

# Case Study Questions (Physical Education) 048

Class XII (2025-26)

## Chapter 1: Management of Sporting Events

**Q.1. Case Study:** A district-level sports committee is planning a state athletic meet using a knockout tournament format. They need to handle fixtures, seeding, and various organizing committees efficiently.

- (i) What is the main objective of seeding in a knockout tournament? (1)
- (ii) Match the committees in List I with their functions in List II: (1)
  - **List I:** 1. Publicity Committee, 2. Finance Committee, 3. Reception Committee
  - **List II:** A. Budget making and financial management, B. Welcoming chief guests and teams, C. Advertisement and promotion of the event
  - (Options: (a) 1-C, 2-A, 3-B (b) 1-A, 2-B, 3-C (c) 1-B, 2-C, 3-A)
- (iii) If 11 teams participate in a knockout tournament, how many total rounds will be played? (1)
- (iv) State one major demerit of a knockout tournament. (1)

### Answer Key (Chapter 1):

- (i) To place strong teams specially in fixed positions in the fixture so that they do not meet in earlier rounds.
- (ii) (a) 1-C, 2-A, 3-B
- (iii) 4 Rounds
- (iv) Good teams can get eliminated early if they lose a single match, denying them further play.

## Chapter 2: Children & Women in Sports

**Q.2. Case Study:** During a sports camp for adolescent girls, coaches noticed issues related to the female athlete triad, nutritional deficiencies, and menstrual dysfunctions.

- (i) Define Menarche. (1)
- (ii) Match the components of the Female Athlete Triad in List I with their descriptions in List II: (1)
  - **List I:** 1. Osteoporosis, 2. Amenorrhea, 3. Energy Deficiency
  - **List II:** A. Low bone mineral density, B. Absence of menstruation, C. Inadequate caloric intake relative to physical activity
  - (Options: (a) 1-A, 2-B, 3-C (b) 1-C, 2-A, 3-B (c) 1-B, 2-C, 3-A)

- (iii) What primary mineral deficiency leads to weak bones in female athletes? (1)
- (iv) State one preventive measure against the female athlete triad. (1)

**Answer Key (Chapter 2):**

- (i) Onset of menstruation in young girls.
- (ii) (a) 1-A, 2-B, 3-C
- (iii) Calcium (and Vitamin D deficiency).
- (iv) Maintaining a balanced diet with proper caloric intake and regular health check-ups.

### Chapter 3: Yoga as Preventive Measure for Lifestyle Disease

**Q.3. Case Study:** A school organized a yoga camp for students and staff suffering from lifestyle diseases like obesity, hypertension, and back pain. Specific asanas were prescribed for each condition.

- (i) Which yoga asana is considered most effective for controlling obesity? (1)
- (ii) Match the Asanas in List I with their therapeutic benefits in List II: (1)
  - **List I:** 1. Tadasana, 2. Bhujangasana, 3. Gomukhasana
  - **List II:** A. Improves posture and relieves back pain, B. Helps in improving concentration and height, C. Cures asthma and shoulder pain
  - (Options: (a) 1-B, 2-A, 3-C (b) 1-A, 2-C, 3-B (c) 1-C, 2-B, 3-A)
- (iii) State two contraindications of Vajrasana. (1)
- (iv) How does regular yogic practice help prevent lifestyle diseases? (1)

**Answer Key (Chapter 3):**

- (i) Pavanmuktasana / Tadasana
- (ii) (a) 1-B, 2-A, 3-C
- (iii) People suffering from severe knee pain, arthritis, or spinal column issues should avoid Vajrasana.
- (iv) By improving metabolic rate, flexibility, reducing stress, and regulating proper endocrine and organ functions.

### Chapter 4: Physical Education & Sports for CWSN (Children with Special Needs)

**Q.4. Case Study:** Special Olympics and Paralympic games provide global platforms for Children with Special Needs (CWSN) to showcase their athletic talents, supported by adapted physical education.

