

CBSE Class 12 Physical Education 2025 Question Paper(Set-4) with Solutions

Time Allowed :3 Hours	Maximum Marks :70	Total questions :37
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General Instructions

- (i) The question paper consists of 5 sections and 37 questions.
- (ii) Section-A consists of questions 1-18 carrying 1 mark each and are multiple choice questions. All questions are compulsory.
- (iii) Section-B consists of questions 19-24 carrying 2 marks each and are Very Short Answer Type. Their answer should not exceed 60-90 words. Attempt any 5.
- (iv) Section-C consists of questions 25-30 carrying 3 marks each and are Short Answer Type. Their answer should not exceed 100-150 words. Attempt any 5.
- (v) Section-D consists of questions 31-33 carrying 4 marks each and are case studies. There is an internal choice available.
- (vi) Section-E consists of questions 34-37 carrying 5 marks each and are Long Answer types. Their answer should not exceed 200-300 words. Attempt any 3.

SECTION - A

1. Which one of the following is a post-competition responsibility of the technical committee?

- (1) Requisition to purchase equipment
- (2) Arrangement of equipment and stationery
- (3) Arrangement of officials
- (4) Maintenance of the field

Correct Answer: (4) Maintenance of the field

Solution: The post-competition responsibility of the technical committee includes tasks related to organizing the event after its completion. The correct option is the one that reflects the committee's responsibility for organizing equipment and stationery after the event. After the competition, the committee handles equipment and stationery, ensuring that everything is stored, and appropriate materials are managed for future use. This responsibility does not include purchasing equipment or maintaining the field.

Quick Tip

Post-competition responsibilities typically involve logistical aspects such as managing equipment, ensuring storage, and preparing for future events.

2. Which of the following is an objective of Intramural tournaments?

- (1) To achieve high performance at the highest level of the tournament.
- (2) To develop the feeling of integration with other institutions.
- (3) To provide opportunities for choosing a career in sports.
- (4) To promote health and recreation at the institution.

Correct Answer: (4) To promote health and recreation at the institution.

Solution: The primary objective of intramural tournaments is to promote health, wellness, and recreational activities within the institution. These tournaments encourage students to engage in physical activity in a fun and non-competitive environment.

Intramural tournaments focus on enhancing the well-being of the participants and fostering a recreational atmosphere, unlike intercollegiate competitions which focus on high

performance.

Quick Tip

Intramural tournaments are designed to focus on promoting a healthy lifestyle and fostering unity and enjoyment through sports.

3. Which of the following deformity is NOT related to lower extremities?

- (1) Knock-Knee
- (2) Scoliosis
- (3) Bow-legs
- (4) Flat-foot

Correct Answer: (2) Scoliosis

Solution: Scoliosis is a condition that affects the spine and is unrelated to the lower extremities. The other options, such as Knock-Knee, Bow-legs, and Flat-foot, are deformities that affect the lower limbs.

Scoliosis causes an abnormal curvature of the spine and does not involve the legs or feet, unlike the other conditions which affect the structure and alignment of the lower extremities.

Quick Tip

When studying deformities, it's important to recognize which parts of the body they affect. Scoliosis affects the spine, while the other options are related to the legs or feet.

4. Brisk walking, running, bicycling, and jumping are related to which activities?

- (1) Speed activities
- (2) Strength activities
- (3) Endurance activities
- (4) Co-ordinative activities

Correct Answer: (3) Endurance activities

Solution: Brisk walking, running, bicycling, and jumping are all activities that primarily focus on endurance, as they require sustained physical effort over time.

These activities improve cardiovascular and muscular endurance, making them classified under endurance activities, as opposed to speed or strength activities.

Quick Tip

Endurance activities are typically those that require prolonged physical exertion, such as running and cycling, which build stamina and aerobic capacity.

