



INDIAN SCHOOL SOHAR
TERM II EXAMINATION (2023-24)
PHYSICAL EDUCATION(048)

CLASS: XI

DATE: 26/02/2024

MAX MARKS: 70


TIME: 3 HOURS

General Instructions :-

1. The question paper consists of 5 sections and 37 Questions.
2. Section A consists of questions 1-18 carrying 1 mark each and are multiple choice questions. All questions are compulsory.
3. Section B consists of questions 19-24 carrying 2 marks each and are very short answer types and should not exceed 60-90 words. Attempt any 5.
4. Section C consists of questions 25-30 carrying 3 marks each and are short answer types and should not exceed 100-150 words. Attempt any 5.
5. Section D consists of questions 31-33 carrying 4 marks each and are case studies.
6. Section E consists of questions 34-37 carrying 5 marks each and are long answer types and should not exceed 200-300 words. Attempt any 3.

SECTION – A

(1 mark each)

1. How many components are included in Khelo India Program ?
(a) 10 (b) 12 (c) 8 (d) 15
2. is called as Isometric strength.
(a) Maximum Strength (b) Explosive strength (c) Static strength (d) Strength endurance
3. is a very good Kriya to get rid of nasal allergy.
(a) Vastradhauti (b) Dandadhauti (c) Neti (d) Kapalbhathi
4. Given below are the two statements labeled Assertion (A) and Reason (R) :
A : The heart, blood and blood vessels constitute as the circulatory system of the body.
R : Arteries carry blood away from the heart and veins carry blood back to the heart.
In the context of above two statements, which one of the following is correct ?
(a) Both (A) and (R) are true and (R) is the correct explanation of (A).
(b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(c) (A) is true, but (R) is false.
(d) (A) is false, but (R) is true.
5. Identify the following figure :

(a) Olympic Flag (b) National Flag (c) Special Olympics Flag (d) None of these
6. Study of human behavior is called :
(a) Physiology (b) Social Science (c) Psychology (d) Kinesiology
7. What is the maximum range of movement possible at a joint known as ?
(a) Flexibility (b) Coordinative ability (c) Locomotor ability (d) None of the above

8. The plane which divides the body into a left and a right is called :
 (a) coronal plane (b) sagittal plane (c) vertical plane (d) transverse plane
9. An individual's ability to bounce back emotionally in the face of adversity is referred as
 (a) Aggression (b) Anxiety (c) Resilience (d) Motivation
10. World Anti-Doping Agency was established in :
 (a) 1896 (b) 1999 (c) 1912 (d) 1916
11. is a person's ability to control their body position relative to some support base.
 (a) Inertia (b) Balance (c) Spin (d) None of the above
12. The simplest possible joint movement is :
 (a) circular motion (b) flexing movement (c) gliding movement (d) swinging motion
13. Which of the following is a matter of inheritance ?
 (a) Personality traits (b) Habits & routines (c) Character (d) Manners & etiquettes
14. Which parameters are required for calculation of BMI?
 (a) Weight and Height (b) Age and Gender (c) Weight and Age (d) Height and Age
15. The first modern Olympic games were held in the year
 (a) 1896 (b) 1900 (c) 1904 (d) None of the above

16. Match the following :

Column A	Column B
A. Wearable gear	(i) Natural grass
B. Playing Surface	(ii) Smart Watch
C. Protective Equipment	(iii) 3D Lasers
D. Sensor Tools	(iv) Helmet

	A	B	C	D
a)	iv	ii	i	iii
b)	i	ii	iii	iv
c)	iii	iv	ii	i
d)	ii	i	iv	iii

17. The correct positioning of fingers in Anulom-Vilom is :



- (a) (b) (c) (d)

18. The study of forces & their effects on living systems is called as :

- (a) Biochemistry (b) Physiology (c) Biomechanics (d) None of the above

SECTION -B

(2 marks each)

19. What do you mean by sports journalism ?
20. List the principles of Niyama.
21. What is the main aim of Adaptive Physical Education ?
22. What is the formula for calculating waist-hip ratio ?
23. Define Abduction.
24. Define the term Test and Measurement.

SECTION – C

(3 marks each)

25. Briefly explain any six adolescent problems.
26. Briefly explain procedure of any three Pranayama techniques.
27. Describe any three qualities of a good leader.
28. What is Anatomy and Physiology ? Write its importance.
29. Explain Kinetics and Kinematics.
30. Explain Resilience and its importance in sports ?

