

12<sup>th</sup> Class  
Physical Education

**Solution & Marking Scheme**

- Ans.1. (c) Weightlifting — 1  
Ans.2. (b) Alternating fast and slow running over natural terrain — 1  
Ans.3. (c) Physical, mental, emotional and social well being. — 1  
Ans.4. (d) Greece. — 1  
Ans.5. (c) J. F. Cuber — 1  
Ans.6. (d) All of these — 1  
Ans.7. (b) Manu Bhaker — 1  
Ans.8. (a) 3 — 1  
Ans.9. (b) Guru Vashisth Award — 1  
Ans.10. (c) Fire — 1  
Ans.11. (d) All of these — 1  
Ans.12. (a) First Aid — 1

Ans.13. [Participation in games and sports enhances cardiovascular health, strengthens muscles, improves flexibility, and boosts endurance.] It aids in weight management, enhances motor skills, and promotes better coordination. Regular physical activity also reduces the risk of chronic diseases and improves overall physical fitness and agility. — 1  
1+1 = 2

Ans.14. [Cooling down involves gradually reducing physical activity after exercise to allow the body to return to its resting state.] This process includes light aerobic exercises like walking or jogging, followed by stretching major muscle groups. Cooling down helps lower heart rate, relax muscles, prevent stiffness, and promote recovery. — 1  
1+1 = 2

Ans.15. [The family plays a vital role in education by providing early learning experiences, instilling values, and teaching social norms. It fosters emotional and cognitive development, shaping the child's attitudes toward learning.] Through communication, guidance, and support, the family nurtures intellectual curiosity, discipline, and the foundation for formal education. — 1  
1+1 = 2

Ans.16. [A fracture is a break, crack, or discontinuity in a bone, usually caused by trauma, excessive force, or underlying conditions that weaken the bone, such as osteoporosis. Fractures can vary in severity, from hairline cracks to complete breaks,] and may require immobilization, realignment, or surgery for healing. Symptoms typically include pain, swelling, bruising, and difficulty in movement. Proper medical assessment is essential for effective treatment and recovery. — 1  
1+1 = 2

Ans.17. [A flood is the overflow of water onto normally dry land, often caused by heavy rainfall, river overflow, or storm surges.] It can lead to widespread damage to property, infrastructure, and agriculture, disrupting daily life and causing displacement of people in affected areas. — 1  
1+1 = 2

Or

[A landslide is the sudden downward movement of rock, soil, and debris on a slope, triggered by factors such as heavy rainfall, earthquakes, or human activities.] Landslides — 1  
1+1 = 2



can cause significant damage to infrastructure, disrupt transportation, and pose serious risks to lives and property in affected areas. ]-①

**Ans.18.** Benefit of Warming-up in sports.

1. Warming up before sports increases blood flow to muscles, enhancing flexibility and reducing the risk of injury. —①
2. It gradually elevates heart rate and prepares the cardiovascular system for intense activity. —①
3. Additionally, warming up improves muscle coordination and mental focus, leading to better overall performance by priming the body and mind for the physical demands of the sport —①

1+1+1  
= 3

**Ans.19.** Socialization in Physical Education and sports is essential as it fosters teamwork, communication, and respect for others, promoting emotional and social development. Through interaction with peers, students learn cooperation, leadership, and conflict resolution, which are vital life skills. It also helps build a sense of community and belonging, encouraging positive behavior and boosting self-confidence. Socialization in sports can further bridge cultural and social gaps, instilling values such as fairness, discipline, and inclusivity. Ultimately, it plays a crucial role in holistic development, contributing to both individual and societal well-being. ]-①

1+1+1  
= 3

**Ans.20.** The living environment refers to the surroundings in which individuals live, encompassing both natural and built components. It includes elements like air, water, land, climate, vegetation, and the infrastructure of homes, schools, and workplaces. A healthy living environment supports physical and mental well-being by providing clean air, safe water, proper sanitation, and access to green spaces. It also influences social interactions, lifestyle choices, and overall quality of life, contributing to personal and community health. ]-①

1+1+1  
= 3

**Ans.21.** A sprain is an injury to the ligaments, which are the tough bands of tissue connecting bones in a joint. It occurs when these ligaments are stretched or torn due to sudden twists or impacts, commonly in areas like the ankle, wrist, or knee. Symptoms include pain, swelling, bruising, and limited movement in the affected area. Treatment typically involves rest, ice, compression, and elevation (RICE) for healing and recovery. ]-①

1+1+1  
= 3

**Ans.22.** Circuit training is a type of physical training that involves a series of exercises performed in sequence, targeting various muscle groups and fitness components. Each exercise is performed for a specific duration or number of repetitions, followed by a brief rest period before moving on to the next exercise. ]-2

#### **Importance of Circuit Training in Games and Sports**

1. **Required less space:** Circuit training required less space .It can be perform anywhere like indoor hall or outdoor.

2. **Overall Fitness Improvement:** Enhances strength, endurance, flexibility, and cardiovascular fitness, essential for athletes.
3. **Time Efficiency:** Provides a comprehensive workout in a shorter duration, accommodating busy training schedules.
4. **Variety and Engagement:** Combines different exercises, keeping workouts interesting and reducing boredom.
5. **Teamwork and Motivation:** Encourages camaraderie and motivation when conducted in group settings.