5. As per prescribed syllabus, Suryabhedan Pranayam is recommended for:

- (1) Obesity
- (2) Hypertension
- (3) Asthma
- (4) Back pain

Correct Answer: (2) Hypertension

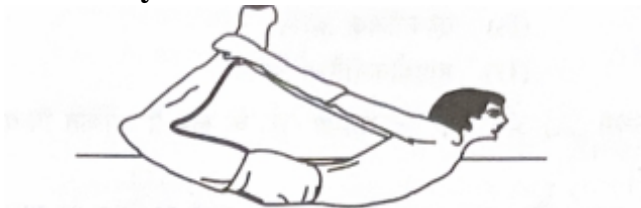
Solution: Suryabhedan Pranayam is a yogic breathing technique known for its benefits in controlling high blood pressure, making it ideal for those suffering from hypertension.

This pranayama helps in calming the nervous system, reducing stress, and improving circulation, which is effective in managing hypertension.

Quick Tip

Breathing exercises like Suryabhedan Pranayam can help lower blood pressure by enhancing relaxation and improving oxygen flow.

6. Identify the asana:



- (1) Chakrasana
- (2) Halasana
- (3) Dhanurasana
- (4) Ushtrasana

Correct Answer: (3) Dhanurasana

Solution: The asana depicted in the image is Dhanurasana, also known as the Bow Pose, where the body forms the shape of a bow. **Step 1:** In Dhanurasana, the practitioner lies on their stomach, bends their knees, and holds their ankles with their hands, lifting their chest and thighs off the ground to form a curve.

Quick Tip

Dhanurasana helps in improving flexibility of the back, strengthens the core, and stimulates the abdominal organs.

7. Given below are two statements, one of which is labelled as Assertion (A) and other is labelled as Reason (R). Read both the statements carefully:

Assertion (A): The International Paralympic Committee (IPC) has developed a classification process which can contribute "to sporting excellence for all athletes and sports in the Paralympic Movement, and provide equitable competition."

Reason (R): The classification process serves two roles. The first is to determine who is eligible and the second is to grouping the sports people for the purpose of competitions.

In the context of the above two statements, which one of the following is correct?

- (1) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).
- (2) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
- (3) Assertion (A) is true, but Reason (R) is false.
- (4) Assertion (A) is false, but Reason (R) is true.

Correct Answer: (1) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).

Solution: Both the assertion and reason are correct. The classification process described by the IPC ensures equitable competition by determining eligibility and grouping athletes for competitions, which aligns with the reason provided.

Step 1: The IPC's classification process contributes to fairness by categorizing athletes and

ensuring that the competition is equitable.

Step 2: Reason (R) explains why the classification process is necessary and supports the assertion that it contributes to sporting excellence.

Quick Tip

In Assertion-Reason type questions, carefully check if the reason fully supports the assertion or justifies it.

8. _____ are the colours, that represent the four regional confederation in the Deaflympic logo.

- (1) Red, blue, black and yellow
- (2) Blue, yellow, black and red
- (3) Red, blue, yellow and green
- (4) Blue, black, red and yellow

Correct Answer: (3) Red, blue, yellow and green

Solution: The Deaflympic logo uses four colours to represent the four regional confederations. These colours are red, blue, yellow, and green.

The Deaflympic Games are represented by these four colours, which symbolize the global diversity of its participants.

Quick Tip

In identifying logos, focus on the key colours or shapes that distinguish each emblem, as they usually represent the core values or regions.

9. What type of lever has the load resistance between the fulcrum and the force?

- (1) First class lever
- (2) Second class lever
- (3) Both (A) and (B)
- (4) Third class lever

Correct Answer: (2) Second class lever

Solution: In a second class lever, the load is positioned between the fulcrum and the applied force. Examples include a wheelbarrow or a nutcracker.

The defining feature of second class levers is that the load is always between the fulcrum and the applied force, providing mechanical advantage.

Quick Tip

In levers, the position of the fulcrum, load, and force determines the class of the lever and its mechanical advantage.

10. The scientific name of Vitamin 'C' is:

- (1) Betadine acid
- (2) Ascorbic acid
- (3) Acetonic acid
- (4) Hydrochloric acid

Correct Answer: (2) Ascorbic acid

Solution: Vitamin C is scientifically known as Ascorbic acid. It is an essential nutrient in humans and is commonly found in fruits like citrus, strawberries, and in vegetables such as bell peppers. Ascorbic acid plays a critical role in the maintenance of skin, blood vessels, bones and cartilage, and wound healing.

