CUET UG Physical Education Sample Paper - 9

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.

Q1. The 'Mid-Day Meal Scheme' (now PM-POSHAN) has been scientifically linked to 'climbing the ladder' of educational achievement primarily by:

(A) Increasing the weight of school bags

(B) Improving classroom attention spans through better glucose regulation

(C) Providing free athletic tracksuits to all students

(D) Reducing the number of teachers required in rural areas

Q2. Under the NRHM, 'ASHA' workers act as the first port of call for any health-related demands. What does the acronym 'ASHA' stand for?

(A) Accredited Social Health Activist

(B) Advanced State Health Association

(C) Association of Social Health Advocates

(D) Allied System for Health Assistance

Q3. According to Jung's classification, an athlete who is socially bold, prefers team sports, and draws energy from external stimulation is classified as an:

(A) Introvert

(B) Extrovert

(C) Ambivert

(D) Endomorph

Q4. Which specific dimension of the 'Big Five' personality traits is most closely associated with an athlete's tendency to be cooperative, warm, and trusting towards teammates?

(A) Conscientiousness

(B) Agreeableness

(C) Extraversion

(D) Openness to Experience

Q5. Match List-I (Aggression Type) with List-II (Example/Definition) and select the correct option:

List-I (Aggression)	**List-II (Definition)**
(I) Hostile Aggression	(A) Aggression used as a tool to achieve a goal
(II) Instrumental Aggression	(B) Intent to cause pain or injury as a primary goal
(III) Assertive Behavior	(C) Use of legitimate physical or verbal force within rule
(IV) Violence	(D) Extreme aggression with intent to cause severe harm

(A) (I)-(B), (II)-(A), (III)-(C), (IV)-(D)

(B) (I)-(A), (II)-(B), (III)-(D), (IV)-(C)

(C) (I)-(C), (II)-(D), (III)-(A), (IV)-(B)

(D) (I)-(B), (II)-(C), (III)-(A), (IV)-(D)

Q6. What is the official weight of a standard 'Handball' used in professional Men's competitions?

(A) 325-375 grams

(B) 425-475 grams

(C) 500-550 grams

(D) 250-300 grams

Q7. In Kabaddi, the line that a raider must cross to be 'safe' and avoid being declared 'out' even if no touch is made is called the:

(A) Bonus Line
(B) Baulk Line
(C) End Line
(D) Mid Line

Q8. Which specific 'Kriya' in Yoga involves the cleansing of the frontal brain through rapid, forceful exhalations?

(A) Nauli
(B) Kapalbhati
(C) Basti
(D) Dhauti

Q9. The 'Vrikshasana' (Tree Pose) is most beneficial for improving which of the following sensory-motor skills?

(A) Auditory processing
(B) Neuromuscular coordination and balance
(C) Digestive speed
(D) Lung vital capacity

Q10. A 'Stress Fracture' is different from a Greenstick fracture because it is primarily caused by:

(A) Sudden high-impact collision
(B) Repetitive mechanical stress and overuse
(C) Severe calcium deficiency in children

(D) Twisting the bone beyond its limit

Case Study 1

Read the following passage and answer the questions 11 to 15:

The Rajiv Gandhi Khel Ratna, now renamed the Major Dhyan Chand Khel Ratna, is India's highest sporting honor. It recognizes spectacular performance over four years. Parallelly, the Arjuna Award celebrates consistent excellence, while the Dronacharya Award honors the 'architects' behind these champions—the Coaches. In the professional world of Physical Education, obtaining a B.P.Ed or M.P.Ed is essential for those seeking to be Physical Directors or University Lecturers. Furthermore, the Mid-Day Meal scheme serves as a silent partner in sports development; by ensuring children receive at least 450 calories and 12g of protein daily, it prevents the chronic fatigue that once hindered rural talent from reaching state-level fitness.

Q11. According to the passage, why is the Mid-Day Meal scheme considered a "silent partner" in sports development?

(A) It provides free jerseys to student-athletes

(B) It builds new stadiums in every school

(C) It provides the necessary caloric and protein foundation for physical activity

(D) It replaces the need for actual sports training

Q12. What is the primary educational requirement mentioned for becoming a 'University Lecturer' in Physical Education?

(A) Only a high school diploma

(B) A Master's degree (M.P.Ed)

(C) Experience as a professional cricket player

(D) Winning a Dronacharya Award

Q13. Based on the text, what is the specific timeframe considered for the Major Dhyan Chand Khel Ratna award?

(A) Performance in the last 1 year

(B) Performance over a period of 4 years

(C) Performance in a single Olympic match

(D) Performance throughout a lifetime

Q14. The passage refers to Coaches as "architects." Which award is specifically designated for them?

(A) Arjuna Award

(B) Khel Ratna

(C) Dronacharya Award

(D) Bharat Ratna

Q15. Which nutritional component in the Mid-Day Meal is specifically highlighted for its 12g contribution to a child's daily intake?

(A) Carbohydrates

(B) Fats

(C) Proteins

(D) Minerals

Q16. The 'Rikli Jones Senior Citizen Fitness Test' includes the '8-Foot Up and Go' test. This specific test is designed to measure:

(A) Upper body flexibility

(B) Speed, agility, and dynamic balance

(C) Aerobic endurance

(D) Lower body strength

Q17. Which of the following strategies is most effective for improving the participation of 'CWSN' (Children with Special Needs) in Physical Education?

(A) Providing a highly competitive and rigid environment

(B) Modifying the environment and using buddy systems

(C) Strictly following international Olympic rules for all

(D) Reducing the physical education periods for these students

Q18. In a professional 'Handball' match, what is the duration of a '2-minute suspension' penalty for a player?

(A) 60 Seconds

(B) 120 Seconds

(C) 180 Seconds

(D) Until the next goal is scored

Q19. Identify the 'Asana' based on the following description: "The practitioner lies on the stomach, lifts the chest and head while keeping the lower body on the ground, mimicking a snake with a raised hood."

(A) Tadasana

(B) Bhujangasana

(C) Shalabhasana

(D) Dhanurasana

Q20. Which type of fracture involves the bone breaking into more than two pieces or fragments?

(A) Transverse Fracture

(B) Comminuted Fracture

(C) Oblique Fracture

(D) Impacted Fracture

Q21. Match List-I (Nutrient) with List-II (Function) and select the correct option:

List-I (Nutrient)	**List-II (Function)**
(I) Carbohydrates	(A) Primary source of long-term stored energy
(II) Proteins	(B) Main source of immediate energy
(III) Fats	(C) Regulation of metabolism and immunity
(IV) Vitamins	(D) Growth and repair of body tissues

(A) (I)-(B), (II)-(D), (III)-(A), (IV)-(C)

(B) (I)-(A), (II)-(B), (III)-(C), (IV)-(D)

(C) (I)-(B), (II)-(A), (III)-(D), (IV)-(C)

(D) (I)-(C), (II)-(D), (III)-(A), (IV)-(B)

Q22. Which training method focuses on stretching the muscle to its limit and then performing an isometric contraction against resistance?