SECTION -D

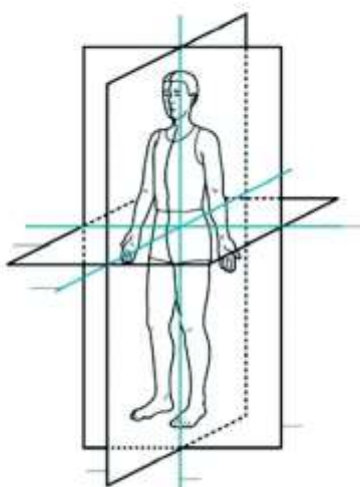
(4 marks each)

31. Patanjali in his text of Yoga Sutras mentioned pranayama as means of attaining higher states of awareness. Pranayama is related to respiratory or breathing exercises. It refers to breathing exercises that are used for relaxation, concentration and meditation. Pranayama is the practice of various breathing techniques.



Based on the above, answer the following questions:

- a. In Pranayama, refers to inhalation of breath.
 - b. In Pranayama,refers to retention of breath.
 - c. In Pranayama,refers to exhalation of breath.
 - d. The exhalation in.....pranayama resembles the typical humming sound of a bee.
32. To perform the daily activities, we need to change body positions or move our body parts as well as we need to displace from one place to another. Every human movement is described in three dimensions based on a series of planes and axis.



On the basis of the above, answer the following questions :

- a. A vertical plane that divides the body into left and right side is known as
 - b.axis runs from left to right through the centre of the body.
 - c. Sagittal axis is also known as..... axis.
 - d. plane passes through the middle of the body and divides the body horizontally in the upper and lower half.
33. The ancient Olympics were a prestigious and sacred sporting event. These games celebrated physical prowess, skill, and unity. Athletes competed in disciplines like running, discus, wrestling, and chariot racing. The games were accompanied by religious rituals and truces, during which conflicts were suspended.
- Based on the above, answer the following questions:
- a. Ancient Olympics were held in , Greece.
 - b. The first ancient Olympic Games can be traced back to B.C.
 - c. There were a series of athletic competitions held for representatives of various city states of Ancient Greece held in honor of
 - d. of France, is rightly known as the “Founder of the Modern Olympic Games”.


SECTION E

(5 marks each)

34. Define Physical Education. Explain the aim and objectives of physical education.
35. Explain Somatotypes in detail.
36. Describe the different types of Bones.
37. “Warm up is important for optimum performance”. Justify the statement.

ANSWER KEY

SECTION—A

- | | | |
|--|---------------------------------|---|
| 1. (b) 12 | 2. (c) Static Strength | 3. (c) Neti |
| 4. (a) Both (A) and (R) are true and (R) is the correct explanation of (A) | 5. (a) Olympic Flag | |
| 6. (c) Psychology | 7. (a) Flexibility | 8. (b) sagittal plane |
| 9. (c) Resilience | 10. (b) 1999 | 11. (b) Balance |
| 12. (c) gliding movement | 13. (a) Personality traits | 14. (a) Weight and Height |
| 15. (a) 1896 | 16. (d) A- ii, B-i, C-iv, D-iii | 17. (b)  |
| 18. (c) Biomechanics | | |

SECTION—B

19. Newspapers & sports magazines need professional people of sports to perform journalism. Those physical educators who have the talent for writing may opt a career as the sports journalist.
A large number of sports channels like ESPN, Star Sports etc. need good commentators for various sports events. So, sportsmen with good speaking skills and having knowledge about the concerned game can opt for this as a career.
20. 1. Saucha (Purification), 2. Santosh (Contentment), 3. Tapas (Asceticism), 4. Swadhyaya (Study), 5. Ishwara Pranidhana (Dedication To God)
21. The aim of Adaptive Physical Education is to provide all students with special needs, regardless of their disability, the opportunity to participate in physical education, safely and successfully, in the least restrictive environment.
22. The formula for calculating waist hip ratio is :
- $$\text{Waist-hip ratio} = \frac{\text{Waist Circumference}}{\text{Hip Circumference}}$$
23. **Abduction** is a movement laterally away from the midline or centre of your body.
24. Measurement is the use of tests and techniques to get the information about a particular skill or fitness level of an athlete or player.