Quick Tip

Vitamin C is commonly known as Ascorbic acid, and it is essential for maintaining immune function and overall health.

11. Given below are two statements, one of which is labelled as Assertion (A) and the other is labelled as Reason (R). Read both the statements carefully:

Assertion (A): The risk of cancer can be reduced by eating more colorful vegetables, fruits, and other plant-foods that have certain phytochemicals in them.

Reason (R): Non-nutritive components of the diet are part of a balanced diet.

In the context of the above two statements, which one of the following is correct?

(1) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(2) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(3) Assertion (A) is true, but Reason (R) is false.

(4) Assertion (A) is false, but Reason (R) is true.

Correct Answer: (2) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

Solution: Step 1: Assertion (A) is true because it is widely accepted that a diet rich in colorful vegetables, fruits, and plant-foods can help reduce the risk of cancer due to the presence of beneficial phytochemicals.

Step 2: Reason (R) is also true, as non-nutritive components, such as fiber and phytochemicals, are indeed part of a balanced diet. However, Reason (R) does not explain why eating these foods reduces cancer risk, so it is not the correct explanation for Assertion (A).

Quick Tip

When evaluating assertions and reasons, ensure both statements are factually correct and assess if the reason directly supports or explains the assertion.

12. In which test, score is recorded to the nearest centimetre between the initial and final score?

(1) Partial curl-up test

(2) Back stretch test

(3) Sit and reach test

(4) Chair sit and reach test

Correct Answer: (3) Sit and reach test

Solution: The sit and reach test is used to measure flexibility and is recorded to the nearest centimeter. The score reflects the distance reached by the participant, which is measured between the initial and final positions.

This test involves the participant sitting and reaching forward to measure the flexibility of the lower back and hamstrings, with the score taken to the nearest centimeter.

Quick Tip

The sit and reach test is a standard test for flexibility, especially in the hamstrings and lower back, commonly used in physical fitness assessments.

13. Given below are types of fractures in List - I with their features in List - II:

List - I	List - II
(a) Transverse	(i) Bone breaks diagonally
(b) Oblique	(ii) Bone is crushed into a number of pieces
(c) Green stick	(iii) Straight break right across a bone
(d) Comminuted	(iv) Soft bone, in which bone bends

Table 1: Types of Fractures and their Features

Match the items of List - I with List - II and choose the correct option from the following:

- (1) (a) iii, (b) iv, (c) ii, (d) i
- (2) (a) iii, (b) i, (c) iv, (d) ii
- (3) (a) i, (b) ii, (c) iii, (d) iv
- (4) (a) ii, (b) iii, (c) iv, (d) i

Correct Answer: (2) (a) iii, (b) i, (c) iv, (d) ii

Solution: Transverse fractures (a) involve a straight break right across a bone (iii).

Oblique fractures (b) are characterized by bone breaking diagonally (i).

Green stick fractures (c) involve soft bone, where the bone bends but doesn't break completely (iv).

Comminuted fractures (d) occur when the bone is crushed into a number of pieces (ii).

Correctly matching the fracture types with their respective features.

Quick Tip

When studying fractures, it's important to distinguish between the different patterns of breaks, as they determine the nature of treatment and healing.

14. "The golf ball remains at rest until it is struck by a golf club." This statement indicates:

- (1) Law of Inertia
- (2) Law of Acceleration
- (3) Law of Gravity
- (4) Law of Reaction

Correct Answer: (1) Law of Inertia

Solution: This statement describes the principle of inertia, which states that an object at rest will remain at rest until acted upon by an external force. In this case, the golf ball remains at rest until struck by the golf club.

The law of inertia, formulated by Newton, is the first law of motion, which is demonstrated in the scenario of the golf ball.

Quick Tip

Inertia is a fundamental concept in physics that explains why objects resist changes in their motion unless acted upon by an external force.