(A) Ballistic Stretching

(B) PNF Stretching

(C) Static Stretching

(D) Dynamic Stretching

Q23. The 'Flamingo Test' is used to measure static balance. If a subject falls 15 times within one minute, what is their status according to the test protocol?

(A) Excellent balance

(B) Average balance

(C) Poor balance / Test is terminated

(D) The score is not counted

Q24. Which postural deformity is characterized by an abnormal inward curvature of the 'lumbar' (lower) spine?

(A) Kyphosis

(B) Scoliosis

(C) Lordosis

(D) Knock Knees

Q25. In Biomechanics, a 'Third Class Lever' is the most common in the human body. In this lever, which component is located in the middle?

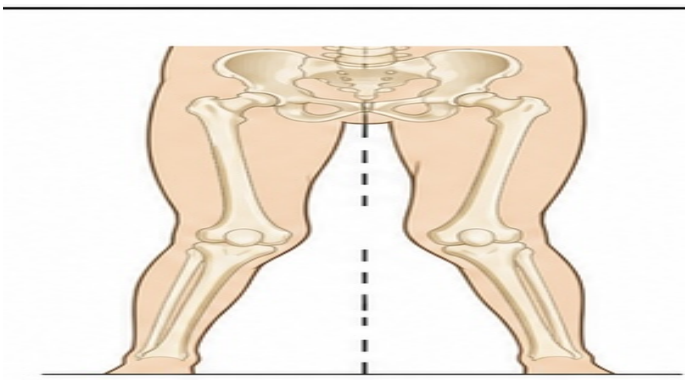
(A) Fulcrum

(B) Resistance (Load)

(C) Effort (Force)

(D) Axis

Q26. Identify the postural deformity where there is a permanent inward bending of the knees, causing them to touch each other while standing.



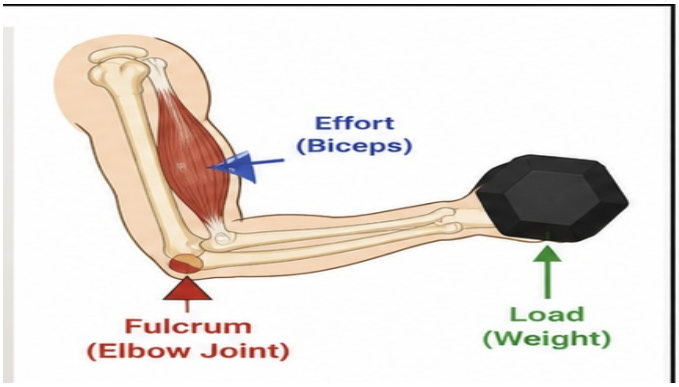
(A) Bow Legs

(B) Knock Knees

(C) Flat Foot

(D) Scoliosis

Q27. Look at the diagram of a 'Bicep Curl'. Which class of lever is being represented at the elbow joint during the lifting phase?



(A) Class I Lever

(B) Class II Lever

(C) Class III Lever

(D) Class IV Lever

Q28. What is the total number of players (on court + substitutes) allowed in a professional 'Kabaddi' team list for a match?

(A) 7 Players

(B) 10 Players

(C) 12 Players

(D) 14 Players

Q29. Which of the following is a communicable disease that can be spread through respiratory droplets?

(A) Diabetes

(B) Hypertension

(C) Tuberculosis (TB)

(D) Obesity

Q30. The 'Isometric' exercise method was introduced by Hettinger and Muller in 1953. In this method:

(A) Work done is clearly visible

(B) Muscle length remains constant while tension increases

(C) Speed of movement is controlled by a machine

(D) The body moves through a full range of motion

Case Study 2

Read the following passage and answer the questions 31 to 35:

Biomechanics is the study of forces and their effects on living systems. In sports, understanding the three laws of motion is essential. Newton's Second Law, the Law of Acceleration, states that the rate of change of momentum is proportional to the force applied. This explains why a heavier shot-put requires more force than a lighter one to reach the same speed. Furthermore, the human body acts as a system of levers. Most joints, like the elbow during a curl, act as third-class levers where the effort is between the fulcrum and the resistance. This setup favors speed and range of motion over brute strength.

Q31. According to the passage, why does a heavier shot-put require more force?

(A) Because of the Law of Inertia

(B) Because force is proportional to the rate of change of momentum

(C) Because it is a third-class lever

(D) Because the fulcrum is at the end

Q32. What is the primary advantage of a 'Third-class lever' as mentioned in the text?

(A) It provides maximum lifting power

(B) It favors speed and range of motion

(C) It eliminates the need for effort

(D) It keeps the fulcrum in the center

Q33. Where is the 'Effort' located in a third-class lever?

(A) At one end

(B) Between the fulcrum and the resistance

(C) At the same point as the resistance

(D) Below the fulcrum

Q34. The passage identifies the 'elbow during a curl' as an example of which lever?

(A) First-class

(B) Second-class

(C) Third-class

(D) Zero-class

Q35. The study of 'forces and their effects on living systems' is called:

(A) Physiology

(B) Sociology

(C) Biomechanics

(D) Psychology

Q36. Which fitness test is used to measure the 'Explosive Power' of the legs?

(A) Standing Broad Jump

(B) 4x10m Shuttle Run

(C) Sit and Reach Test

(D) Push-ups

Q37. The 'Fartlek' training method is most effective for developing:

(A) Maximum Strength

(B) Cardiovascular Endurance

(C) Static Flexibility

(D) Reaction Time

Q38. Which of the following is considered a 'Micro-nutrient' necessary for bone health?

(A) Fats

(B) Calcium

(C) Carbohydrates

(D) Water

Q39. The 'Big Five' personality trait 'Conscientiousness' refers to being:

(A) Sociable and talkative

(B) Anxious and moody

(C) Organized, disciplined, and dependable

(D) Kind and sympathetic

Q40. Which of the following is an official dimension of a 'Kabaddi' court for Senior Men?

(A) 13m x 10m

(B) 11m x 8m

(C) 12m x 12m

(D) 15m x 12m

Q41. During intense physical activity, the heart's efficiency is measured by 'Cardiac Output'. If a marathon runner has a stroke volume of 110 ml and a heart rate of 160 bpm, their Cardiac Output is:

(A) 11.2 Litres/min

(B) 17.6 Litres/min

(C) 15.0 Litres/min

(D) 12.5 Litres/min

Q42. Which type of training method utilizes 'Proprioceptive Neuromuscular Facilitation' to achieve maximum static-passive flexibility?

(A) Fartlek Training

(B) PNF Stretching

(C) Isokinetic Exercise

(D) Continuous Method

Q43. The 'Law of Inertia' (Newton's First Law) states that an object will continue in its state of rest or uniform motion unless:

(A) It runs out of internal energy

(B) An external unbalanced force acts upon it

(C) It reaches the end of the playing field

(D) The friction coefficient becomes zero

Q44. In the 'Rikli Jones' test for senior citizens, which specific item is used to measure 'Lower Body Flexibility'?