- (i) What is the primary aim of Adapted Physical Education? (1)
- (ii) Match the organizations/events in List I with their target groups in List II: (1)

- **List I:** 1. Special Olympics, 2. Paralympics, 3. Deaflympics
- **List II:** A. Athletes with physical and motor impairments, B. Persons with intellectual disabilities, C. Deaf and hard-of-hearing athletes
- *(Options: (a) 1-B, 2-A, 3-C (b) 1-A, 2-C, 3-B (c) 1-C, 2-B, 3-A)*
- **(iii)** Mention two key responsibilities of a physical education teacher towards CWSN students. (1)
- **(iv)** State the significance or motto of the Paralympic Games. (1)

**Answer Key (Chapter 4):**

- **(i)** To ensure safe and successful participation of individuals with disabilities by modifying rules and equipment.
- **(ii)** (a) 1-B, 2-A, 3-C
- **(iii)** Providing modified equipment and ensuring an inclusive, supportive environment.
- **(iv)** "Spirit in Motion"

## Chapter 5: Sports & Nutrition

**Q.5. Case Study:** A school dietician prepared a balanced diet chart for teenage athletes, emphasizing macro and micro nutrients, hydration, and the avoidance of junk food.

- **(i)** Why are carbohydrates considered the primary source of energy for athletes? (1)
- **(ii)** Match the nutrients in List I with their deficiency diseases in List II: (1)
  - **List I:** 1. Iron, 2. Vitamin D, 3. Iodine
  - **List II:** A. Goitre, B. Anemia, C. Rickets
  - *(Options: (a) 1-B, 2-C, 3-A (b) 1-A, 2-B, 3-C (c) 1-C, 2-A, 3-B)*
- **(iii)** Differentiate between macro-nutrients and micro-nutrients with one example of each. (1)
- **(iv)** What vital role do roughage and water play in our daily diet? (1)

**Answer Key (Chapter 5):**

- **(i)** Because they break down quickly into glucose to provide immediate energy required during physical exertion.
- **(ii)** (a) 1-B, 2-C, 3-A
- **(iii)** Macro-nutrients are needed in large amounts (e.g., Carbohydrates), whereas micro-nutrients are needed in small amounts (e.g., Vitamins/Minerals).
- **(iv)** Roughage aids digestion and prevents constipation, while water regulates body temperature and prevents dehydration.

## Chapter 6: Test & Measurement in Sports

**Q.6. Case Study:** Senior citizens of a residential community underwent functional fitness testing using the Rikli and Jones Senior Fitness Test battery to evaluate their physical independence.

- (i) Which test item from the battery measures lower body strength and endurance? (1)
- (ii) Match the fitness test items in List I with the physical parameter they measure in List II: (1)
  - **List I:** 1. Chair Sit and Reach Test, 2. 8-Foot Up and Go Test, 3. Back Scratch Test
  - **List II:** A. Agility and dynamic balance, B. Upper body flexibility, C. Lower body flexibility
  - (Options: (a) 1-C, 2-A, 3-B (b) 1-A, 2-B, 3-C (c) 1-B, 2-C, 3-A)
- (iii) What is the primary purpose of conducting the 6-Minute Walk Test? (1)
- (iv) Why is physical fitness testing important for senior citizens? (1)

### Answer Key (Chapter 6):

- (i) Chair Stand Test.
- (ii) (a) 1-C, 2-A, 3-B
- (iii) To measure aerobic fitness and endurance in senior citizens.
- (iv) To evaluate functional independence and identify health or mobility risks.

## Chapter 7: Physiology & Injuries in Sports

**Q.7. Case Study:** During an inter-school football match, a player sustained a knee joint sprain and a soft tissue bruise (contusion), while another player suffered a hairline bone fracture.

- (i) Differentiate between a sprain and a strain. (1)
- (ii) Match the sports injuries in List I with their proper classifications in List II: (1)
  - **List I:** 1. Dislocation, 2. Abrasion, 3. Greenstick fracture
  - **List II:** A. Bone injury, B. Joint injury, C. Skin/Soft tissue injury
  - (Options: (a) 1-B, 2-C, 3-A (b) 1-A, 2-B, 3-C (c) 1-C, 2-A, 3-B)
- (iii) What is the immediate first-aid treatment recommended for soft tissue injuries (RICE principle)? (1)
- (iv) Define Stroke Volume in human physiology. (1)

### Answer Key (Chapter 7):

- (i) Sprain is an injury to ligaments, whereas strain is an injury to muscles or tendons.
- (ii) (a) 1-B, 2-C, 3-A

- (iii) Rest, Ice, Compression, and Elevation (RICE).
- (iv) The volume of blood pumped out by each ventricle of the heart in one heartbeat.

