is incorrect as equipment modification does not need to be expensive or "high-tech"; it can be as simple as deflating a ball slightly to make it easier to catch.

5. Option (B) accurately describes modification: "changing the size, weight, or texture" to align with the child's specific motor or sensory abilities.

6. This strategy is essential for holistic development, as it ensures that the physical environment is adapted to the child's reality rather than forcing the child to meet an impossible standard.

Final Answer: Modified Equipment implies changing the size, weight, or texture of balls to suit the child's ability.

Answer: (B)

Q6.

Solution

Concept: Somatotyping is a system of classification developed by William Sheldon that relates body build to personality characteristics. Sheldon identified three fundamental body types: Endomorph, Mesomorph, and Ectomorph. The Endomorph is characterized by a rounder, softer body with a tendency to store fat. The Ectomorph is characterized by a lean, thin, and fragile structure with little muscle or fat. The Mesomorph is the "athletic" type, possessing a sturdy bone structure and well-defined musculature. In sports psychology and physiology, identifying these types helps in determining the suitability of an individual for specific sports; for instance, Mesomorphs often excel in activities requiring strength, speed, and agility due to their natural physical advantages.

Solution: 1. The question asks for the classification of an individual with a "muscular and athletic physique" according to Sheldon.

2. Analyzing Option (A), Endomorphs are typically pear-shaped or round, which does not match the athletic description.

3. Analyzing Option (B), Ectomorphs are characterized by long limbs and a lack of muscle mass, often appearing frail.

4. Option (C), Mesomorph, describes an individual with a wedge-shaped body, broad shoulders, a narrow waist, and high muscle definition. This perfectly aligns with the term "muscular and athletic."

5. Option (D), Introvert, is a psychological classification by Carl Jung, not a physical somatotype by Sheldon.

6. Therefore, based on the physical characteristics described in the passage and Sheldon's theory, the muscular physique belongs to the Mesomorph category.

Final Answer: A person with a muscular and athletic physique is categorized as a Mesomorph.

Answer: (C)

Q7.

Solution

Concept: Motivation is the internal or external drive that pushes an individual toward a goal. In sports psychology, it is primarily divided into two types: Intrinsic and Extrinsic. Intrinsic motivation occurs when an individual engages in an activity for its own sake, deriving personal satisfaction, joy, or a sense of accomplishment from the process itself. Extrinsic motivation, on the other hand, is driven by external rewards such as medals, money, fame, or social approval. While extrinsic rewards can boost performance in the short term, intrinsic motivation is often considered more sustainable and powerful for long-term athletic development because the reward is the activity itself.

Solution: 1. The scenario describes an athlete running a marathon for "personal joy and satisfaction."

2. Because the reward (joy) is internal and comes directly from the act of running, it falls under the definition of Intrinsic Motivation.

3. Option (A), Extrinsic Motivation, is incorrect because the athlete is not running for a trophy, cash prize, or external validation.

4. Option (C), Hostile Aggression, is unrelated as it involves an intent to harm others, which is not present in a solo pursuit of joy.

5. Option (D), Social Pressure, implies the athlete is running because they feel forced by others, which contradicts the "personal joy" stated in the question.

6. Thus, following the distinction made in the passage between internal satisfaction and external rewards, this behavior is a clear example of Intrinsic Motivation.

Final Answer: The athlete is driven by Intrinsic Motivation.

Answer: (B)

Q8.

Solution

Concept: The 'Big Five' Personality Traits, also known as the Five-Factor Model (FFM), is a widely accepted framework in psychology for describing human personality. The five dimensions are often remembered by the acronym OCEAN: Openness (creativity and new experiences), Conscientiousness (organization and discipline), Extraversion (sociability and energy), Agreeableness (cooperation and kindness), and Neuroticism (emotional instability and anxiety). Each trait exists on a spectrum. In sports, these traits help coaches understand how athletes handle pressure (Neuroticism), how they interact with teammates (Agreeableness/Extraversion), and how dedicated they are to training (Conscientiousness).

Solution: 1. The question requires identifying which term is NOT part of the standard Big Five model.

2. Option (A), Openness, is the 'O' in OCEAN and refers to an athlete's willingness to try new training methods.

3. Option (B), Neuroticism, is the 'N' in OCEAN and relates to how an athlete responds to the stress of competition.

4. Option (D), Conscientiousness, is the 'C' in OCEAN and is a strong predictor of athletic success due to the link with self-discipline.

5. Option (C), Aggression, while frequently discussed in sports psychology, is considered a behavior or a response to a situation rather than one of the core five dimensions of personality structure.

6. Therefore, Aggression is the outlier in the context of the Big Five theory.

Final Answer: Aggression is NOT one of the 'Big Five' personality traits.

Answer: (C)

Q9.

Solution

Concept: Aggression in sports is defined as any behavior intended to achieve a goal or harm another being. Psychology distinguishes between Hostile Aggression and Instrumental Aggression. Hostile Aggression is reactive; its primary goal is to inflict injury or pain, often fueled by anger. Instrumental Aggression, however, is proactive and goal-oriented. In this case, the aggressive behavior is a means to an end (like winning the ball or blocking an opponent). While physical force is used, the "intent" is to achieve a sports-related objective rather than to cause suffering. Understanding this distinction is vital for referees and coaches to differentiate between "hard play" and "dirty play."

Solution: 1. In the given scenario, the player uses force to "win the ball," which is a legitimate sporting objective.

2. The passage notes that the resulting foul was "accidental" and occurred "without the intent to injure."

3. Because the aggression was a tool used to reach a goal (winning the ball), it is classified as Instrumental Aggression.

4. Option (A), Hostile Aggression, is incorrect because there was no primary intent to harm the opponent.

5. Option (C), Passive Aggression, involves indirect resistance or avoidance, which does not fit a physical foul in football.

6. Option (D), Assertive Behavior, usually refers to playing with high intensity and within the rules without unnecessary force; since a foul occurred, "Instrumental Aggression" is the more precise psychological term used in the text.

Final Answer: This behavior is called Instrumental Aggression.

Answer: (B)

Q10.

Solution

Concept: Carl Jung, a Swiss psychiatrist, proposed one of the most influential theories of personality types, focusing on where an individual directs their psychic energy. He identified two primary orientations: Introversion and Extraversion. Introverts are oriented toward their internal world; they are often reflective, shy, and gain energy from solitude. Extraverts (or Extroverts) are oriented toward the external world. They are socially active, talkative, and gain energy from interacting with other people and their environment. In a sports context, Extroverts often prefer team sports and high-energy environments, whereas Introverts might excel in individual sports that require deep internal focus and concentration.