SECTION—C

25. Some main adolescent problems are :
1. Physical Problems (ii) Intensification of self consciousness (iii) Eating disorders (iv) Sexual Problems (v) Peer group relationship (vi) Problem of career selection (vii) Dependence – independence (viii) Idealism Vs realism.

26. (i) Anuloma-Viloma / Nadi-Shodhana Pranayama

Procedure :

1. Sit in any comfortable meditative posture.
2. Keep the head and spine erect. Close your eyes.
3. Raise the right hand and place the right thumb on the right nostril and close it. Inhale slowly through the left nostril.
4. Release the pressure of the thumb on the right nostril. Now close the left nostril by the ring finger and the little finger and exhale slowly through the right nostril.
5. Now inhale slowly through the right nostril. Close the right nostril with your thumb and exhale slowly through the left nostril.
6. This is one round of Anuloma Viloma pranayama. Repeat it 5 times.

(ii) Surya Bhedi Pranayama :

Procedure :

1. Sit in a comfortable seated position with a straight spine and neck. Close your eyes and become aware of your breath.
2. Allow the left arm to relax by your side. Fold your right-hand's index finger & middle finger down towards the palm while keeping the ring and little finger as in the natural position.
3. Closing the left nostril, inhale slowly and deeply through the right nostril. Retain the breath for a few seconds.
4. Open the left nostril and close the right nostril with the thumb, exhaling slowly. Repeat steps 6-7 for one to three minutes.

27. Two qualities of a good leader are :

(i) Delegation of Duty :

Good leader is the ability to delegate tasks effectively. Leaders should identify the strengths discuss and weaknesses of their team members and assign tasks accordingly. Effective delegation allows the leader to focus on the big picture and helps to create a more efficient and productive team.

(i) Responsibility :

Leaders must be responsible for the success of their team and the organisation. They should be willing to take ownership of their mistakes and work towards making things right. Responsibility helps to create a culture of accountability and can help to ensure that the team is working towards achieving their goals.

28. The word "Physiology" comes from the Ancient Greek Word physis, which means "nature, origin", and logia, which means "study of". Physiology is the study of how living organisms perform the various functions of life. This includes how organisms, organ systems, organs, cells, and bio-molecules carry out the chemical or physical functions that exist in a living system. Physiology aims to understand the mechanisms of living - how living things work.

In other words, "Physiology is the study of functions of human body".

The importance of anatomy and physiology in Physical Education and Sports can be better judged from the below points :

- (i) **Helps in physical fitness** : Strong and fit body is an inevitable asset in the field of sports. Study of anatomy and physiology helps a sportsperson to understand the structure and function of different parts of human body and to acquire a fit and healthy body.
- (ii) **Provides knowledge about body structure** : On the basis of the knowledge of body structure, a sportsperson knows about the strength and weakness of his body and accordingly they can develop forte in the field of game which is suitable for the sportsperson as per their body structure.
- (iii) **Helps in selection of sports** : On the basis of knowledge of body structure, the coach and player can choose an appropriate sport / game which is suitable for a particular sport. Like tall students can be selected for basketball and volleyball. And short and stout students can be selected for weight lifting.

29. Kinetics is the branch of mechanics that deals with the forces that cause motion. It involves studying the forces acting on an object and their effects on its motion. For example, if you want to know why a car is moving on the road, you need to use kinetics to understand the forces that are causing it to move. In other words, kinetics is concerned with the “why” of motion.

Kinematics is the branch of mechanics that deals with the motion of objects without considering the forces that cause the motion. It involves studying the position, velocity, and acceleration of an object without any regard to the forces that cause it to move. For example, if you observe a car moving on the road, you can use kinematics to describe its position, velocity, and acceleration without knowing anything about the forces that caused it to move. In other words, kinematics is concerned with the “what” and “how” of motion.

30. Resilience is a psychological attribute that refers to an individual’s ability to cope with adversity, stress, and uncertainty. It involves the capacity to adapt to challenging situations and recover quickly from setbacks. Resilience can be fostered through various techniques, such as cognitive reframing, positive self-talk, and social support. In sports, resilience is a critical attribute that can impact an athlete’s performance and success. Athletes face numerous challenges, such as injuries, defeats, and intense pressure to perform, which can take a toll on their mental and emotional well-being. Resilience can help athletes cope with these challenges and maintain their motivation, focus, and confidence. Resilient athletes are better able to bounce back from setbacks, learn from their failures, and remain committed to their goals.