## Chapter 8: Biomechanics & Sports

**Q.8. Case Study:** A physics teacher and a sports coach analyzed biomechanical forces, Newton's laws of motion, and lever systems operating during a basketball jump shot and a calf raise exercise.

- (i) Which class of lever operates when a person stands on their toes (calf raise)? (1)
- (ii) Match Newton's Laws of Motion in List I with their relevant sports examples in List II: (1)
  - **List I:** 1. First Law of Motion (Inertia), 2. Second Law of Motion (Acceleration), 3. Third Law of Motion (Action-Reaction)
  - **List II:** A. Starting a sprint from starting blocks, B. A football resting on the ground until kicked, C. Force applied to throw a heavy shot put
  - (Options: (a) 1-B, 2-C, 3-A (b) 1-A, 2-B, 3-C (c) 1-C, 2-A, 3-B)
- (iii) Define Friction and list its primary types. (1)
- (iv) Why do athletes wear spiked running shoes on synthetic tracks? (1)

### Answer Key (Chapter 8):

- (i) Class 2 Lever.
- (ii) (a) 1-B, 2-C, 3-A
- (iii) Friction is the opposing force between two surfaces in contact. Types: Static, Sliding, and Rolling friction.
- (iv) To increase traction and grip, preventing slipping during movement.

## Chapter 9: Psychology and Sports

**Q.9. Case Study:** During a psychological counselling session before a national championship, a sports psychologist evaluated athletes' personality traits, motivational levels, and aggressive behaviours during competitive matches.

- (i) Define Personality in the context of sports psychology. (1)
- (ii) Match the Big Five Personality traits in List I with their characteristics in List II: (1)
  - **List I:** 1. Extraversion, 2. Conscientiousness, 3. Openness
  - **List II:** A. Organized, dependable, and efficient; B. Outgoing, energetic, and talkative; C. Curious, inventive, and imaginative
  - (Options: (a) 1-B, 2-A, 3-C (b) 1-A, 2-B, 3-C (c) 1-C, 2-B, 3-A)
- (iii) Differentiate between intrinsic and extrinsic motivation with one example of each. (1)

- **(iv)** What is the difference between hostile aggression and instrumental aggression in sports? (1)

**Answer Key (Chapter 9):**

- **(i)** Personality is the unique and relatively stable pattern of behavior, thoughts, and emotions of an individual.
- **(ii)** (a) 1-B, 2-A, 3-C
- **(iii)** Intrinsic motivation comes from within (e.g., personal satisfaction), while extrinsic motivation comes from external rewards (e.g., trophies or prize money).
- **(iv)** Hostile aggression is intended to cause physical or psychological harm, whereas instrumental aggression is goal-directed where harming an opponent is secondary to winning.

## Chapter 10: Training in Sports

**Q.10. Case Study:** A professional track coach designed a comprehensive annual training plan (periodization) for elite runners, incorporating various training methods, micro-cycles, and flexibility routines.

- **(i)** What is the primary objective of sports training? (1)
- **(ii)** Match the training methods in List I with their primary training goals in List II: (1)
  - **List I:** 1. Fartlek Training, 2. Circuit Training, 3. Interval Training
  - **List II:** A. Developing endurance through varying speeds (speed play); B. Improving general muscular strength and fitness through multiple station exercises; C. Enhancing cardiovascular endurance alternating high-intensity work with recovery
  - *(Options: (a) 1-A, 2-B, 3-C (b) 1-B, 2-A, 3-C (c) 1-C, 2-B, 3-A)*
- **(iii)** Define Flexibility and list its two main types. (1)
- **(iv)** Explain the significance of a 'Micro Cycle' in sports training periodization. (1)

**Answer Key (Chapter 10):**

- **(i)** To improve physical, technical, tactical, and psychological capacities of an athlete for peak performance.
- **(ii)** (a) 1-A, 2-B, 3-C
- **(iii)** Flexibility is the range of motion around a joint. Types: Active flexibility and Passive flexibility.
- **(iv)** A micro-cycle is a short-term training cycle (usually lasting for one week) designed to achieve specific immediate training targets.