15. Given below are traits of the big five theories of personality in List - I with their characteristics in List - II:

List - I	List - II
(a) Openness	(i) Active, optimistic and social
(b) Extroversion	(ii) Insecure, nervous and anxious
(c) Neuroticism	(iii) Creative, focused on tackling new challenges and curious
(d) Agreeableness	(iv) Friendly, helpful and trustworthy

Table 2: Traits of Big 5 and their Characteristics

Match the items of List - I with List - II and choose the correct option from the following:

- (1) (a) iii, (b) i, (c) iv, (d) ii
- (2) (a) i, (b) iv, (c) iii, (d) ii
- (3) (a) iv, (b) iii, (c) i, (d) ii
- (4) (a) iii, (b) iv, (c) ii, (d) i

Correct Answer: (2) (a) iii, (b) i, (c) ii, (d) iv

Solution: Openness (a) is characterized by being creative, focused on tackling new challenges and curious (iii).

Extroversion (b) is described as being active, optimistic, and social (i).

Neuroticism (c) relates to being insecure, nervous, and anxious (ii).

Agreeableness (d) reflects being friendly, helpful, and trustworthy (iv).

The traits of personality are matched with the characteristics that describe the individual differences in emotions and behaviors.

Quick Tip

The Big Five personality traits provide a comprehensive framework for understanding human personality, which includes openness, conscientiousness, extroversion, agreeableness, and neuroticism.

16. The concept of _____ generally refers to a person's evaluation of, or attitude towards, him or herself.

- (1) Mental-imagery
- (2) Self-esteem
- (3) Self-talk
- (4) Goal-setting

Correct Answer: (2) Self-esteem

Solution: Self-esteem refers to the way an individual evaluates their own worth and how they feel about themselves. It involves both self-confidence and self-acceptance. **Step 1:** People with high self-esteem generally have a positive view of themselves, while those with

low self-esteem may feel inadequate or less worthy.

Quick Tip

Self-esteem is crucial for mental well-being as it influences an individual's confidence and motivation to pursue goals.

17. The Swedish word speed play is also known as:

- (1) Fartlek training
- (2) Interval method
- (3) Continuous method
- (4) Pace method

Correct Answer: (1) Fartlek training

Solution: Fartlek training, which is Swedish for "speed play," involves varying the intensity and pace during a run or exercise. It is a method of interval training that incorporates both aerobic and anaerobic exercises, making it highly effective for improving cardiovascular and muscular endurance.

Quick Tip

Fartlek training combines continuous and interval training techniques, providing a dynamic workout for improved speed and endurance.

18. In which type of exercises can movement NOT be seen directly?

- (1) Iso-tonic
- (2) Iso-kinetic
- (3) Iso-metric
- (4) Plyometric

Correct Answer: (3) Iso-metric

Solution: In Iso-metric exercises, muscles contract without changing length, which means no visible movement occurs in the joints. Unlike Iso-tonic and Iso-kinetic exercises, where visible motion is involved, Iso-metric exercises involve holding a position without visible

movement.

Quick Tip

Iso-metric exercises focus on strength-building through muscle contraction without joint movement, which can help increase stability and endurance.

Section-B

19. Suggest any two corrective measures for each, bow legs and round shoulders.

Solution: Corrective measures for bow legs:

Regular stretching exercises for the thighs and calves.

Strengthening exercises for the inner thighs and hip muscles.

Corrective measures for round shoulders:

Perform exercises to strengthen the upper back and shoulder muscles.

Practice proper posture and engage in stretches to open up the chest.

Quick Tip

Regular exercise and proper stretching can help in correcting postural issues like bow legs and round shoulders.

20. Enlist four benefits of participation in physical activities for children with special needs.

Solution: 1. Improved physical fitness and overall health.

2. Enhanced social skills and interaction with peers.

3. Increased self-confidence and independence.

4. Better cognitive development and improved motor skills.

Quick Tip

Physical activities not only benefit the physical health of children with special needs but also contribute significantly to their emotional and social growth.

21. Enumerate any two myths related to food items with their respective facts.

Solution: Myth 1: Eating late at night causes weight gain.

Fact: Weight gain is caused by an excess of calories consumed, regardless of the time of day.

Myth 2: Carbohydrates make you fat.