Solution: 1. The passage mentions that "Jung classified individuals into Introverts and Extroverts."

2. The definition of an 'Extrovert' centers on the outward direction of energy and interest.

3. Option (A), "Shy and reserved," and Option (C), "Focused on internal thoughts," both describe Introverts.

4. Option (D), "Physically frail," is a physical description (related to Sheldon's Ectomorph) and is not part of Jung's psychological classification.

5. Option (B), "Socially active and outgoing," accurately captures the psychological profile of an Extrovert as defined by Jung.

6. Therefore, an Extrovert is characterized by their engagement with the social world and external stimulation.

Final Answer: Jung's classification of 'Extroverts' refers to individuals who are socially active and outgoing.

Answer: (B)

Q11.

Solution

Concept: Developmental disorders affect the way a child grows and learns. Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition that primarily impacts two areas: social communication/interaction and restricted, repetitive patterns of behavior or interests. Individuals with ASD may find it difficult to read social cues, engage in "back-and-forth" conversation, or understand non-verbal communication like body language and eye contact. Because it is a "spectrum," the severity and combination of symptoms vary significantly from person to person. Understanding this condition is crucial in physical education to ensure that instructions are clear, predictable, and sensory-friendly, allowing the student to feel secure in a social environment.

Solution: 1. The question defines a condition characterized by "persistent difficulty in social communication and interaction."

2. Option (A), Sensory Processing Disorder, involves difficulty handling information from the senses (light, sound, touch), which may coexist with ASD but is not defined primarily by social communication.

3. Option (C), Physical Disability, refers to limitations on physical functioning or mobility, which does not inherently affect social communication.

4. Option (D), Cognitive Impairment, refers to limitations in mental functioning and skills such as communication, self-care, and social skills, but ASD is the specific diagnosis where social-communication deficits are the defining diagnostic hallmark.

5. Option (B), Autism Spectrum Disorder, is specifically categorized by these social and communicative challenges according to the DSM-5 criteria.

6. Therefore, the description provided matches the clinical definition of Autism Spectrum Disorder.

Final Answer: A condition characterized by persistent difficulty in social communication and interaction is related to Autism Spectrum Disorder.

Answer: (B)

Q12.

Solution

Concept: Inclusion in Physical Education requires modifying the environment or equipment to utilize the remaining senses of a student with impairments. For students with visual impairment, the "auditory-tactile" approach is most effective. Since the student cannot rely on sight to track a moving object, the object must be made "audible" or highly "visible" (if they have partial sight). Using equipment that provides sound feedback allows the student to use their sense of hearing to determine the position, speed, and direction of the ball. This empowers the student to participate actively in the game alongside their peers rather than being relegated to a passive role.

Solution: 1. The goal is to find the "MOST effective" strategy for inclusion.

2. Option (B), "Asking them to sit in the dugout," is exclusion, not inclusion, and prevents the student from receiving the benefits of PE.

3. Option (C), "Using very small equipment," would actually make the task harder because smaller objects are more difficult to locate and track without clear sight.

4. Option (D), "Playing in a pitch-dark hall," is unsafe and creates a barrier for all students, rather than helping the student with an impairment.

5. Option (A), "Using bright colored balls with bells inside," addresses both low vision (through high contrast/brightness) and total blindness (through sound). The bells provide constant auditory feedback.

6. This strategy directly aligns with the "Adaptive Physical Education" principles of modified equipment mentioned in the passage to ensure effective participation.

Final Answer: The most effective strategy is using bright colored balls with bells inside.

Answer: (A)

Q13.

Solution

Concept: The National Health Mission (NHM) is a massive government undertaking aimed at improving the overall health indicators of the Indian population. One of its primary metrics for success is the reduction of mortality rates among the most vulnerable groups: mothers and infants. The Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) are key indicators of a country's socioeconomic development and the efficiency of its healthcare system. By improving institutional deliveries, providing prenatal and postnatal care, and ensuring immunization, the NHM seeks to prevent avoidable deaths during childbirth and early childhood. This focus is a core part of the mission's goal to provide quality healthcare to all.

Solution: 1. The question asks what the NHM aims to "reduce." Public health missions generally aim to reduce negative health outcomes.

2. Option (A), Literacy rates, and Option (D), Employment opportunities, are socioeconomic factors handled by the Ministry of Education and Ministry of Labour, respectively, not primarily by the Health Mission.

3. Option (C), Sports participation, is something the government wants to "increase," not reduce.

4. Option (B), Maternal and Infant Mortality Rates, is a central objective of any national health initiative. High mortality rates indicate gaps in the healthcare chain that the NHM is designed to close through better rural and urban health infrastructure.

5. Based on the objectives of the National Rural Health Mission (a component of NHM) mentioned in the passage, the focus is on accessible and quality healthcare, which directly impacts mortality statistics.

Final Answer: The National Health Mission aims to reduce Maternal and Infant Mortality Rates.

Answer: (B)

Q14.

Solution

Concept: The Individualized Educational Program (IEP) is a legally mandated document (in many educational systems) or a best-practice framework used to ensure that a student with a disability receives specialized instruction and related services. In Physical Education, an IEP outlines the student's current performance level, sets specific goals, and details the modifications or accommodations required for the student to succeed. Because "special needs" cover a vast range of conditions (from physical to cognitive to sensory), a generic approach is ineffective. The IEP ensures that the physical activities are tailored to the specific strengths and limitations of the individual child, fostering a supportive and effective learning environment.

Solution: 1. The question seeks the "principle" on which physical activities for CWSN should be based.

2. Option (A), "One-size-fits-all," is the opposite of inclusive education; it ignores the specific needs of the individual.

3. Option (B), "Maximum intensity," could be dangerous or discouraging for CWSN depending on their specific condition.

4. Option (D), "Purely competitive," focuses on winning rather than the "holistic development" and "participation" emphasized in the passage.

5. Option (C), "Individualized Educational Program (IEP)," is the standard professional approach. It recognizes that each child with special needs is unique and requires a personalized plan to participate "effectively," as stated in the text.

6. Therefore, the IEP principle is the cornerstone of Adaptive Physical Education.

Final Answer: Physical activities for CWSN should be based on the Individualized Educational Program (IEP) principle.

Answer: (C)

Q15.

Solution

Concept: Communicable diseases, also known as infectious diseases, are caused by microscopic organisms such as bacteria, viruses, fungi, or parasites. These diseases can be spread, directly or indirectly, from one person to another. Transmission can occur through various routes, including air (coughing/sneezing), water, food, or vectors like mosquitoes. Influenza, commonly known as the "Flu," is a classic example of a communicable disease. It is caused by influenza viruses that infect the respiratory tract. Because it spreads through respiratory droplets when an infected person talks, coughs, or sneezes, it can quickly move through a community or school environment.