(A) Chair Sit and Reach Test

(B) Back Scratch Test

(C) Eight Foot Up and Go

(D) Arm Curl Test

Q45. A 'Comminuted Fracture' is most likely to occur in which of the following sporting scenarios?

(A) A child falling on a soft grass field

(B) A high-impact collision in motor racing or high-altitude skiing

(C) A long-distance runner developing a tiny crack in the shin

(D) A yoga practitioner over-stretching their hamstrings

Q46. The 'Suryanamaskar' stage where the body forms an inverted 'V' shape (mountain pose) is known as:

(A) Ashwa Sanchalanasana

(B) Parvatasana

(C) Ashtanga Namaskara

(D) Bhujangasana

Q47. Which specific career path in Physical Education involves the statistical analysis of player performance and team strategy for broadcasting?

(A) Sports Medicine

(B) Sports Journalism / Performance Analyst

(C) Sports Biomechanics

(D) Physical Director

Q48. Match List-I (Postural Deformity) with List-II (Corrective Measure) and select the correct option:

List-I (Deformity)	**List-II (Correction)**
(I) Flat Foot	(A) Chakrasana / Bhujangasana
(II) Kyphosis	(B) Walking on heels and inner edge
(III) Lordosis	(C) Walking on outer edge / picking pebbles
(IV) Bow Legs	(D) Halasana / Paschimottanasana

(A) (I)-(C), (II)-(A), (III)-(D), (IV)-(B)

(B) (I)-(B), (II)-(D), (III)-(A), (IV)-(C)

(C) (I)-(A), (II)-(B), (III)-(C), (IV)-(D)

(D) (I)-(C), (II)-(D), (III)-(B), (IV)-(A)

Q49. The 'Rockport One Mile Test' is a field test primarily used to estimate:

(A) VO_2 Max (Aerobic Capacity)

(B) Explosive Leg Strength

(C) Static Flexibility of the spine

(D) Body Mass Index (BMI)

Q50. What is the primary physiological effect of long-term 'Aerobic Exercise' on the heart's 'Left Ventricle'?

(A) Decrease in chamber size

(B) Hypertrophy (Increase in wall thickness and volume)

(C) Increase in resting heart rate

(D) Reduction in total blood volume

Detailed Solutions

Q1.

Solution

Concept:

The Mid-Day Meal Scheme (now PM-POSHAN) is a school meal program in India designed to better the nutritional standing of school-age children nationwide. Beyond basic nutrition, the program has a profound impact on cognitive function and academic performance by addressing "short-term hunger."

Solution:

1. Scientific studies show that children who are hungry cannot concentrate on lessons. 2. The brain requires a steady supply of glucose to maintain focus and executive function. 3. By providing a nutritious meal during school hours, the scheme helps in "glucose regulation," which prevents the mid-day energy crash. 4. This stabilization of energy levels leads to improved classroom attention spans and better retention of information. 5. Consequently, students perform better academically, effectively "climbing the ladder" of achievement. Options like free tracksuits or reducing teachers are not the primary mechanisms of this scheme.

Final Answer: The scheme improves achievement by improving classroom attention spans through better glucose regulation.

Answer: (B)

Q2.

Solution

Concept:

The National Rural Health Mission (NRHM) utilizes community-based health volunteers to bridge the gap between the rural population and the public health system. These workers are trained to provide basic information and facilitate access to healthcare services.

Solution:

1. ASHA is a key component of the NRHM, specifically stationed in every village. 2. The acronym stands for **Accredited Social Health Activist**. 3. **Accredited:** They are recognized and certified by the government. 4. **Social Health:** Their focus is on the health of the community and social welfare. 5. **Activist:** They are meant to be proactive leaders who mobilize the community for health-seeking behaviors, such as immunization and institutional delivery.

Final Answer: ASHA stands for Accredited Social Health Activist.

Answer: (A)

Q3.

Solution

Concept:

Carl Jung's psychological theory classifies individuals into two primary personality types based on where they direct their energy: Introversion and Extroversion. In sports, these traits often dictate an athlete's preference for individual versus team environments.

Solution:

1. According to Jung, an **Extrovert** is an individual whose psyche is oriented toward the external world. 2. They are socially bold, talkative, and enjoy being the center of attention. 3. Extroverts typically draw energy from being around other people and participating in social activities. 4. In a sporting context, they often thrive in team sports (like football or basketball) where social interaction and external stimulation are constant. 5. Introverts, conversely, draw energy from within and often prefer solitary or individual sports.

Final Answer: An athlete who is socially bold and draws energy from external stimulation is an Extrovert.

Answer: (B)

Q4.

Solution

Concept:

The Big Five Personality Model (OCEAN) includes a dimension that measures an individual's orientation toward interpersonal relationships and social harmony.

Solution:

1. **Agreeableness** is the trait that reflects individual differences in general concern for social harmony. 2. Athletes high in Agreeableness are typically kind, sympathetic, cooperative, warm, and considerate. 3. They value getting along with others and are willing to compromise their interests for the sake of the team. 4. This makes them excellent "team players" who build trust and support within a locker room or on the field. 5. Conscientiousness refers to being disciplined, while Extraversion refers to being outgoing; neither specifically focuses on "warmth and trust" like Agreeableness does.

Final Answer: Agreeableness is associated with being cooperative, warm, and trusting towards teammates.

Answer: (B)

Q5.

Solution

Concept:

Aggression in sports is categorized based on the intent of the athlete and the objective of the action. Understanding these distinctions is vital for maintaining sportsmanship and safety.

Solution:

1. **Hostile Aggression (I):** This is reactive aggression where the primary goal is to cause pain or injury to an opponent, often driven by anger; thus, (I) matches with (B). 2. **Instrumental Aggression (II):** This is proactive aggression used as a "tool" to achieve a non-aggressive goal, such as winning a ball or slowing down an opponent, without the primary intent to cause injury; thus, (II) matches with (A). 3. **Assertive Behavior (III):** This involves the use of legitimate physical or verbal force to achieve a goal while strictly following the rules of the game; thus, (III) matches with (C). 4. **Violence (IV):** This is the most extreme form, involving the intent to cause severe harm, often outside the context of the sport's rules; thus, (IV) matches with (D). 5. Combining these matches: (I)-(B), (II)-(A), (III)-(C), (IV)-(D).

Final Answer: The correct matching sequence is (I)-(B), (II)-(A), (III)-(C), (IV)-(D).

Answer: (A)

Q6.

Solution

Concept:

Equipment specifications for professional sports are strictly regulated to ensure fairness and safety. In Handball, the size and weight of the ball vary based on the age and gender of the participants, as determined by the International Handball Federation (IHF).