Fact: Carbohydrates are an essential energy source and only lead to weight gain when consumed in excess.

Quick Tip

It is important to separate food myths from facts to make informed dietary choices.

22. Mention the fitness index score formula and its norms for the Harvard Step Test.

Solution: The fitness index score (FIS) for the Harvard Step Test is calculated using the formula:

$$FIS = \frac{100 \times \text{Duration in seconds}}{\text{Sum of heart rates at 1, 2, and 3 minutes post-test}}$$

Norms for Harvard Step Test:

Excellent: 90 and above

Good: 80-89

Average: 60-79

Poor: Below 60

Quick Tip

The Harvard Step Test is a useful tool to evaluate cardiovascular fitness and recovery after physical exertion.

23. Mention any two strategies for enhancing adherence to exercise.

Solution: 1. Set realistic and achievable fitness goals to stay motivated.

2. Engage in variety to prevent monotony and make exercise enjoyable.

Quick Tip

Finding enjoyable and achievable activities is key to ensuring long-term adherence to an exercise routine.

24. When wrestlers fall on the mat, why do they spread their arms, knees, and legs?

Justify your answer.

Solution: Wrestlers spread their arms, knees, and legs when they fall to distribute the impact force over a larger area, reducing the risk of injury. This technique helps in absorbing and dissipating the force more effectively, preventing localized injuries.

Quick Tip

Spreading the body upon impact can significantly reduce the risk of injury by distributing force evenly across the body.

Section-D

25. “The organisation of its community sports reflects the progress of any country.” In the context of this statement, outline ‘Run for a specific cause’ and ‘Run for unity’.

Solution: Run for a Specific Cause:

The initiative “Run for a specific cause” aims to raise awareness or funds for a particular social issue, such as promoting education, health, or environmental causes. It engages participants in a fun and active way, allowing them to contribute to meaningful causes while staying fit.

Run for Unity:

“Run for unity” promotes social cohesion and community building. It encourages individuals from diverse backgrounds to come together and participate in a common goal, symbolizing solidarity and harmony in society.

Quick Tip

Community sports events like "Run for a specific cause" or "Run for unity" are not only great for fitness but also provide opportunities to raise awareness and foster inclusivity.

26. Describe the physical and psychological benefits of women's participation in sports.

Solution: Physical Benefits:

Increased cardiovascular health and stamina.

Improved muscle strength, flexibility, and endurance.

Enhanced bone health and a reduced risk of osteoporosis.

Psychological Benefits:

Boosted self-esteem and confidence.

Reduced stress, anxiety, and depression through the release of endorphins.

Improved mental focus and concentration.

Quick Tip

Engaging in sports not only promotes physical health but also has significant mental and emotional benefits, helping individuals feel empowered and confident.

27. Define flexibility. Explain the methods to improve flexibility for a gymnast.

Solution: Flexibility: Flexibility is the ability to move joints and muscles through their full range of motion.

Methods to Improve Flexibility for a Gymnast:

1. Static Stretching: Holding stretches for extended periods to increase the flexibility of muscles.

2. Dynamic Stretching: Performing controlled leg and arm swings to enhance muscle flexibility before workouts.

3. PNF (Proprioceptive Neuromuscular Facilitation): A technique combining stretching and contracting the muscles to improve flexibility.

Quick Tip

Regular stretching and controlled exercises are crucial for gymnasts to maintain high flexibility, which is essential for performing complex movements.

28. Mention any three importance of diet during competition.

Solution: 1. Energy Supply: Proper nutrition ensures athletes have enough energy to perform at their best during competition.

2. Muscle Repair and Recovery: Nutrients like protein help in muscle repair and recovery after intense activity.

3. Hydration: Proper hydration maintains fluid balance, reduces the risk of cramps, and supports overall performance.

Quick Tip

A well-balanced diet before and during competition is vital for peak performance and faster recovery.

29. Describe the following: (a) Residual Volume (b) Stroke Volume

Solution: (a) Residual Volume:

Residual volume is the amount of air remaining in the lungs after a maximal exhalation. It ensures that the lungs do not collapse and helps maintain gas exchange.