Solution: 1. To identify a communicable disease, we must find the one that is infectious and transmissible.

2. Option (A), Diabetes, and Option (B), Cancer, are Non-Communicable Diseases (NCDs) caused by genetic, environmental, and lifestyle factors. They cannot be transmitted between people.

3. Option (D), Asthma, is a chronic respiratory condition, often allergic or genetic in nature, and is also an NCD.

4. Option (C), Influenza (Flu), is caused by a virus and is easily passed from person to person, making it a communicable disease.

5. The passage notes the rise of NCDs like Diabetes as a "new challenge" compared to "traditional Communicable diseases," implying that diseases like the flu represent the infectious category we are looking for.

6. Thus, Influenza is the correct answer among the provided options.

Final Answer: Influenza (Flu) is a communicable disease.

Answer: (C)

Q16.

Solution

Concept: Within the 'Big Five' Personality Traits (OCEAN), 'Agreeableness' reflects individual differences in general concern for social harmony. It measures how much an individual values getting along with others. High scorers in this dimension are fundamentally altruistic, trusting, and helpful. In a sporting context, an athlete with high agreeableness is often seen as a "team player." They are likely to sacrifice personal glory for the benefit of the group, follow the coach's instructions without conflict, and maintain positive relationships with teammates. Conversely, those low in agreeableness may be more competitive or challenging, which can be useful in individual combat sports but may require careful management in team settings.

Solution: 1. The question asks for the definition of the 'Agreeableness' dimension.

2. Option (A), "Organized and disciplined," refers to the dimension of Conscientiousness.

3. Option (C), "Curious and imaginative," defines the dimension of Openness to Experience.

4. Option (D), "Easily stressed or anxious," describes the dimension of Neuroticism.

5. Option (B), "Kind, sympathetic, and cooperative," accurately describes the interpersonal tendencies of someone high in Agreeableness.

6. Therefore, according to the Five-Factor Model, agreeableness is rooted in prosocial behaviors and cooperation.

Final Answer: The 'Big Five' personality trait 'Agreeableness' refers to being kind, sympathetic, and cooperative.

Answer: (B)

Q17.

Solution

Concept: William Sheldon's somatotyping system provides a framework for understanding human physique and its relation to behavior. The 'Endomorph' somatotype is characterized by a predominance of soft roundness throughout the body. Physically, endomorphs tend to have a large bone structure, a higher percentage of body fat, and a slower metabolism, which makes them prone to gaining weight easily. Their digestive system is highly developed, and they often have a "pear-shaped" appearance. In the context of sports, endomorphs might excel in activities where bulk and a low center of gravity are advantageous, such as certain positions in rugby or heavyweight wrestling, provided they maintain a high level of functional strength.

Solution: 1. The question asks to identify the somatotype with a "round body shape" and a "tendency to gain fat."

2. Option (A), Mesomorph, refers to a muscular and athletic build with low fat.

3. Option (B), Ectomorph, refers to a thin, lean, and fragile build with very little fat or muscle.

4. Option (D), Ambivert, is a psychological term for someone whose personality falls between an introvert and an extrovert; it is not a physical somatotype.

5. Option (C), Endomorph, is the correct physiological classification for someone with a round physique and a propensity for fat storage.

6. This classification aligns with Sheldon's original 1940s research into body types and temperament.

Final Answer: The Endomorph somatotype is characterized by a round body shape and a tendency to gain fat easily.

Answer: (C)

Q18.

Solution

Concept: Mental skills training is a critical component of sports performance. Psychological techniques such as positive self-talk and visualization (mental imagery) are used to influence an athlete's mental state. Positive self-talk involves replacing negative, self-defeating thoughts with constructive, encouraging ones to build confidence. Visualization is the process of creating or recreating an experience in the mind—"seeing" and "feeling" a successful performance before it happens. These techniques do not change the athlete's physical muscles directly, but they optimize the brain's focus and emotional control. By regulating nerves and boosting self-efficacy, these tools significantly enhance psychological motivation and mental toughness.

Solution: 1. The question asks what positive self-talk and visualization are intended to enhance.

2. Option (A), Physical Strength, is developed through resistance training and nutrition, not mental exercises alone.

3. Option (C), Aggression, is a behavioral response that these techniques usually aim to "control" rather than enhance.

4. Option (D), Body Weight, is a physical metric determined by calories and metabolism.

5. Option (B), Psychological Motivation, is the correct answer. These techniques are designed to prime the athlete's mind, increase their desire to succeed, and manage their focus during high-pressure situations.

6. Thus, these are "mental" tools used to improve the "psychological" aspects of sports performance.

Final Answer: Positive self-talk and visualization are techniques used to enhance Psychological Motivation.

Answer: (B)

Q19.

Solution

Concept: Social cohesion is a fundamental concept in sports sociology and team dynamics. it refers to the extent to which members of a group or team bond together and remain united in the pursuit of common goals. Cohesion is generally divided into two types: task cohesion (the degree to which group members work together to achieve common goals) and social cohesion (the interpersonal attraction between group members). A team with high social cohesion enjoys being together and supports each other emotionally. High cohesion is often linked to better performance, higher athlete satisfaction, and lower turnover rates. It is the "glue" that keeps a team functioning under the stress of competition.

Solution: 1. The question asks for the definition of 'Social Cohesion' in a sports context.

2. Option (A), "Individual performance," focuses on the person, while "cohesion" is a group-level concept.

3. Option (C), "Rivalry between teams," refers to inter-group conflict, not intra-group unity.

4. Option (D), "Spectator behavior," relates to the audience rather than the internal dynamics of the team itself.

5. Option (B), "The degree to which team members work together," correctly identifies the essence of cohesion. It describes the unity and cooperative spirit within the team structure.

6. Therefore, social cohesion is synonymous with team unity and collective effort.

Final Answer: 'Social Cohesion' refers to the degree to which team members work together.

Answer: (B)

Q20.

Solution

Concept: 'Openness to Experience' is one of the five dimensions of the Big Five personality model. This trait distinguishes imaginative, creative people from down-to-earth, conventional people. Individuals high in Openness are intellectually curious, appreciative of art, and sensitive to beauty. They tend to be more aware of their feelings and are likely to hold unconventional beliefs. In a sports environment, an athlete high in Openness is often more willing to experiment with new training techniques, adapt to different coaching styles, and seek out creative solutions to tactical problems on the field. They are "seekers" of new information and experiences.

Solution: 1. The question describes an individual who is "highly creative" and "likes to try new things."