Solution:

1. For professional Men's competitions (Category: Size 3), the ball must meet specific circumference and weight requirements. 2. The official weight for a Size 3 ball is specified to be between **425 and 475 grams**. 3. For Women's competitions (Size 2), the ball is lighter, typically weighing between 325 and 375 grams. 4. The air pressure in the ball is also regulated to ensure it has a consistent bounce and grip, which is essential for high-speed passing and shooting. 5. Therefore, for the men's senior category, the correct weight range is 425-475 grams.

Final Answer: The official weight of a professional Men's Handball is 425-475 grams.

Answer: (B)

Q7.

Solution

Concept:

In Kabaddi, the court is divided by several lines that dictate the rules of raiding. To have a "legal" raid, the raider must cross certain boundaries to prove they have entered the opponent's territory effectively.

Solution:

1. The **Baulk Line** is the line located approximately 3.75 meters from the midline in the opponent's half. 2. For a raid to be considered "valid" or "safe," the raider must cross this Baulk Line with at least one foot (while the other foot is in the air or has already crossed) before returning to their own half. 3. If a raider fails to cross this line and returns to their half without touching a defender, they are declared "out." 4. The Bonus Line is further back and provides an extra point if crossed under specific conditions, but the Baulk Line is the fundamental requirement for a raider's safety. 5. Crossing the Baulk Line ensures the raider has committed to the attack.

Final Answer: The line a raider must cross to be safe is the Baulk Line.

Answer: (B)

Q8.

Solution

Concept:

Kapalbhati is one of the 'Shatkarmas' (six purification techniques) in Hatha Yoga. It is considered both a 'Kriya' (cleansing act) and a preparatory breathing exercise for advanced Pranayama.

Solution:

1. The word 'Kapal' means "forehead/skull" and 'Bhati' means "shining" or "glowing." 2. The technique involves passive, natural inhalations and **rapid, forceful exhalations** driven by the contraction of the abdominal muscles. 3. This process helps in clearing the respiratory passages and increasing the oxygenation of the blood. 4. Physiologically, it is believed to stimulate the frontal lobes of the brain, leading to mental clarity and a "shining" forehead (metaphorically representing a clear mind). 5. Nauli involves abdominal churning, while Basti and Dhauti focus on the lower and upper digestive tracts respectively.

Final Answer: Kapalbhati is the kriya involving rapid, forceful exhalations to cleanse the frontal brain.

Answer: (B)

Q9.

Solution

Concept:

Balance-based asanas like Vrikshasana (Tree Pose) focus on the integration of the nervous system and the muscular system. This integration is known as neuromuscular coordination.

Solution:

1. To perform Vrikshasana, the practitioner must stand on one leg, which significantly narrows the base of support. 2. To maintain this posture, the brain must constantly process sensory information from the inner ear (vestibular system), the eyes (visual system), and the muscles/joints (proprioception). 3. The brain then sends rapid signals to the stabilizing muscles of the ankle, leg, and core to make micro-adjustments. 4. This practice directly trains and improves **neuromuscular coordination and balance**. 5. While it may indirectly help other systems, its primary and most immediate benefit is the stability of the body-mind connection.

Final Answer: Vrikshasana is most beneficial for improving neuromuscular coordination and balance.

Answer: (B)

Q10.

Solution

Concept:

Fractures are broadly categorized by their cause. While many fractures result from a single traumatic event, some develop slowly over time due to mechanical failure of the bone.

Solution:

1. A **Stress Fracture** is a tiny crack in a bone that typically occurs in the weight-bearing bones of the lower leg and foot. 2. Unlike a Greenstick fracture (which is a partial break due to bone flexibility) or a traumatic fracture (due to a sudden fall), stress fractures are caused by **repetitive mechanical stress**. 3. Athletes who suddenly increase the intensity, duration, or frequency of their training are most at risk. 4. The bone's natural remodeling process cannot keep up with the microscopic damage caused by "overuse," eventually leading to a crack. 5. This is a common injury in long-distance runners and track athletes.

Final Answer: A Stress Fracture is primarily caused by repetitive mechanical stress and overuse.

Answer: (B)

Q11.

Solution

Concept:

The concept of a "silent partner" in development refers to a factor that provides the necessary groundwork or infrastructure for success without being the primary focus of the activity. In sports, nutrition is the biological infrastructure.

Solution:

1. The passage describes the Mid-Day Meal scheme as providing 450 calories and 12g of protein daily. 2. It explains that this nutritional support "prevents the chronic fatigue" that previously stopped rural children from reaching state-level fitness. 3. Without basic caloric and protein intake, the body cannot sustain the physical demands of sports training, regardless of how good the coaching or facilities are. 4. Therefore, the scheme acts as a partner by providing the physiological foundation (energy and muscle repair) required for physical activity. 5. It does not provide equipment or stadiums, but rather the internal fuel for the athlete.

Final Answer: The Mid-Day Meal is a "silent partner" because it provides the necessary caloric and protein foundation for physical activity.

Answer: (C)

Q12.

Solution

Concept:

Educational qualifications in Physical Education are structured to ensure professional standards in teaching and administration. Different levels of responsibility require different academic degrees.

Solution:

1. The passage explicitly lists professional degrees: B.P.Ed (Bachelor of Physical Education) and M.P.Ed (Master of Physical Education). 2. It states that these degrees are "essential for those seeking to be Physical Directors or University Lecturers." 3. In the Indian educational hierarchy, a Master's degree is the minimum requirement for lecturer positions in higher education. 4. While playing experience (Option C) is valuable, it is not the "educational requirement" mentioned in the text. 5. Therefore, a Master's degree (M.P.Ed) is the correct requirement identified.

Final Answer: The primary educational requirement for a University Lecturer is a Master's degree (M.P.Ed).

Answer: (B)

Q13.

Solution

Concept:

The Major Dhyan Chand Khel Ratna is the highest sporting award in India. To ensure the award recognizes sustained excellence rather than a "one-off" lucky performance, the selection committee evaluates an athlete over a multi-year window.

Solution:

1. According to the text, the award "recognizes spectacular performance over four years." 2. This four-year cycle typically aligns with the Olympic cycle, ensuring that athletes who perform consistently at the highest level (World Championships, Asian Games, Olympics) are rewarded. 3. A single year or a single match is not sufficient for this specific honor, as those might be covered by other citations. 4. Lifetime achievement (Option D) refers to the Dhyan Chand Award (not the Khel Ratna).

Final Answer: The timeframe for the Khel Ratna is performance over a period of 4 years.

Answer: (B)

Q14.

Solution

Concept:

Coaches are the strategic and technical guides for athletes. Recognizing their contribution is essential for the holistic development of sports in a country.

Solution:

1. The passage uses the metaphor "architects" to describe Coaches because they design and build the career of a champion. 2. It explicitly states that the **Dronacharya Award** "honors the 'architects' behind these champions—the Coaches." 3. The Arjuna Award is for the athletes, and the Khel Ratna is also for the athletes. 4. The Dronacharya Award is the only one in the passage specifically designated for coaching excellence.

Final Answer: The Dronacharya Award is specifically designated for Coaches.