(b) Stroke Volume:

Stroke volume is the amount of blood ejected by the left ventricle of the heart in one contraction. It is an important indicator of cardiovascular fitness.

Quick Tip

Both residual volume and stroke volume are key indicators of lung and heart function, affecting overall physical performance.

30. Compare and contrast the hostile and instrumental aggression.

Solution: Hostile Aggression:

Hostile aggression is a type of aggression where the goal is to cause harm or injury to another person, driven by anger or emotional response.

Instrumental Aggression:

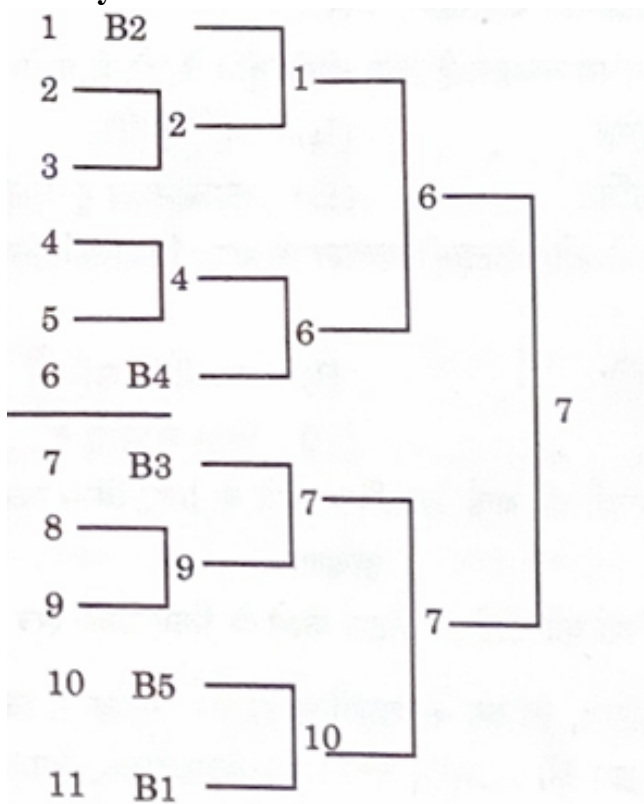
Instrumental aggression is goal-oriented aggression used as a means to achieve something (e.g., winning a competition), where harm to the other person is a byproduct of reaching the objective.

Quick Tip

Understanding the distinction between hostile and instrumental aggression helps in addressing behavior in sports and managing emotions effectively.

Section-D

31. Aarti prepared a fixture of 11 teams to conduct the Kho-Kho tournament in her locality as shown below:



31. (i) What is the number of Non-bye teams in this tournament?

Solution: In a fixture with 11 teams, there are 5 teams with byes (B2, B3, B4, B5, B1).

These teams automatically advance to the next round without playing. The remaining teams (6 teams) are the non-bye teams that play against each other in the first round.

Quick Tip

A team that receives a "bye" does not participate in the initial round and automatically advances to the next stage of the tournament.

31. (ii) If the above fixture had been of 48 teams, then the number of byes would have been

Solution: For a single-elimination tournament, the number of byes can be calculated by finding the smallest power of 2 greater than or equal to the number of teams. The smallest power of 2 greater than or equal to 48 is 64. The number of byes required is the difference between 64 and 48, which is 16 byes.

Quick Tip

To determine the number of byes in a knockout tournament, find the smallest power of 2 greater than the total number of teams and subtract the total number of teams from it.

31. (iii) 7th match will be played between team number and

Solution: Based on the given fixture, the 7th match will be played between team number 7 (B3) and team number 6 (B4). These teams advance to the 7th round in the knockout tournament structure.

Quick Tip

In knockout tournaments, the teams that progress to the next round play against each other, and the matchups are determined based on the tournament bracket.

31. (iv) The provision in which good teams are placed in different half or pool, based on their ranking or previous performance, not by allotment of draw, so that they do not

play with other teams in the first round is known as _____.

- (1) Bye
- (2) British method
- (3) Seeding
- (4) American method

Solution: The provision described is known as **Seeding**. In seeding, the top-ranked or best-performing teams are placed in different halves or pools of the tournament bracket to avoid playing each other in the initial rounds, ensuring a balanced competition structure.