2. Option (A), Extraversion, relates to social energy and outgoingness.

3. Option (C), Agreeableness, relates to being cooperative and kind to others.

4. Option (D), Neuroticism, relates to emotional instability and stress.

5. Option (B), Openness to Experience, is the dimension that specifically measures creativity, curiosity, and the desire for novelty.

6. Because the traits of creativity and trying new things are the defining characteristics of this dimension, it is the correct choice.

Final Answer: A person who is creative and likes new things would score high on Openness to Experience.

Answer: (B)

Q21.

Solution

Concept: The dimensions of a playing field are standardized by international governing bodies to ensure fair competition. In Cricket, the "pitch" is the central rectangular area of the ground between the two sets of wickets. The length of the pitch is a critical measurement that dictates the speed, bounce, and trajectory of the ball delivered by the bowler. This distance is traditionally defined as 22 yards. In the metric system, which is used for modern international standardizations, this translates specifically to 20.12 meters. Precision in this measurement is vital because even a few centimeters of difference can significantly alter the timing required for a batsman to play a shot.

Solution: 1. The question asks for the standard length of a Cricket pitch between the wickets in meters.

2. The traditional measurement for a pitch is 22 yards.

3. To convert yards to meters, we use the factor: 1 yard = 0.9144 meters.

4. Calculation: $22 \times 0.9144 = 20.1168$ meters.

5. This value is rounded to the standard international measurement of 20.12 meters.

6. Option (B), (C), and (D) provide incorrect lengths that do not correspond to the laws of cricket established by the Marylebone Cricket Club (MCC).

7. Therefore, 20.12 meters is the scientifically and legally accepted length for a standard pitch.

Final Answer: The standard length of a Cricket pitch is 20.12 meters.

Answer: (A)

Q22.

Solution

Concept: Handball is a high-paced team sport where the objective is to throw a ball into the goal of the opposing team. According to the International Handball Federation (IHF) rules, a standard match is played between two teams. Each team is allowed to have a specific number of players on the court at any given time to balance the space of the 40m x 20m court. This number includes the court players and one designated goalkeeper. Having the correct number of players is essential for maintaining the tactical integrity of the game, including defensive formations like the 6-0 or 5-1 zones.

Solution: 1. The question asks for the number of players on the court for a single team in a standard Handball match.

2. According to IHF rules, a team consists of up to 14 players, but only a maximum of 7 players can be on the court at once.

3. These 7 players typically consist of 6 court players (Left Wing, Left Back, Center Back, Right Back, Right Wing, and Pivot) and 1 Goalkeeper.

4. Option (A), 11, is the number of players for Football or Cricket.

5. Option (B), 9, is used in sports like Baseball or Kho-Kho.

6. Option (D), 5, is the standard number for Basketball.

7. Therefore, Option (C) is the correct answer as it follows the official laws of the game for Handball.

Final Answer: There are 7 players on the court for one team in a standard Handball match.

Answer: (C)

Q23.

Solution

Concept: Kabaddi is a traditional contact sport that originated in ancient India. It is unique because it requires a combination of physical strength, agility, and breath control. The "Cant" is the most fundamental and defining technical requirement of the sport. It refers to the continuous, clear, and audible chanting of the word "Kabaddi" by the raider while they are in the opponent's half of the court. The raider must maintain this chant on a single breath. If the raider loses their breath or stops the "Cant" before returning to their own half, they are declared out. This rule tests the lung capacity and composure of the athlete under physical pressure.

Solution: 1. The question asks which sport is associated with the skill or rule known as 'Cant'.

2. In Hockey (Option A) and Football (Option B), the game revolves around ball control with sticks or feet, and there is no breath-holding requirement.

3. In Basketball (Option D), the focus is on dribbling and shooting.

4. In Kabaddi (Option C), the "Cant" is the core mechanic that defines the duration of a "raid." The raider must prove they are holding their breath by continuously chanting.

5. The term "Cant" is specifically used in the official rulebooks of the International Kabaddi Federation to describe this rhythmic chanting.

6. Therefore, the association between 'Cant' and Kabaddi is fundamental to the sport's identity.

Final Answer: The skill 'Cant' is fundamentally associated with Kabaddi.

Answer: (C)

Q24.

Solution

Concept: Suryanamaskar, or Sun Salutation, is a sequence of 12 powerful yoga poses that provide a comprehensive cardiovascular workout and improve flexibility. Each position in the sequence is synchronized with the breath. The sequence begins with Pranamasana (Prayer Pose) and progresses through various stretches. The fourth stage is particularly important as it is the first "low" stretch in the sequence that engages the hip flexors and balance. It involves stepping one leg back and keeping the other foot between the hands while looking upward. This specific posture is known as Ashwa Sanchalanasana, or the Equestrian Pose.

Solution: 1. The question asks to identify the fourth stage of the 12-step Suryanamaskar sequence.

2. Step 1 is Pranamasana (Prayer Pose).

3. Step 2 is Hasta Uttanasana (Raised Arms Pose).

4. Step 3 is Padahastasana (Hand to Foot Pose).

5. Step 4 is Ashwa Sanchalanasana (Equestrian Pose), where one leg is stretched back.

6. Option (C), Parvatasana (Mountain Pose), occurs at Step 5 and Step 8.

7. Option (D), Padahastasana, occurs at Step 3 and Step 10.

8. Therefore, Ashwa Sanchalanasana is the correct fourth stage of the cycle.

Final Answer: The fourth stage of Suryanamaskar is Ashwa Sanchalanasana.

Answer: (B)

Q25.

Solution

Concept: In Hatha Yoga, 'Shatkarmas' are six purification techniques used to cleanse the body of internal impurities and balance the 'doshas' (humors). These 'Kriyas' (actions) prepare the body for advanced Pranayama and meditation. One of the most common categories of Kriyas involves the cleansing of the nasal passages. This is crucial for optimal breathing and respiratory health. The two primary methods for this are 'Jala Neti' (using saline water) and 'Sutra Neti' (using a waxed cotton thread). Both techniques involve passing the medium through the nostrils to remove mucus and pollutants, thereby improving the flow of air and clarity of mind.

Solution: 1. The question asks for the Yoga Kriya used for cleaning the nasal passage using a thread or water.

2. Option (A), Kapalbhati, is a breathing technique or "shining skull" kriya that focuses on forceful exhalations but does not involve thread or water.

3. Option (C), Dhauti, refers to the cleansing of the digestive tract (stomach), often using a long cloth or water.

4. Option (D), Nauli, involves the abdominal churning of muscles to massage internal organs.

5. Option (B), Neti, is the specific term for nasal cleansing. 'Jala' means water and 'Sutra' means thread; both are sub-types of the Neti Kriya.