Answer: (C)

Q15.

Solution

Concept:

Macronutrients include carbohydrates, proteins, and fats. Each has a specific role and is required in specific amounts for growing children.

Solution:

1. The passage mentions two specific numerical values for the Mid-Day Meal: 450 calories and 12g of a specific component. 2. It states: "ensuring children receive at least 450 calories and 12g of **protein** daily." 3. Protein is the nutrient responsible for muscle growth and repair, which is critical for children participating in sports. 4. Carbohydrates provide the bulk of the calories, but the 12g figure is specifically assigned to protein in the government's nutritional guidelines for primary students.

Final Answer: The nutritional component highlighted for its 12g contribution is Protein.

Answer: (C)

Q16.

Solution

Concept:

The Rikli Jones Senior Citizen Fitness Test is a standardized battery of tests designed to assess the functional fitness of older adults. One of its key items is the '8-Foot Up and Go' test, which simulates common daily activities like getting up from a chair to answer the door or the phone.

Solution:

1. The test requires the participant to sit in a chair, and on the signal "go," stand up, walk 8 feet to a marker, turn around, and return to sit back down in the chair. 2. The score is the time taken to complete this sequence. 3. Because the participant must move quickly (speed), navigate a turn (agility), and maintain stability while transitioning from sitting to walking and back (dynamic balance), the test evaluates all these components. 4. It is not a test for flexibility or long-term aerobic endurance. 5. Therefore, it specifically measures speed, agility, and dynamic balance.

Final Answer: The 8-Foot Up and Go test measures speed, agility, and dynamic balance.

Answer: (B)

Q17.

Solution

Concept:

Inclusive Physical Education aims to provide meaningful participation for Children with Special Needs (CWSN). This involves modifying the standard curriculum and environment to meet their specific functional abilities.

Solution:

1. A "highly competitive and rigid environment" creates barriers for CWSN. 2. The most effective strategy involves **modifying the environment** (e.g., lower baskets, softer balls, or smaller play areas) to ensure the activity is physically accessible. 3. Implementing a **buddy system** (pairing a CWSN student with a peer) provides social support, enhances safety, and encourages social integration. 4. This approach focuses on "ability" rather than "disability," promoting confidence and physical health. 5. Reducing periods or strictly following pro-rules would only lead to further exclusion.

Final Answer: Modifying the environment and using buddy systems is the most effective strategy for CWSN.

Answer: (B)

Q18.

Solution

Concept:

Handball is a high-speed game with strict disciplinary rules. When a player commits a serious foul (like hitting an opponent in the face or unsportsmanlike conduct), the referee issues a "2-minute suspension."

Solution:

1. A 2-minute suspension is a time penalty where the player must leave the court for a fixed duration. 2. During this time, the team must play with one fewer player (shorthanded). 3. "2 minutes" is equivalent to exactly **120 seconds** (2×60 seconds). 4. After the 120 seconds have passed, the player (or a substitute) can re-enter the game. 5. This is the standard secondary punishment in Handball, usually preceded by a yellow card and followed by a red card for repeated offenses.

Final Answer: The duration of a 2-minute suspension is 120 Seconds.

Answer: (B)

Q19.

Solution

Concept:

Yoga asanas are often named after animals or nature based on the final shape the body takes. The description provided is a classic identification of the Cobra Pose.

Solution:

1. "Lying on the stomach" indicates a prone position. 2. Lifting the "chest and head" while keeping the pelvis and legs on the floor creates a backward bend in the spine. 3. The visual of a "raised hood" refers to the hood of a Cobra snake. 4. In Sanskrit, **Bhujanga** means "Snake/Cobra" and **Asana** means "Pose." 5. Shalabhasana is the Locust Pose (lifting legs), and Dhanurasana is the Bow Pose (lifting both chest and legs while holding ankles).

Final Answer: The asana described is Bhujangasana.

Answer: (B)

Q20.

Solution

Concept:

Fractures are classified by the direction of the break and the number of fragments produced. High-energy trauma often results in complex fractures that go beyond a simple break.

Solution:

1. A **Comminuted Fracture** is a severe injury where the bone is crushed, splintered, or broken into **more than two pieces**. 2. This typically occurs during high-impact accidents, such as a high-speed fall in skiing or a vehicular collision. 3. A Transverse fracture is a straight horizontal break, and an Oblique fracture is a diagonal break; both usually result in only two pieces. 4. An Impacted fracture occurs when the ends of the broken bone are driven into each other. 5. Therefore, multiple fragments define a Comminuted fracture.

Final Answer: A fracture where the bone breaks into more than two pieces is a Comminuted Fracture.

Answer: (B)

Q21.

Solution

Concept:

Nutrients are the chemical substances in food that the body needs to function properly. They are categorized into macronutrients (needed in large amounts for energy and structure) and micronutrients (needed in small amounts for chemical reactions).

Solution:

1. **Carbohydrates (I):** These are the body's preferred and main source of immediate energy, especially during high-intensity exercise. Thus, (I) matches with (B). 2. **Proteins (II):** These are known as the "building blocks" of the body, essential for the growth and repair of muscle and other body tissues. Thus, (II) matches with (D). 3. **Fats (III):** While carbs are for immediate use, fats serve as the primary source of long-term stored energy and protect internal organs. Thus, (III) matches with (A). 4. **Vitamins (IV):** These are micronutrients essential for the regulation of metabolic processes, immune function, and bone health. Thus, (IV) matches with (C). 5. The correct combination is (I)-(B), (II)-(D), (III)-(A), (IV)-(C).

Final Answer: The correct matching sequence is (I)-(B), (II)-(D), (III)-(A), (IV)-(C).

Answer: (A)

Q22.

Solution

Concept:

Proprioceptive Neuromuscular Facilitation (PNF) is an advanced form of flexibility training. It was originally developed for rehabilitation but is now widely used by athletes to increase range of motion (ROM) more effectively than static stretching.

Solution:

1. The most common PNF technique is the "contract-relax" method. 2. It involves stretching a muscle to its limit (passive stretch). 3. Then, the athlete performs an **isometric contraction** (pushing against a partner or immovable object) of that stretched muscle for several seconds. 4. After relaxing the contraction, the muscle can usually be stretched even further due to a neurological phenomenon called autogenic inhibition. 5. Ballistic stretching involves bouncing, which is different from the controlled contraction-relaxation of PNF.

Final Answer: PNF Stretching involves stretching a muscle followed by an isometric contraction against resistance.

Answer: (B)

Q23.

Solution

Concept:

The Flamingo Balance Test measures the ability to balance on a single leg. The test protocol includes a specific rule regarding the number of falls allowed before the test is considered invalid or indicative of a lack of functional balance.

Solution:

1. During the test, every time the subject loses balance (touches the ground with the non-standing foot or lets go of the foot being held), the timer is stopped and a "fall" is recorded. 2. The subject then restarts the balance. 3. According to the standard Eurofit protocol, if the subject falls **15 times or more within the first minute**, the test is terminated immediately. 4. Such a high number of falls suggests that the subject is unable to perform the test correctly or has very poor static balance. 5. In such cases, the score is often recorded as a failure or categorized at the lowest possible level.