Quick Tip

Seeding is commonly used in tournaments to create fair matchups by ensuring that top teams do not face each other in the early rounds.

31(b). Tarun's physical education teacher gave him the responsibility of organizing a Kabaddi competition in school. Tarun along with his classmates formed several committees and prepared a knockout fixture of 17 teams for the Kabaddi tournament. He faced many challenges in organizing the match, but finally, he was successful.

Answer the following questions based on the above case and your prior knowledge:

31(b). (i) How many matches will be played in this tournament?

Solution: In a knockout tournament, each team that loses is eliminated, so the number of matches played will be one less than the total number of teams. Since there are 17 teams, the total number of matches will be 16.

For a knockout tournament with 17 teams, 16 matches will be needed to determine the winner.

31(b). (ii) _____ saves cost and time and makes each match intensive because of fear of elimination.

- (1) Knockout tournament
- (2) League tournament
- (3) Round robin tournament
- (4) Combination tournament

Solution: The correct answer is a knockout tournament. In this format, teams are eliminated after each loss, which increases the intensity of each match and minimizes the duration of the tournament.

Knockout tournaments are efficient and cost-effective as they reduce the number of matches by eliminating teams after each round.

31(b). (iii) Two team players got injured during the match, which committee will manage it?

- (1) Logistics committee
- (2) Technical committee
- (3) Finance committee
- (4) Marketing committee

Solution: In this case, the Technical committee would manage the situation as they handle the overall operations during the tournament, including any injuries. They would ensure players get medical assistance.

The Technical committee oversees the match logistics and is responsible for managing player safety during the competition.

31(b). (iv)(a) Which formula was used to allot byes to the above teams in the lower half?

Solution: To allot byes in a knockout tournament, the formula ensures that each team has an equal chance of progressing. Byes are often given to the teams that are ranked highest or based on the tournament draw.

In knockout tournaments, teams may be given byes to even out the number of teams in each round, particularly when there is an uneven number of teams (like 17 teams).

31(b). (iv)(b). Which formula was used to allot byes to the above teams in the upper half?

Solution: For the upper half, the formula used is similar. It assigns byes based on seeding or ranking, often giving a bye to the highest-ranked teams to balance the brackets. This ensures the upper half has an equal number of teams, even if the number is odd.

Byes in the upper half are allotted based on similar principles—either by ranking or drawing lots—to ensure fairness in the distribution of matches.

32. During the Physical Education class, Vivek’s physical education teacher provided

information about sports for children with special needs. He explained how they are catered for the Paralympics, Deaflympics and Special Olympics. Additionally, he advised them to motivate such children to participate in physical activities to improve their performance. Answer the following questions based on the above case and your prior knowledge:

32. (i) To participate in Special Olympics, the minimum age should be ____ years old.

- (A) 7
- (B) 6
- (C) 8
- (D) 9

Correct Answer: (C) 8

Solution: (i) The minimum age to participate in the Special Olympics is generally **8** years old.

32. (ii) The first Deaflympics was held in the year ____.

Solution: The first Deaflympics was held in the year **1924**.

32. (iii) Who was the founder of the Paralympics?

Solution: The founder of the Paralympics was **Sir Ludwig Guttmann**.

32. (iv) Write any two strategies to make physical activities accessible for special children.

Solution: Two strategies to make physical activities accessible for special children include:

- Providing specialized equipment that accommodates various disabilities.
- Implementing individualized training programs tailored to each child's specific needs and abilities.

Quick Tip

When teaching or organizing physical activities for children with special needs, always ensure that the environment is safe, inclusive, and supportive. Adapt activities to meet individual abilities, and involve professionals who specialize in adaptive physical education.

33. Diya went to a sports training center for the first time. Her coach informed her that participation in sports not only promotes physical growth but also has social and psychological benefits. He highlighted numerous physical benefits for muscles, heart, and respiratory systems. He advised her to continue daily practice to improve her health-related and skill-related fitness. Answer the following questions based on the above case and your prior knowledge:

33. (i) Which is not a long-term effect of exercises on the muscular system?