Some attributes of resilience include the ability to regulate emotions, maintain optimism, and cultivate a growth mindset. Resilient individuals are also adept at problem-solving, resourceful in seeking out support and resources, and able to maintain a sense of purpose and meaning even in the face of adversity.

SECTION—D

- 31. (a) Puraka (b) Kumbhaka (c) Rechaka (d) Bhramari
- 32. (a) Sagittal Plane (b) Frontal (c) Anteroposterior or Dorsoventral (d) Transverse
- 33. (a) Olympia (b) 776 (c) Zeus (d) Baron Pierre De Coubertin

SECTION—E

34. According to William Herbert Sheldon, there are three types of personalities on the basis of physical traits known as somatotypes.

- (i) **Endomorph** : An endomorphic somatotype, also known as viscerotonic type, is characterised by the social temperament type. They are physically quite ‘round’, have short arms and legs. General Physical characteristics of endomorphs are :

- (a) Wide hips and narrow shoulders, which makes them rather pear-shaped.
- (b) Quite a lot of fat spread across the body, including upper arms and thighs.
- (c) They have quite slim ankles and wrists, which only serves to accentuate the other fatter parts.

Psychologically, the endomorph is :

- Sociable
- Fun-loving
- Tolerant
- Even-tempered
- Good humored
- Relaxed
- With a love of comfort
- And has a need for affection

(ii) **Ectomorph** : An ectomorph somatotype is also known as the cerebrotonic type. General Physical characteristics of ectomorphs are :

- (a) Narrow shoulders and hips
- (b) A thin and narrow face, with a high forehead
- (c) A thin & narrow chest and abdomen
- (d) Thin legs and arms
- (e) Very little body fat

Even though they may eat as much as the endomorph, they never seem to put on weight. Psychologically they are :

- Self-conscious
- Private
- Introverted
- Inhibited
- Socially anxious
- Artistic
- Intense
- Emotionally restrained
- Thoughtful

(iii) **Mesomorph** : The mesomorph somatotype is also known as the somatotonic type. The mesomorph is somewhere between the round endomorph and the thin ectomorph. General Physical characteristics of mesomorphs are :

- (a) Large head, broad shoulders and narrow waist (wedge-shaped).
- (b) Muscular body, with strong forearms and thighs
- (c) Very little body fat

They are generally considered as 'well-proportioned'. Psychologically, they are :

- Adventurous
- Courageous
- Indifferent to what others think or want
- Assertive/bold
- Zest for physical activity
- Competitive
- With a desire for power/dominance
- And a love of risk/chance

35. The word 'PHYSICAL EDUCATION' is the combination of two words – 'Physical' and 'Education'. The word 'Physical' is related to body or any one or all of the bodily characteristics, that include physical strength, physical endurance, physical fitness, physical appearance and physical health. The word 'Education' refers to the process of receiving or giving systematic instruction.

'Physical Education' can be referred to an educational process which aims to develop human personality through activity.

AIMS OF PHYSICAL EDUCATION

Physical Education means “education through movement”. It aims to maximize our physical ability, leading us to be healthy, knowledgeable, skillful, creative, productive and influential in all areas of life.