6. Therefore, Neti is the correct terminology for the practice described.

Final Answer: The Yoga Kriya used for cleaning the nasal passage is Neti.

Answer: (B)

Q26.

Solution

Concept: Yoga asanas are often named after the physical objects, animals, or nature elements they resemble. Standing asanas are fundamental for developing balance, leg strength, and focus. One of the most recognizable standing postures is the 'Tree Pose'. In this pose, the practitioner stands on one leg while the other foot is placed on the inner thigh of the standing leg, and the hands are stretched upward or held in a prayer position. The name of the pose is derived from the Sanskrit words 'Vriksha', meaning tree, and 'Asana', meaning posture. This asana is excellent for improving neuromuscular coordination and concentration.

Solution: 1. The question asks for the standing asana that resembles a tree.

2. Option (A), Tadasana (Mountain Pose), involves standing with both feet together and arms at the sides or raised; while it is a standing pose, it represents a mountain.

3. Option (C), Bhujangasana (Cobra Pose), and Option (D), Vajrasana (Thunderbolt Pose), are performed in prone and sitting positions, respectively, not standing.

4. Option (B), Vrikshasana, literally translates to 'Tree Pose'. The physical alignment of the body—with a single "trunk" (leg) and "branches" (arms)—is a direct representation of a tree.

5. Therefore, Vrikshasana is the correct posture based on the description of shape and position.

Final Answer: The asana that resembles the shape of a tree is Vrikshasana.

Answer: (B)

Q27.

Solution

Concept: Pranayama is the fourth limb of Ashtanga Yoga as described by Patanjali. The word is composed of two Sanskrit roots: 'Prana' (life force or vital energy) and 'Ayama' (extension or expansion). While many associate yoga primarily with physical postures (Asanas), Pranayama shifts the focus to the internal energy system through the medium of the breath. It involves various techniques of inhalation (Puraka), retention (Kumbhaka), and exhalation (Rechaka). By consciously controlling the rhythm and depth of breathing, practitioners aim to calm the nervous system, improve lung capacity, and prepare the mind for meditation.

Solution: 1. The question asks for the primary concern or focus of 'Pranayama'.

2. Option (A), Physical postures, is the domain of Asana.

3. Option (C), Cleansing of the stomach, refers to Shatkarmas like Dhauti.

4. Option (D), Concentration on an object, refers to Dharana.

5. Option (B), Regulation of breath, is the literal and technical definition of Pranayama. The practice is centered on mastering the breathing process to control the vital life force.

6. Therefore, breath regulation is the fundamental objective of all Pranayama techniques.

Final Answer: Pranayama is primarily concerned with the regulation of breath.

Answer: (B)

Q28.

Solution

Concept: Most yoga asanas are strictly prohibited immediately after eating because they divert blood flow away from the digestive system to the skeletal muscles, which can cause indigestion or cramps. However, there is one significant exception. Vajrasana, or the Thunderbolt Pose, is a kneeling posture where the practitioner sits on their heels with a straight back. In this position, blood circulation is restricted to the lower limbs and redirected toward the abdominal region. This increased blood flow stimulates the digestive organs and helps in the efficient processing of food. It is widely recommended for relieving acidity and digestive discomfort.

Solution: 1. The question identifies an asana that improves digestion and is unique because it can be performed after meals.

2. Option (A), Shavasana (Corpse Pose), is a relaxation pose generally done at the end of a session.

3. Option (B), Chakrasana (Wheel Pose), is a deep backbend that requires significant exertion and should never be done on a full stomach.

4. Option (D), Halasana (Plow Pose), involves intense abdominal compression which would interfere with digestion.

5. Option (C), Vajrasana, is scientifically recognized for its ability to enhance the digestive process by altering blood flow patterns while the body is in a restful, kneeling state.

6. Therefore, Vajrasana is the only correct choice for post-meal practice.

Final Answer: Vajrasana is the only asana that can be performed after meals.

Answer: (C)

Q29.

Solution

Concept: Nutrients are substances in food that our bodies need to function and grow. They are categorized into two groups: Macro Nutrients and Micro Nutrients. Macro Nutrients are required by the body in large quantities because they provide the bulk of energy (calories) and serve as the building blocks for tissues. The three main macro nutrients are Carbohydrates (the primary energy source), Proteins (for tissue repair), and Fats (for energy storage and hormone production). Micro Nutrients, such as Vitamins and Minerals, are equally vital but are required in much smaller amounts for biochemical reactions.

Solution: 1. The question asks to identify a 'Macro Nutrient' from the list.

2. Option (A), Vitamin A, is a fat-soluble vitamin and is classified as a micro nutrient.

3. Option (B), Iron, and Option (D), Calcium, are minerals required in milligrams or grams, placing them in the micro nutrient category.

4. Option (C), Carbohydrates, is a major food group that humans consume in hundreds of grams per day to fuel metabolic processes.

5. Since carbohydrates provide 4 calories per gram and are needed in large amounts, they are a primary macro nutrient.

Final Answer: Carbohydrates are considered a Macro Nutrient.

Answer: (C)

Q30.

Solution

Concept: Fractures are classified based on the nature of the break in the bone. Children have bones that are more flexible and softer than adult bones because they contain more organic matter and less mineral density. Because of this flexibility, a child's bone might not snap completely when subjected to force; instead, it may bend and suffer a partial break on one side, similar to how a young, moist "green stick" from a tree would behave when bent. This is a common pediatric injury where the bone is cracked but remains in one piece.

Solution: 1. The question describes a fracture where the bone "bends and cracks but does not break completely."

2. Option (A), Comminuted Fracture, involves the bone shattering into three or more pieces.

3. Option (C), Stress Fracture, is a tiny crack caused by repetitive force or overuse.

4. Option (D), Transverse Fracture, is a straight break across the long axis of the bone.

5. Option (B), Greenstick Fracture, is the specific clinical term for this incomplete break caused by the pliability of young bones.

6. Therefore, the Greenstick fracture is the correct classification for this child-specific injury.

Final Answer: A fracture where the bone bends and cracks without breaking completely is a Greenstick Fracture.

Answer: (B)

Q31.

Solution

Concept:

Postural deformities are misalignments of the skeletal structure that can result from poor habits, muscle weakness, or genetic factors. 'Knock Knees', medically known as Genu Valgum, is a condition where the legs curve inward so that the knees touch each other while the ankles remain apart when standing. This deformity shifts the weight-bearing line of the body toward the outer part of the knee joint, which can lead to pain and difficulty in running or walking. It is often contrasted with 'Bow Legs' (Genu Varum), where the knees stay wide apart even when the ankles are touching.