Final Answer: If a subject falls 15 times within a minute, the test is terminated.

Answer: (C)

Q24.

Solution

Concept:

Postural deformities of the spine are classified by the direction and location of the abnormal curve. The spine has natural curves, but when these curves become exaggerated, they lead to health issues.

Solution:

1. The "lumbar" region refers to the lower back. 2. **Lordosis** (also known as swayback) is an abnormal inward curvature of the lumbar spine. 3. It often results in the abdomen protruding forward and the buttocks sticking out backward. 4. This is commonly caused by weak abdominal muscles and tight hip flexors. 5. Kyphosis is an outward curve of the upper back, and Scoliosis is a sideways curve.

Final Answer: Lordosis is the abnormal inward curvature of the lumbar spine.

Answer: (C)

Q25.

Solution

Concept:

In a lever system, the "Effort" is the force applied (usually by muscle contraction) to move a load. Levers are categorized by which of the three components—Fulcrum, Resistance, or Effort—sits in the middle.

Solution:

1. In a **Third Class Lever**, the **Effort is located between the Fulcrum and the Resistance**. 2. Most of the limbs in the human body act as third-class levers. 3. For example, in the arm, the elbow is the Fulcrum, the muscle (bicep) attaches just past the elbow to provide Effort, and the hand holds the Resistance. 4. While this class of lever requires more force than the weight of the load, it allows for high-speed movement and a great range of motion at the end of the limb. 5. Memory cue: F-R-E (1-2-3). Middle component of Class 3 is **E**ffort.

Final Answer: In a Third Class Lever, the Effort (Force) is in the middle.

Answer: (C)

Q26.

Solution

Concept:

Postural deformities are deviations from the normal skeletal alignment. One of the most common deformities in children and adolescents involves the alignment of the lower limbs, specifically the knees.

Solution:

Knock Knees (scientifically known as Genu Valgum) is a condition where the knees angle in and touch each other when the legs are straightened.

When the knees touch, there is usually a large gap between the ankles.

This deformity can be caused by vitamin D deficiency (Rickets), obesity, or weak ligaments during growth.

In contrast, Bow Legs (Genu Varum) is the opposite condition where the knees stay wide apart even when the ankles are touching.

Corrective measures for Knock Knees include horse riding and keeping a pillow between the knees while sleeping.

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

Answer: (B)

Q27.

Solution

Concept: The human musculoskeletal system functions through a series of levers. In a Class III lever, the Effort (muscle force) is applied between the Fulcrum (joint) and the Resistance (weight being moved).**Solution:**During a Bicep Curl, the elbow joint acts as the Fulcrum.The weight held in the hand acts as the Resistance.The Effort is provided by the Bicep muscle, which attaches to the radius bone between the elbow and the hand.Because the Effort is located in the middle, it is a Class III Lever.While this lever is mechanically "inefficient" for moving heavy loads (requiring more force than the weight of the object), it is perfectly designed for high speed and range of motion.

Final Answer: A bicep curl is an example of a Class III Lever.

Answer: (B)

Q28.

Solution

Concept: The rules of Kabaddi specify the number of players required for a competitive match. This includes the "Active" players on the court and the "Reserve" players who can be used as substitutes.

Solution: In a standard Kabaddi match, each team starts with 7 active players on the court.In addition to these 7 players, a team is allowed to have 5 substitutes (Reserves) on the bench.Therefore, the total number of players allowed in the official team list for a match is $7+5 = 12$ players.Substitutions can be made during the game to replace injured or struggling players, provided the referee is informed.The 12-player list is the standard for national and international competitions.

Final Answer: The total number of players in a Kabaddi team list is 12 Players.

Answer: (C)

Q29.

Solution

Concept: Communicable diseases are illnesses caused by pathogens (bacteria, viruses, parasites) that can be spread from one person to another. Understanding the mode of transmission is key to preventing outbreaks.

Solution: Diabetes, Hypertension, and Obesity are all Non-Communicable Diseases (NCDs) caused by lifestyle, genetics, or age.Tuberculosis (TB) is a highly communicable disease caused by the bacterium Mycobacterium tuberculosis.It primarily affects the lungs and is spread through respiratory droplets when an infected person coughs, sneezes, or speaks.When a healthy person inhales these droplets, they can become infected.TB remains a major public health concern, especially in densely populated areas.

Final Answer: Tuberculosis is a communicable disease spread through respiratory droplets.

Answer: (C)

Q30.

Solution

Concept: Isometric exercises are a type of strength training where the joint angle and muscle length do not change during contraction. These are often used in rehabilitation and static strength building.

Solution: In 'Isometric' (meaning "same length"), the muscle develops tension but does not shorten or lengthen.A classic example is pushing against a brick wall or holding a plank position.Because there is no movement at the joint, the muscle length remains constant.In physical terms, since there is no displacement ($Work = Force \times Displacement$), the "Work Done" is considered zero in physics, even though the body is expending energy.Therefore, work is NOT visible in isometric exercises, unlike isotonic exercises.

Final Answer: In isometric exercises, muscle length remains constant while tension increases.

Answer: (B)

Q31.

Solution

Concept:

Newton's Second Law of Motion provides the mathematical relationship between the mass of an object, the force applied to it, and the resulting change in its motion.

Solution:

1. The passage explains that the Law of Acceleration (Newton's Second Law) states the rate of change of momentum is proportional to the force applied ($F = ma$). 2. A heavier shot-put has a greater mass (m). 3. To achieve a specific acceleration or "speed" for a larger mass, the required force (F) must increase proportionally. 4. If an athlete applies the same force to a light object and a heavy object, the lighter one will accelerate much faster. 5. Therefore, a heavier shot-put requires more force because, as the passage notes, force is proportional to the rate of change of momentum.

Final Answer: A heavier shot-put requires more force because force is proportional to the rate of change of momentum.

Answer: (B)

Q32.

Solution

Concept:

Different classes of levers provide different mechanical advantages. Some are designed for power (lifting heavy weights), while others are designed for "speed and range."

Solution:

1. According to the text, the human body primarily utilizes third-class levers. 2. The passage explicitly states: "This setup favors speed and range of motion over brute strength." 3. In a third-class lever, the effort is closer to the fulcrum than the resistance is. This means the end of the lever (the hand or foot) moves a much greater distance than the muscle contracts. 4. This allows humans to throw, kick, and swing with great velocity. 5. It does not provide maximum power; in fact, it requires more muscle force to move a smaller weight, but it trades that "brute strength" for speed.

Final Answer: The primary advantage of a third-class lever is that it favors speed and range of motion.

Answer: (B)

Q33.

Solution

Concept:

The classification of levers depends entirely on the relative position of the three components: the axis/fulcrum (joint), the effort (muscle), and the resistance (weight).