2

2+2  
=4

**Ans.23. Qualities of a leader in Physical Education include:**

1. **Physical fitness** – Maintains personal fitness, setting a standard for others.
2. **Discipline** – Maintains order and promotes hard work and consistency.
3. **Confidence** – Displays self-assurance in guiding and decision-making.
4. **Fairness** – Treats all participants equally, without favoritism.
5. **Strong communication skills** – Effectively conveys instructions and motivates others.
6. **Knowledgeable** – Well-versed in sports science, fitness, and teaching methods.
7. **Integrity** – Acts with honesty and fairness.
8. **Emotional intelligence** – Recognizes and manages both their own emotions and those of others.

1

1  
1+1+1+1  
=4

**Ans.24. Problems of adolescents:**

1. **Emotional Instability:** Mood swings and heightened sensitivity can lead to anxiety and depression.
2. **Identity Exploration:** Struggles with self-identity and personal values can create confusion.
3. **Peer Pressure:** Influences from peers can lead to risky behaviors, such as substance abuse.
4. **Academic Stress:** Pressure to succeed in school can result in burnout and lower self-esteem.
5. **Cyber bullying:** Negative experiences online can lead to feelings of isolation and distress.
6. **Family Conflicts:** Tensions with parents or guardians can contribute to emotional turmoil.

1

1



7. **Risky Behaviors:** Engagement in unsafe activities, such as reckless driving or unsafe sex. — ①

8. **Career Uncertainty:** Anxiety about future career choices and life paths can create pressure and indecision

9. **Body Image Issues:** Concerns about appearance can result in eating disorders and low self-esteem. — ①

10. **Substance Abuse:** Experimentation with drugs and alcohol can lead to addiction and health issues. — ①

1+1+1+1  
= 4

Ans. 25. [A disaster is a sudden, catastrophic event that causes significant disruption, destruction, and damage to communities, infrastructure, and ecosystems. They often result in loss of life, injury, property damage, and long-term economic and environmental impacts.] — ①

How we can prepare for disaster: — ①

1. **Education and Awareness:** Educate ourselves and our community about the types of disasters that may occur in your area and their potential impacts. — ①

2. **Preparedness Plans:** Develop a disaster preparedness plan that includes communication strategies, evacuation routes, and emergency contacts. — ①

3. **Emergency Kits:** Assemble emergency kits with essential supplies, including water, non-perishable food, first aid supplies, flashlights, batteries, and personal documents. — ①

4. **Training:** Participate in training programs for first aid, CPR, and emergency response to be better equipped to handle situations. — ①

5. **Risk Assessment:** Assess your home and community for vulnerabilities and take steps to minimize risks, such as reinforcing structures or creating defensible space around homes. — ①

= 4

Ans. 26. Here are the key factors affecting physical fitness and wellness in detail:

Physical fitness and wellness are influenced by several factors, each playing a critical role in an individual's health and well-being. — ①

1. **Genetics:** Inherited traits affect muscle composition, metabolism, and body structure, which influence a person's natural athletic ability and fitness levels. — ①

2. **Nutrition:** A balanced diet provides essential nutrients and energy to fuel physical activity, build muscle, and support recovery. Poor eating habits can lead to deficiencies and affect performance and overall wellness.

3. **Physical Activity:** Regular exercise improves cardiovascular health, muscle strength, flexibility, and endurance. Inactivity, on the other hand, leads to a decline in fitness and increases the risk of obesity and chronic diseases.

4. **Age:** Fitness levels change with age due to factors like muscle loss, reduced bone density, and slower metabolism. Physical activity should be adapted to meet the needs of different life stages. ①

5. **Lifestyle:** Sedentary habits, smoking, and excessive alcohol consumption negatively impact fitness, while active lifestyles promote health. ①

6. **Mental Health:** Psychological factors such as stress, anxiety, and depression can decrease motivation to engage in physical activity, affecting fitness and wellness. ①

7. **Sleep:** Adequate sleep is crucial for recovery and maintaining energy levels. Poor sleep affects physical performance and cognitive function. ①

$$1+1+1+1+1=5$$

**Ans. 27.** Sports injuries refer to the physical damage sustained during athletic activities, exercise, or any form of physical activity. These injuries can affect bones, muscles, ligaments, tendons, or other tissues and vary in severity from mild to severe. Common types of sports injuries include sprains, strains, fractures, dislocations, concussions, and overuse injuries like tendinitis. Proper training, equipment, warm-up routines, and understanding of body mechanics are essential to prevent these injuries. ②

A **sprain** is one of the most common sports injuries, occurring when the ligaments (the fibrous tissues connecting bones at a joint) are overstretched or torn. Sprains typically happen in the ankle, knee, wrist, or thumb and are caused by twisting, turning, or trauma that forces the joint out of its normal range of motion. ①

#### Symptoms:

- **Pain:** Immediate sharp pain at the site of the injury.
  - **Swelling:** Rapid swelling around the affected joint.
  - **Bruising:** Discoloration may appear due to internal bleeding.
  - **Limited Movement:** Difficulty moving the joint due to pain and swelling.
- ①

#### Treatment:

- **R.I.C.E Method:** Rest, Ice, Compression, and Elevation are the immediate steps to treat a sprain.
  - **Physical Therapy:** Strengthening exercises to restore range of motion and prevent future injuries.
  - **Immobilization:** In severe cases, braces or splints may be required to stabilize the joint while it heals.
  - **Surgery:** Rarely, if the ligament is completely torn, surgery may be necessary to repair it.
- ①

$$2+1+1+1=5$$