Solution:

1. The question describes a deformity where the "knees touch each other in a normal standing position."
2. Option (A), Bow Legs, is the opposite condition where the knees curve outward, creating a large gap between the legs.
3. Option (B), Flat Foot, involves the collapse of the arches of the feet, affecting the sole's contact with the ground.
4. Option (D), Kyphosis, is a spinal deformity involving an excessive outward curve of the upper back, often called a hunchback.
5. Option (C), Knock Knees, specifically refers to the inward inclination where the knees make contact while the feet stay apart.
6. Therefore, according to the physical description of the misalignment, Knock Knees is the correct identification.

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

Answer: (C)

Q32.

Solution

Concept:

Vitamins are organic compounds required in small quantities for various metabolic functions. One of the most critical processes in the body is 'hemostasis' or blood clotting, which prevents excessive bleeding when a blood vessel is injured. This process requires a cascade of proteins called clotting factors. Vitamin K serves as an essential co-factor for the enzyme that modifies these proteins, allowing them to bind to calcium and function correctly. A deficiency in Vitamin K can lead to impaired clotting and an increased risk of uncontrolled hemorrhaging. It is primarily found in green leafy vegetables and is also synthesized by bacteria in the human gut.

Solution:

1. The question asks which vitamin is essential for the process of blood clotting.
2. Option (A), Vitamin C, is vital for collagen synthesis, wound healing, and immunity, but it does not play a direct role in the clotting cascade.
3. Option (B), Vitamin D, is essential for calcium absorption and maintaining bone density and health.
4. Option (D), Vitamin B12, is necessary for red blood cell formation and maintaining healthy neurological function.
5. Option (C), Vitamin K, is the specific nutrient required for the synthesis of prothrombin and other clotting factors (Factors II, VII, IX, and X) in the liver.
6. Without Vitamin K, the chemical chain reaction that forms a fibrin clot cannot be completed effectively, leading to prolonged bleeding.

Final Answer: Vitamin K is essential for blood clotting.

Answer: (C)

Q33.

Solution

Concept:

Fractures are categorized by the direction of the break relative to the bone's structure. When a bone is subjected to a force that is applied from an angle, or a twisting motion, the resulting break may not be straight. An 'Oblique Fracture' occurs when the bone breaks diagonally across the shaft. Unlike a transverse fracture, which is a horizontal break at a 90-degree angle to the bone's long axis, the oblique fracture line is slanted. These fractures are often unstable and can be caused by falls or sudden impacts where the bone is compressed while being slanted.

[Image of various types of bone fractures: Transverse, Oblique, Spiral, and Greenstick]

Solution:

1. The question asks for the characteristic of an 'Oblique Fracture'.
2. Option (A), "Parallel to the bone's long axis," describes a linear fracture, which runs vertically.
3. Option (B), "Curved or circular," describes a spiral fracture, which is usually caused by a severe twisting force.
4. Option (D), "Shattered into many fragments," describes a comminuted fracture, typical of high-impact trauma.
5. Option (C), "At an angle to the bone's long axis," is the geometric definition of 'oblique'. This slanted break is distinct from the perpendicular break of a transverse fracture.
6. Therefore, the diagonal or angular nature of the break is the defining feature of an oblique fracture.

Final Answer: An Oblique Fracture is characterized by a break that is at an angle to the bone's long axis.

Answer: (C)

Q34.

Solution

Concept:

India honors its athletes with various national awards to recognize excellence and inspire the youth. The most prestigious of these is the Major Dhyan Chand Khel Ratna Award (formerly known as the Rajiv Gandhi Khel Ratna). It is awarded annually by the Ministry of Youth Affairs and Sports. The criteria for this award are stringent: it is given for the most spectacular and outstanding performance in the field of sports and games by a sportsperson over a period of four years immediately preceding the year in which the award is given. The award includes a medallion, a certificate, and a substantial cash prize.

Solution:

1. The question asks for the "highest sporting honor in India" based on a four-year performance cycle.
2. Option (A), Arjuna Award, is a prestigious award for consistent good performance over four years but is considered the second-highest honor after the Khel Ratna.
3. Option (B), Dronacharya Award, is specifically for coaches who have mentored athletes to achieve international success.
4. Option (D), Padma Shri, is the fourth-highest civilian honor in India and is not exclusive to the sporting world.
5. Option (C), Major Dhyan Chand Khel Ratna Award, is the pinnacle of sporting recognition in India, specifically highlighting "spectacular and outstanding" achievements.
6. Therefore, it is correctly identified as the highest honor in the context of Indian sports.

Final Answer: The highest sporting honor in India is the Major Dhyan Chand Khel Ratna Award.

Answer: (C)

Q35.

Solution

Concept:

The success of an athlete is often a reflection of the guidance and technical expertise provided by their mentor. To recognize the contribution of these individuals, the Government of India instituted the Dronacharya Award in 1985. The award is named after Dronacharya, the legendary teacher of archery and warfare from the Indian epic, the Mahabharata. It is presented to those sports professionals who have shown excellence in training athletes or teams and enabled them to achieve outstanding results in international competitions. This award emphasizes that a coach's role is fundamental to the long-term development of a nation's sporting talent.

Solution:

1. The question asks which category of professionals receives the 'Dronacharya Award'.
2. Option (A), Players, receive awards like the Arjuna or Khel Ratna for their field performance.
3. Option (C), Referees, and Option (D), Sports Administrators, have different recognition platforms but do not qualify for the Dronacharya Award.
4. Option (B), Coaches, is the specific group for whom this award was created. The name itself (Dronacharya) symbolizes the ultimate teacher or mentor.
5. The award serves to incentivize coaches to adopt modern training methods and produce world-class athletes.
6. Thus, coaches are the only eligible recipients for this specific honor.

Final Answer: The 'Dronacharya Award' is presented to Coaches.

Answer: (B)

Q36.

Solution

Concept:

The Bachelor of Physical Education (B.P.Ed) is a professional degree designed to produce qualified physical education teachers and sports coaches. In the Indian context, the National Council for Teacher Education (NCTE) sets the standards for these programs. There are primarily two types of B.P.Ed programs available to cater to different stages of a student's academic journey.

Solution:

1. Duration and Entry: Indian universities offer a 2-year B.P.Ed program and a 4-year integrated B.P.Ed program.
2. Eligibility for 2-Year Program: This is a post-graduate professional degree. A candidate must have completed a Bachelor's degree (Graduation) in any stream with at least 50% marks and have participated in sports at the inter-college or inter-district level.
3. Eligibility for 4-Year Program: This is an undergraduate integrated course. Students who have passed their 12th standard (Intermediate) are eligible to apply, provided they meet the minimum percentage and sports merit criteria.
4. Summary: Because the qualification depends entirely on whether the university offers the integrated or the post-graduation professional model, the answer encompasses both 12th pass and Graduation.