Solution:

1. The passage defines the structure of the most common lever in the body. 2. It states that in third-class levers, the **effort is between the fulcrum and the resistance**. 3. For example, in the arm, the elbow is the fulcrum at one end, the hand holds the resistance at the other end, and the bicep inserts in the middle to provide the effort. 4. This configuration is the hallmark of the Class III lever system.

Final Answer: In a third-class lever, the effort is located between the fulcrum and the resistance.

Answer: (B)

Q34.

Solution

Concept:

Applying biomechanical theory to specific body movements helps in understanding how the body functions as a machine.

Solution:

1. The passage provides a specific anatomical example to illustrate the lever concept. 2. It mentions: "Most joints, like the elbow during a curl, act as third-class levers." 3. During a curl, the bicep muscle attaches to the forearm bones just a few centimeters away from the elbow joint (fulcrum). 4. Since the muscle pull (effort) is applied between the joint and the weight in the hand (resistance), it fits the definition of a Class III lever.

Final Answer: The elbow during a curl is an example of a Third-class lever.

Answer: (C)

Q35.

Solution

Concept:

Physical Education is supported by various scientific disciplines. Each discipline has a specific definition that outlines its scope of study.

Solution:

1. The passage begins with a direct definition: "Biomechanics is the study of forces and their effects on living systems." 2. This field combines the principles of biology (living systems) with the principles of mechanics/physics (forces). 3. While Physiology studies internal organ functions and Psychology studies behavior, Biomechanics specifically focuses on physical movement and force. 4. Therefore, based on the text provided, the study described is Biomechanics.

Final Answer: The study of forces and their effects on living systems is Biomechanics.

Answer: (C)

Q36.

Solution

Concept:

Explosive power (or power) is the ability to exert maximum muscular force in the shortest possible time. It is a combination of speed and strength. In field testing, horizontal or vertical jumps are used to quantify the power of the lower body.

Solution:

1. The **Standing Broad Jump** (also known as the Long Jump from a standstill) requires the subject to stand behind a line and jump as far forward as possible using a two-footed takeoff. 2. The distance covered is a direct measurement of the "explosive" contraction of the quadriceps, hamstrings, and gluteal muscles. 3. The Shuttle Run measures agility, Sit and Reach measures flexibility, and Push-ups measure upper body endurance. 4. Because the Broad Jump relies on a single, maximum effort of speed-strength, it is the gold standard for leg power.

Final Answer: The Standing Broad Jump is used to measure the explosive power of the legs.

Answer: (A)

Q37.

Solution

Concept:

Fartlek training, or "speed play," is a unique conditioning method because it is continuous but varyingly intense. It bridges the gap between steady-state running and high-intensity interval training.

Solution:

1. Fartlek training involves running for a long duration (typically 20 to 60 minutes) over varied terrain like hills, woods, or sand. 2. During the run, the athlete spontaneously changes their pace—sprinting for a bit, then jogging, then walking, then running fast again. 3. This constant activity under varying loads significantly strengthens the heart and lungs, making it highly effective for developing **Cardiovascular Endurance**. 4. While it can improve speed, its primary physiological adaptation is the body's ability to utilize oxygen efficiently over time.

Final Answer: The Fartlek training method is most effective for developing Cardiovascular Endurance.

Answer: (B)

Q38.

Solution

Concept:

Micronutrients are required by the body in very small amounts (milligrams or micrograms) but are essential for physiological processes. Minerals are a sub-category of micronutrients.

Solution:

1. Fats, Carbohydrates, and Water are all macronutrients because the body requires them in large quantities (grams or liters) for energy and hydration. 2. **Calcium** is a mineral required in small amounts. 3. It is the most abundant mineral in the body and is specifically essential for the formation and maintenance of **bone density and strength**. 4. It also plays a vital role in muscle contraction and blood clotting. 5. Therefore, Calcium is the correct micronutrient associated with bone health.

Final Answer: Calcium is a micronutrient necessary for bone health.

Answer: (B)

Q39.

Solution

Concept:

Conscientiousness is one of the five major dimensions of personality. It describes the tendency to be responsible, hard-working, and goal-directed.

Solution:

1. Individuals who score high in **Conscientiousness** are reliable and show high levels of self-discipline. 2. In a sports context, a conscientious athlete is one who never misses a practice, follows their diet strictly, and stays focused on their long-term training goals. 3. They are characterized as being **organized, disciplined, and dependable**. 4. Being sociable refers to Extraversion, being moody refers to Neuroticism, and being kind refers to Agreeableness.

Final Answer: Conscientiousness refers to being organized, disciplined, and dependable.

Answer: (C)

Q40.

Solution

Concept:

Field dimensions for sports like Kabaddi are standardized by governing bodies to ensure consistency across different age and gender categories. The size of the court for Senior Men is the largest in the sport.

Solution:

1. For Senior Men and Junior Boys, the Kabaddi court is a rectangle. 2. The official dimensions as per the International Kabaddi Federation are **13 meters in length and 10 meters in width**. 3. For Senior Women and Junior Girls, the court is slightly smaller, measuring 12m x 8m. 4. The court is divided into two equal halves of 6.5m x 10m by a midline. 5. Understanding these dimensions is crucial for players to manage space during raids and defense.

Final Answer: The official dimension for a Senior Men's Kabaddi court is 13m x 10m.

Answer: (A)

Q41.

Solution

Concept:

Cardiac Output (CO) is the total volume of blood pumped by the heart per minute. It is a product of two variables: Stroke Volume (SV), which is the amount of blood pumped per beat, and Heart Rate (HR), which is the number of beats per minute. The formula is:

$$\text{Cardiac Output} = \text{Stroke Volume} \times \text{Heart Rate}$$

Solution:

1. From the question, we have: * Stroke Volume (SV) = 110 ml/beat * Heart Rate (HR) = 160 bpm
2. Apply the formula:

$$\text{CO} = 110 \text{ ml} \times 160 = 17,600 \text{ ml/min}$$

3. To convert milliliters to Litres, divide by 1000:

$$17,600/1000 = 17.6 \text{ Litres/min}$$

4. For an elite athlete, this value can even exceed 30 Litres/min during peak exertion, whereas a normal resting cardiac output is about 5 Litres/min.

Final Answer: The Cardiac Output is 17.6 Litres/min.

Answer: (B)

Q42.

Solution

Concept:

Flexibility training methods are chosen based on the desired outcome. Static-passive flexibility refers to the range of motion held with the help of an external force (like a partner). PNF is widely regarded as the most effective method for this.

Solution:

1. **PNF Stretching** (Proprioceptive Neuromuscular Facilitation) utilizes the nervous system's inhibitory reflexes to allow muscles to relax further into a stretch. 2. By combining passive stretching with isometric contractions, the muscle "re-learns" a new, longer length. 3. Fartlek is an endurance method, Isokinetic is a strength method using machines, and the Continuous method is for cardiovascular health. 4. Therefore, for maximum static-passive flexibility gains, PNF is the correct choice.