OBJECTIVES OF PHYSICAL EDUCATION

- 1. Health Education :** Physical Education provides students with an understanding of the benefits of physical activity and exercise for overall health and wellness. This includes educating students on the importance of healthy eating habits, stress management and disease prevention.
 - 2. Physical Development :** Physical development is the primary objective of physical education. It includes development of strength, muscle tone, endurance, good posture and good health habits. According to this objective, all the systems in our body such as circulatory system, nervous system, respiratory system, digestive system etc. should work in a proper way.
 - 3. Motor Development :** Motor development refers to the neuromuscular relationship of nerve or nerve fibre to the one that connects the central nervous system with muscles. The development of neuro-muscular skills help in developing the ability to do various activities like running, jumping, throwing etc. It helps in developing quick reflexes and leads to efficient and graceful movements with little expenditure of energy.
 - 4. Emotional Development :** Every individual has different emotions like courage, truthfulness, initiative, loyalty, co-operation, strength to face defeat or victory, sportsmanship etc. Controlling these emotions in normal conditions and under pressure is very important. Physical education provides opportunities to develop these emotions and teaches proper control over these emotions.
 - 5. Social Development :** No individual can live alone in the society. An individual is the part of society and he needs to follow the rules, regulations and laws of the society. Physical education provides lot of opportunities for social development. During games, an individual has to deal with players of his own team and rival team. He has to follow rules of the game and instructions given by the coach, captain and referees. Thus, physical education develops qualities of co-operation, togetherness, tolerance, leadership, self control, discipline etc.
 - 6. Mental Development :** Physical education helps in developing mental level of a person. Various physical activities not only require physical strength but also need alertness of mind, deep concentration and precise movements. The study of physical education also includes understanding of rules and regulations, techniques of the game, anatomical and physiological studies, balanced diet etc.
 - 7. Developing an Energetic Life Style :** One of the objectives of physical education is to spread awareness for developing a healthy and energetic lifestyle. This objective also includes making people appreciate the value of a healthy life and everything it entails.
- 36.** There are various bones and their names are given according to their shape and size *i.e.* long bones, short bones, irregular bones, sesamoid bones, flat bones etc.
- 1. Long Bones :** Long bones are found in the limbs and are characterized by their length and thin cylindrical shape. These bones work as levers in the body and make the movements possible. Long bones are humerus, femur, ulna and radius bones. Due to the length of these bones these are given the name as long bones. The longest bone in human body is Femur (Thigh Bone).
 - 2. Short Bones :** Short bones are small and have a cube-like shape. *i.e.* carpal, metacarpals, and phalanges etc. These are small in size that is why these are called short bones. These bones are light in weight but are quite strong. These bones provide force to the body.
 - 3. Irregular Bones :** These bones are different in shapes. Vertebra is a good example of these bones. Some facial bones are also included in this type. The smallest bone in the human body is stapes (ear bone).

4. **Sesamoid Bones** : These bones originate from in between tendons of the muscles. They are present in knees, hand and foot etc. For example, Patella (knee cap) is a sesamoid bone.
5. **Flat Bones** : Flat bones are thin bones made up of two layers of compact bone with a layer of spongy bone in the center. These bones are present where protection such as the lungs and heart protected by the rib cage and brain protected by the skull. There is always large surface on flat bones and muscles are attached to these bones.
37. Warming up does produce physiological changes in the working of a muscle and warming up helps in building a strong and efficient formation for the working of muscles.

The Physiological basis of Warming Up are as follows :

Increases the Body Temperature : A proper warming-up increases the body and muscle temperature which helps in the efficiency of contractions and relaxation of muscles. So it has a lot of benefits for the sportspersons. Researches point that if the muscles have been slightly warmed-up just before the beginning of activity the performance is greatly improved. If one fails to do warm-up exercises before vigorous activity it may lead to tearing of muscle fibres.

1. **Decreases the Resistance in Muscle Capillaries** : Researches reveal that warming up decreases the resistance in muscle capillaries and brings the muscles in a state of readiness.
2. **Decreases the Viscosity of Muscles** : Warming-up decreases the viscosity of muscles. Researches indicate that if a previously inactive muscle is stimulated repeatedly, the first few contractions are often small and irregular and relaxation is incomplete. But once the contractions become stronger, relaxation is complete. It takes place due to decrease in the viscosity of muscles. This leads to faster and efficient rate of muscular contraction and relaxation. It also reduces the occurrence of injury or wear and tear of muscles and ligaments.
3. **Increases the Speed of Nerve Impulses** : Warming-up increases the speed of nerve impulses, which improves and sharpens the reaction time of sportspersons. Improvement in reaction time is important to sportspersons in most of the games and sports.
4. **Increases Metabolic Rate** : Warming-up increases the metabolic rate which ultimately improves energy level. In fact, the metabolic rate increases due to rise in core temperature. If there is an increase in temperature by 0.5°C , the metabolic rate increases by 7%. A high metabolic rate leads to higher production of energy.
5. **Increases the Speed of Oxygen and Fuel Transfer to Tissues** : A proper warming-up increases the speed of oxygen and fuel transfer to tissues. Its occurrence takes place due to the enhancement of blood flow through the muscles by dilating the small blood vessels. Increase in oxygen supply improves the functionality of muscles.
6. **Reduces the Blood Lactic Acid** : Researches indicate that heart rate and consumption of oxygen are directly related to muscle temperature. If the temperature increases, the heart rate also increases and the consumption of oxygen is also high which reduces the blood lactic acid.
7. **Increase in Working Capacity** : The above mentioned physiological adaptations increase the capacity of a person to do physical work. All the systems of body become efficient to do their related work.