Final Answer: 12th Pass / Graduation (depending on course duration) is the required qualification.

Answer: (B)

Q37.

Solution

Concept:

The Arjuna Award, officially known as the Arjuna Awards for Outstanding Performance in Sports and Games, is the second-highest sporting honor in India. It is named after Arjuna, a character from the Sanskrit epic Mahabharata who was a master archer and a symbol of hard work, dedication, and concentration.

Solution:

1. Historical Context: The Government of India established this award to recognize athletes who consistently perform well at the international level.
2. Criteria: To be eligible, an athlete must have shown good performance over the previous four years and must also display qualities of leadership, sportsmanship, and a sense of discipline.
3. The Award: It consists of a cash prize (revised periodically), a bronze statue of Arjuna, and a scroll.
4. The Year of Inception: The award was officially instituted in 1961. In its inaugural year, 20 sportsmen received the honor, including legends like P.K. Banerjee for Football and Salim Durani for Cricket.

Final Answer: The Arjuna Award was instituted in the year 1961.

Answer: (B)

Q38.

Solution

Concept:

Muscle contractions are defined by how the muscle fibers react to a load. In physical education and biomechanics, these are divided into static and dynamic contractions. Static contractions occur when the muscle generates force without changing its physical length or moving the joint.

Solution:

1. Etymology: The word 'Isometric' comes from the Greek "isos" (equal) and "metron" (measure/length). This literally translates to "equal length."

2. Mechanism: During an isometric exercise, the muscle fibers are activated and tension is developed, but the external resistance is so great (or the intention is such) that no movement is produced.

3. Examples: Common examples include pushing against a stationary wall, performing a 'plank' exercise, or holding a heavy grocery bag at a constant height.

4. Comparison: This is different from Isotonic exercises (where the muscle shortens or lengthens) and Isokinetic exercises (where movement happens at a constant speed).

Final Answer: Isometric is the type of exercise where muscle length remains constant.

Answer: (B)

Q39.

Solution

Concept:

Fartlek training was developed in 1937 by Swedish coach Gösta Holmér. It was originally designed to combine speed and endurance training in a natural, outdoor setting rather than on a rigid, timed track. It is a form of continuous training that varies in intensity.

Solution:

1. Nature of Training: Fartlek involves varying the pace of a run, alternating between high-intensity sprints and low-intensity recovery jogs. Unlike interval training, there is no rest period; the athlete keeps moving.

2. Target System: Because the workout is continuous and lasts for a prolonged period, it primarily taxes the aerobic energy system, while the speed bursts challenge the anaerobic system.

3. Adaptation: The body learns to recover from high-intensity efforts while still performing at a moderate level. This significantly boosts the athlete's cardiovascular capacity.

4. Conclusion: While it touches on speed, its primary goal in a fitness regimen is to build "Endurance," particularly for long-distance athletes and games players.

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

Answer: (B)

Q40.

Solution

Concept:

Proprioceptive Neuromuscular Facilitation (PNF) is considered a more advanced form of flexibility training. It involves both the stretching and the contraction of the muscle group being targeted. It was initially used in clinical settings for neuromuscular rehabilitation but has since become a staple in high-level sports training.

Solution:

1. The Process: PNF typically requires a partner. It follows a 'Contract-Relax' pattern where the muscle is stretched, then contracted isometrically against the partner's resistance, and then stretched again.
2. Biological Basis: It works by utilizing the "stretch reflex." When the muscle is contracted isometrically, it triggers the Golgi Tendon Organs, which causes the muscle to relax. This allows for a deeper stretch in the following phase.
3. Application: It is the most effective method for increasing the passive range of motion at a joint.
4. Fitness Component: Out of the four options provided, PNF is strictly a technique for improving "Flexibility."

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

Answer: (B)

Q41.

Solution

Concept:

Isokinetic exercise is a specific type of strength training that utilizes specialized equipment. The term is derived from the Greek words 'iso' (same) and 'kinetik' (motion). Unlike other forms of exercise where the resistance is constant but speed varies, here the speed is controlled and the resistance adapts to the user's effort.

Solution:

1. Mechanism: Isokinetic exercises are performed on machines like the Cybex or Biodex. These machines are programmed to move at a pre-set, constant angular velocity, regardless of how much force the individual applies.
2. Variable Resistance: If the individual pushes harder, the machine increases the resistance to keep the speed from increasing. This allows for maximal muscle contraction throughout the entire range of motion.
3. Efficiency: This method is highly effective for rehabilitation and athletic training because it provides a consistent workload to the muscles at every degree of joint movement.
4. Classification: Because the resistance changes to match the muscle's capability while speed remains fixed, it is categorized distinctly from isotonic or isometric training.

Final Answer: Isokinetic exercises are performed on machines providing variable resistance at constant speed.

Answer: (C)

Q42.

Solution

Concept:

The Flamingo Balance Test is a widely recognized assessment used to measure static balance. Balance is a critical component of physical fitness, especially in sports that require stability and coordination, as well as in general health monitoring for various age groups.

Solution:

1. Procedure: The subject stands on one leg on a metal beam or flat surface, bending the other leg at the knee and holding the foot close to the buttocks. The test measures how many times the subject loses balance in a one-minute interval.
2. Objective: The primary goal is to maintain an upright position while minimizing postural sway. It assesses the ability of the central nervous system to coordinate sensory input from the vestibular system and proprioceptors.
3. Component measured: While speed and agility involve movement, this test is performed in a stationary position, making it a measure of "Static Balance."
4. Significance: It is a standard part of the Eurofit physical fitness test battery, used to identify the equilibrium capabilities of an individual.

Final Answer: The Flamingo Test is used to measure Static Balance.

Answer: (A)

Q43.

Solution

Concept:

The Rikli Jones Senior Citizen Fitness Test (also known as the Fullerton Functional Fitness Test) was developed to assess the physical functional ability of older adults. It focuses on the attributes necessary for performing daily activities, such as strength, flexibility, and aerobic endurance.

Solution:

1. Target Areas: The test battery includes different items for different body parts. The Chair Stand Test measures lower body strength, while the Arm Curl Test measures upper body strength.
2. Measuring Flexibility: To assess flexibility, the battery uses two specific tests: the Chair Sit and Reach for the lower body and the Back Scratch Test for the upper body.
3. The Back Scratch Test: In this test, the participant reaches one hand over the shoulder and the other up the middle of the back to try and touch or overlap the fingers. It measures the range of motion in the shoulder girdle.
4. Outcome: This specific movement identifies the flexibility of the upper body, which is crucial for tasks like dressing or reaching for items on a shelf.