- (A) Hypertrophy of muscle
- (B) Increase in glycogen stored
- (C) Ligament and tendon strengthen
- (D) Accumulation of lactate

Correct Answers: (D) Accumulation of lactate

Solution:

The long-term effect of exercise on the muscular system does not include the **accumulation of lactate**, as lactate accumulation is typically a short-term response to anaerobic activity.

33. (ii) What is cardiac output?

Solution:

Cardiac output is defined as the amount of blood the heart pumps through the circulatory system in one minute.

33. (iii) Choose the correct statement related to tidal volume:

- (A) Amount of air inhaled and exhaled in one breath.
- (B) Amount of air inhaled in one breath.
- (C) Amount of blood pumped out by the heart in one stroke.
- (D) Amount of air exhaled in one breath.

Correct Answers: (A) Amount of air inhaled and exhaled in one breath.

Solution:

The correct statement related to tidal volume is that it is the **amount of air inhaled and exhaled in one breath**.

33. (iv) Lactic acid tolerance relates to:

- (A) Strength
- (B) Speed

- (C) Flexibility
- (D) Endurance

Correct Answers: (D) Endurance

Solution: **Lactic acid tolerance** is primarily related to **endurance** because it reflects the body's ability to tolerate and process lactic acid during prolonged physical activity.

Quick Tip

Understanding physiological terms and concepts like cardiac output, tidal volume, and the effects of exercises on the muscular system is crucial for optimizing athletic performance and designing effective training programs.

Section-E

34. Describe the procedure and benefits of Mandukasana and Makrasana to control hypertension.

Solution: Mandukasana (Frog Pose): This yoga pose involves sitting on the heels with the knees wide apart, placing the hands on the floor, and then bending forward to press the chest against the thighs. The benefits include stimulation of the abdominal organs, reduction in blood sugar levels, and alleviation of stress and anxiety, which can help control hypertension.

Makrasana (Crocodile Pose): This pose is performed by lying face down with the hands folded under the head, legs slightly apart, and the neck and shoulders relaxed. It helps in reducing stress and tension, promoting relaxation and better sleep, thus aiding in the management of hypertension.

Quick Tip

Incorporating yoga into a daily routine can significantly improve cardiovascular health and reduce stress levels, which are key factors in managing hypertension.

35. What do you mean by Equilibrium? Explain how Equilibrium increases with the influence of various factors by giving suitable examples from sports.

Solution: Equilibrium in sports refers to the ability to maintain or quickly return to a state of balance during any activity. Equilibrium can be enhanced by factors such as strength, flexibility, and proprioception. For example, a gymnast maintains equilibrium on the balance

beam through focused training that enhances muscle coordination and balance.

Quick Tip

Improving equilibrium involves regular balance and proprioceptive exercises, which are crucial for athletes in all sports to enhance performance and prevent injuries.

36. What do you understand by circuit training? How a coach will plan circuit training sessions with 6 stations to develop fitness of his new trainees?

Solution: Circuit Training is a form of body conditioning or resistance training using high-intensity aerobics. It targets strength building and muscular endurance. A coach might set up a circuit training session with stations that include a mix of cardiovascular exercises, strength training, and agility exercises, each station lasting a few minutes, encouraging trainees to move quickly from one to the next with minimal rest.

Quick Tip

Circuit training is highly efficient for improving overall fitness levels as it combines various aspects of physical training in a compact, time-effective format.

37. Write in detail the procedure and scoring of 'Flamingo Balance Test' and 'Plate Taping Test' recommended for the age group 5 – 8 years by SAI (Sports Authority of India).

Solution: Flamingo Balance Test: This test measures the balance of an individual by requiring them to stand on one leg for a duration of time. The score is calculated by the number of times the foot is placed on the ground during attempts to maintain balance for one minute.

Plate Taping Test: This test assesses hand-eye coordination and agility by timing how quickly individuals can place and pick up disks from designated circles. The score is determined by the completion time of the task.

Quick Tip

These tests are excellent for gauging physical development in children and can help in early identification of their motor skills proficiency and balance.