Final Answer: PNF Stretching utilizes Proprioceptive Neuromuscular Facilitation for flexibility.

Answer: (B)

Q43.

Solution

Concept:

Newton's First Law (Inertia) defines the fundamental resistance to change in motion. It establishes that objects do not move or stop on their own; they require an interaction with a force.

Solution:

1. The law states that a body at rest will remain at rest, and a body in motion will continue moving at a constant speed in a straight line unless it is compelled to change its state. 2. The "compelling" factor must be an **external unbalanced force**. 3. In sports, an "unbalanced force" could be a player tackling an opponent, friction slowing a ball down, or gravity pulling a projectile to the earth. 4. If all forces are balanced (Equilibrium), the state of motion will not change.

Final Answer: An object continues its state unless an external unbalanced force acts upon it.

Answer: (B)

Q44.

Solution

Concept:

Functional fitness in older adults emphasizes "mobility-related flexibility." Reaching for shoes or picking up items from the floor requires flexibility in the lower back and hamstrings.

Solution:

1. The **Chair Sit and Reach Test** is the senior-friendly version of the standard floor sit and reach. 2. The participant sits on the edge of a chair with one leg extended and reaches toward their toes. This minimizes the risk of falling or overstraining the lower back. 3. The Back Scratch test measures upper body (shoulder) flexibility. 4. Eight Foot Up and Go measures agility, and Arm Curls measure strength. 5. Thus, the Chair Sit and Reach is the correct item for lower body flexibility.

Final Answer: The Chair Sit and Reach Test measures lower body flexibility in senior citizens.

Answer: (A)

Q45.

Solution

Concept:

A comminuted fracture is a high-energy injury. It requires a force significant enough to not just break the bone, but to shatter it into multiple pieces.

Solution:

1. High-speed and high-impact sports carry the greatest risk for such complex fractures. 2. In **motor racing** (F1, Moto GP) or **high-altitude skiing**, the velocity of the athlete is very high. A crash or collision at these speeds involves massive kinetic energy transfer. 3. This energy is often sufficient to shatter bones like the femur or tibia into fragments. 4. Children's falls (Option A) usually result in greenstick fractures, and running (Option C) usually results in stress fractures.

Final Answer: A comminuted fracture is most likely in high-impact collisions like motor racing or skiing.

Answer: (B)

Q46.

Solution

Concept:

Suryanamaskar (Sun Salutation) is a series of 12 powerful yoga poses. Each pose has a specific name in Sanskrit and targets different muscle groups while coordinating with the breath.

Solution:

1. In the sequence of Suryanamaskar, the 5th and 8th positions typically involve pushing the hips upward while keeping the hands and feet on the floor. 2. This creates an inverted 'V' shape, which is known as **Parvatasana** (Mountain Pose). 3. **Ashwa Sanchalanasana** is the Equestrian Pose (lunging), **Ashtanga Namaskara** is the eight-limbed salute (chest and knees down), and **Bhujangasana** is the Cobra Pose. 4. Parvatasana is excellent for strengthening the arms, lengthening the spine, and stretching the hamstrings. 5. In modern vinyasa styles, this is very similar to 'Adho Mukha Svanasana' (Downward Facing Dog).

Final Answer: The inverted 'V' shape stage in Suryanamaskar is Parvatasana.

Answer: (B)

Q47.

Solution

Concept:

The modernization of sports has created data-driven career paths. These roles require a combination of physical education knowledge and technical/analytical skills.

Solution:

1. A **Performance Analyst** (often part of Sports Journalism or technical coaching staff) uses software to track every move an athlete makes. 2. They perform "statistical analysis" on player metrics (like heat maps in football or strike rates in cricket). 3. This data is used by broadcasters to provide "insights" to viewers and by coaches to refine "team strategy." 4. While Biomechanics focuses on the physics of a single movement, the Performance Analyst focuses on the tactical and statistical output of the entire game. 5. Physical Directors usually handle administration and school-level sports management.

Final Answer: The career involving statistical analysis of players for broadcasting is Sports Journalism / Performance Analyst.

Answer: (B)

Q48.

Solution

Concept:

Corrective measures for postural deformities involve specific exercises (Asanas) or movements that counteract the skeletal misalignment by strengthening weak muscles and stretching tight ones.

Solution:

1. **Flat Foot (I):** This involves the loss of the foot arch. Walking on the **outer edge** or using toes to **pick up pebbles** helps recreate the arch. Thus, (I) matches with (C). 2. **Kyphosis (II):** This is a forward hunch. **Chakrasana** (Wheel) and **Bhujangasana** (Cobra) are deep back-bends that open the chest and reverse the hunch. Thus, (II) matches with (A). 3. **Lordosis (III):** This is an inward lower-back curve. **Halasana** (Plow) and **Paschimottanasana** (Forward Fold) stretch the lower back and strengthen abdominals to pull the spine back. Thus, (III) matches with (D). 4. **Bow Legs (IV):** This involves knees curving outward. **Walking on heels** and the **inner edge** of the feet helps pull the knees back toward the center. Thus, (IV) matches with (B). 5. The correct sequence is (I)-(C), (II)-(A), (III)-(D), (IV)-(B).

Final Answer: The correct matching sequence is (I)-(C), (II)-(A), (III)-(D), (IV)-(B).

Answer: (A)

Q49.

Solution

Concept:

The Rockport One Mile Walk Test is a standard field test for individuals who may find running too strenuous. It uses a mathematical formula involving time, heart rate, weight, and age to determine fitness.

Solution:

1. The goal of the test is to walk one mile as fast as possible. 2. Immediately after finishing, the heart rate is recorded. 3. These variables are plugged into an equation to estimate **VO_2 Max**. 4. **VO_2 Max** is the maximum amount of oxygen an individual can utilize during intense exercise and is the definitive measure of **Aerobic Capacity** (Cardiovascular Fitness). 5. It does not measure leg strength, flexibility, or BMI (which is a height/weight ratio).

Final Answer: The Rockport One Mile Test is used to estimate VO_2 Max (Aerobic Capacity).

Answer: (A)

Q50.

Solution

Concept:

Chronic adaptation to aerobic exercise (like long-distance running or swimming) leads to structural changes in the heart to make it a more efficient pump.

Solution:

1. The 'Left Ventricle' is responsible for pumping oxygenated blood to the entire body. 2. Under the stress of long-term aerobic training, the heart undergoes **Hypertrophy**. 3. Specifically, the chamber of the left ventricle increases in volume (allowing it to hold more blood) and the muscular walls become thicker and stronger (allowing it to pump blood more forcefully). 4. This results in a much higher Stroke Volume, which actually **decreases** the resting heart rate because the heart doesn't need to beat as often to supply the body. 5. This condition is often referred to as "Athlete's Heart."

Final Answer: Long-term aerobic exercise causes Hypertrophy of the Left Ventricle.

Answer: (B)

Answer Key

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