Final Answer: The Back Scratch Test is used to measure upper body flexibility.

Answer: (B)

Q44.

Solution

Concept:

The Shuttle Run is a classic field test used to measure various components of physical performance. The 4 x 10 meter variant requires the participant to run back and forth between two lines 10 meters apart, four times, often picking up and placing down small wooden blocks.

Solution:

1. Requirements: The test requires the athlete to accelerate quickly from a stationary start, decelerate rapidly to change direction, and then accelerate again.

2. Agility: Because the test involves frequent and rapid changes of direction, it is a primary measure of agility.

3. Speed: Since the athlete is performing the movement as fast as possible over a short distance, it also heavily assesses anaerobic speed and explosive power.

4. Evaluation: Unlike long-distance runs which test endurance, or lifting which tests pure strength, the shuttle run evaluates how effectively an individual can manipulate their body weight in space under time pressure.

Final Answer: The 4 x 10 meter Shuttle Run evaluates Agility and Speed.

Answer: (C)

Q45.

Solution

Concept:

Newton's Second Law of Motion, also known as the Law of Acceleration, provides the mathematical relationship between the forces acting on an object and the resulting change in its motion. It is fundamental to the study of biomechanics in sports.

Solution:

1. The Formula: The law is expressed by the equation $F = m \times a$, where F is force, m is mass, and a is acceleration.

2. Proportionality: In this equation, acceleration is equal to F/m. This means that if the mass remains constant, an increase in the force applied to an object will lead to a proportional increase in its acceleration.

3. Mathematical Logic: Direct proportionality implies that as one variable increases, the other increases at a consistent rate. Therefore, acceleration is directly proportional to Force.

4. Inverse Relationship: Conversely, acceleration is inversely proportional to mass; if the force remains the same, a heavier object will accelerate less than a lighter one.

Final Answer: According to Newton's Second Law, Acceleration is directly proportional to Force.

Answer: (B)

Q46.

Solution

Concept:

Levers are simple machines present in the human body that consist of a rigid bar (bone), a fulcrum (joint), an effort (muscle contraction), and a resistance (load). Levers are classified into three classes based on the relative position of the fulcrum, the load, and the effort.

Solution:

1. Classification Rule: A simple way to remember lever classes is the "FLE" rule, which identifies what component is in the middle.
2. Class 1 Lever (F): The Fulcrum is located between the effort and the load (E-F-L). An example in the human body is the atlanto-occipital joint (the head nodding on the neck).
3. Class 2 Lever (L): The Load is in the middle (F-L-E). An example is standing on tiptoes.
4. Class 3 Lever (E): The Effort is in the middle (F-E-L). This is the most common lever in the body.
5. Specific Identification: Since the question asks which component is in the middle for a Class 1 lever, the answer is the Fulcrum.

Final Answer: In a Class 1 Lever, the Fulcrum is located in the middle.

Answer: (C)

Q47.

Solution

Concept:

Stroke volume refers to the amount of blood pumped by the left ventricle of the heart in one single contraction. It is a key indicator of cardiac efficiency and overall cardiovascular health. Chronic exercise leads to physiological adaptations in the heart muscle.

Solution:

1. Cardiac Hypertrophy: Long-term aerobic training leads to "Athlete's Heart," where the left ventricle becomes larger and the heart walls become stronger.
2. Volume Increase: A larger ventricular chamber can hold more blood during the diastolic (filling) phase.
3. Contractility: Because the heart muscle becomes stronger, it can eject a larger percentage of that blood with each beat.
4. Result: As a result of these adaptations, the stroke volume increases significantly at rest, during sub-maximal exercise, and during maximal exercise. This allows the heart to pump more oxygenated blood with fewer beats, often resulting in a lower resting heart rate (bradycardia).

Final Answer: The effect of long-term regular exercise is that Stroke Volume increases.

Answer: (C)

Q48.

Solution

Concept:

As established in the classification of levers, the human body primarily functions using Class 3 levers. While Class 2 levers provide a mechanical advantage for lifting heavy loads, Class 3 levers prioritize range of motion and speed over force.

Solution:

1. Definition of Class 3: In this lever system, the effort (muscle force) is applied between the fulcrum (joint) and the load (the weight being moved).
2. Biceps Curl Example: In a biceps curl, the elbow joint is the fulcrum, the bicep muscle attaches to the radius (effort) just below the elbow, and the weight in the hand is the load.
3. Advantage: Although this requires more force from the muscle than the weight of the load itself, it allows the hand to move through a large distance very quickly with only a small contraction of the muscle.
4. Prevalence: Most musculoskeletal attachments in the human body follow this arrangement, making the third-class lever the most common type found in human anatomy.

Final Answer: Class 3 levers are the most common in the human body.

Answer: (C)

Q49.

Solution

Concept:

Hypertrophy is a biological term referring to the enlargement of an organ or tissue from the increase in the size of its cells. In the context of sports and fitness, it specifically refers to "Muscular Hypertrophy," which is the primary goal of bodybuilding and strength training.

Solution:

1. Mechanism: When muscles are subjected to high-tension resistance training, microscopic tears occur in the muscle fibers. During the recovery process, the body repairs these fibers.
2. Adaptation: To prevent future damage, the body doesn't just repair the fibers; it adds more protein filaments (actin and myosin) to them, making each individual muscle fiber thicker.
3. Visible Result: As the individual fibers grow in diameter, the entire muscle belly increases in volume and size.
4. Distinction: This is different from "hyperplasia," which would be an increase in the number of muscle fibers (which is rare/unproven in humans). Hypertrophy is purely about the thickness and size of existing fibers.

Final Answer: Hypertrophy refers to the Increase in muscle size and fiber thickness.

Answer: (B)

Q50.

Solution

Concept:

Isaac Newton formulated three laws of motion that form the basis of classical mechanics. These laws explain how objects behave when they are at rest or in motion and how forces affect them. The first of these laws describes the fundamental property of matter called inertia.

Solution:

1. Definition of Inertia: Inertia is the tendency of an object to resist any change in its state of rest or uniform motion. An object at rest stays at rest, and an object in motion stays in motion unless acted upon by an external force.
2. Relationship to Newton: Newton's First Law formally states this principle of inertia. It explains that motion does not require a force to maintain it; rather, force is required to change it.
3. Sports Application: In sports, this is seen when a ball remains on the ground until kicked, or a sprinter requires significant force to stop their momentum after crossing the finish line.
4. Terminology: Because the first law is entirely dedicated to the concept of inertia, it is universally synonymous with the "Law of Inertia."

Final Answer: The law of Inertia is also known as Newton's First Law.

Answer: (A)

Answer Key

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