

**SET-4**

**Series : GBM/1**

कोड नं.  
Code No.

**75/1**

रोल नं.

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Roll No.

परीक्षार्थी कोड को उत्तर-पुस्तिका के मुख-पृष्ठ पर अवश्य लिखें ।

Candidates must write the Code on the title page of the answer-book.

- कृपया जाँच कर लें कि इस प्रश्न-पत्र में मुद्रित पृष्ठ 4 हैं ।
- प्रश्न-पत्र में दाहिने हाथ की ओर दिए गए कोड नम्बर को छात्र उत्तर-पुस्तिका के मुख-पृष्ठ पर लिखें ।
- कृपया जाँच कर लें कि इस प्रश्न-पत्र में 26 प्रश्न हैं ।
- कृपया प्रश्न का उत्तर लिखना शुरू करने से पहले, प्रश्न का क्रमांक अवश्य लिखें ।
- इस प्रश्न-पत्र को पढ़ने के लिए 15 मिनट का समय दिया गया है । प्रश्न-पत्र का वितरण पूर्वाह्न में 10.15 बजे किया जायेगा । 10.15 बजे से 10.30 बजे तक छात्र केवल प्रश्न-पत्र को पढ़ेंगे और इस अवधि के दौरान वे उत्तर-पुस्तिका पर कोई उत्तर नहीं लिखेंगे ।
- Please check that this question paper contains 4 printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains 26 questions.
- **Please write down the Serial Number of the question before attempting it.**
- 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the students will read the question paper only and will not write any answer on the answer-book during this period.

## शारीरिक शिक्षा (सैद्धान्तिक)

### PHYSICAL EDUCATION (Theory)

निर्धारित समय : 3 घंटे

अधिकतम अंक : 70

Time allowed : 3 hours

Maximum Marks : 70

सामान्य निर्देश :

- (i) प्रश्न-पत्र में कुल 26 प्रश्न हैं ।
- (ii) सभी प्रश्न अनिवार्य हैं ।
- (iii) जिन प्रश्नों का 1 अंक है उनका उत्तर लगभग 10-20 शब्दों में दिया जाए ।
- (iv) जिन प्रश्नों के 3 अंक हैं उनका उत्तर लगभग 30-50 शब्दों में दिया जाए ।
- (v) जिन प्रश्नों के 5 अंक हैं उनका उत्तर लगभग 75-100 शब्दों में दिया जाए ।

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[P.T.O.]

**General Instructions :**

- (i) *The Question paper consists of 26 questions.*
- (ii) *All questions are compulsory.*
- (iii) *Answer to questions carrying 1 mark should be in approximately 10-20 words.*
- (iv) *Answer to questions carrying 3 marks should be in approximately 30-50 words.*
- (v) *Answer to questions carrying 5 marks should be in approximately 75-100 words.*

1. फिक्स्चर खेल प्रतियोगिताओं का कार्यक्रम निर्धारित करने की प्रक्रिया है। बाई किसे कहते हैं ? 1  
Fixtures are the schedule, fixed for the matches. What is a Bye ?
2. नवीकरणीय संसाधन क्या हैं ? 1  
What are renewable resources ?
3. वसा दो प्रकार के स्रोतों से प्राप्त होती है। उनके नाम बताएँ। 1  
Fats are derived from two sources. Name them.
4. 'आगे की ओर कूबड़' क्या है ? स्पष्ट करें। 1  
What is Lordosis ? Explain
5. 'गामक विकास' को परिभाषित करें। 1  
Define Motor Development.
6. 'रजो-निवृत्ति' से क्या अभिप्राय है ? 1  
What is Menopause ?
7. एक वरिष्ठ नागरिक कुर्सी पर बैठकर जूते के फीते बाँधने में कठिनाई अनुभव करता है। किस गामक-गुण की कमी के कारण वह असमर्थ है ? नाम बताएँ। 1  
What motor quality does a senior citizen lack, who finds difficulty in tying the shoe laces while sitting on a chair ?
8. 'माँसपेशीय अतिवृद्धि' से आप क्या समझते हैं ? 1  
What is hypertrophy of muscles ?
9. 'कन्ट्यूशन' क्या है ? 1  
What is contusion ?
10. 'घर्षण' को परिभाषित करें तथा इसके प्रकार बताएँ। 1  
Define Friction and name its types.
11. खेल-मनोविज्ञान के संदर्भ में सहयोग/सामना करने युक्तियों से क्या अभिप्राय है ? 1  
What does the word "Coping strategies" mean, when talking about sports psychology ?

12. अंतःप्राचीर व बाह्य-प्राचीर खेल प्रतियोगिताओं में तीन प्रमुख अंतर बताएँ । 3  
Write three differences between Intramurals and Extramurals.
13. उत्तराखंड में ऋषिकेश के पास गंगा नदी, साहसिक खेल-प्रेमियों का एक प्रसिद्ध स्थल है । हजारों राष्ट्रीय व अंतर्राष्ट्रीय पर्यटक यहाँ हर साल आते हैं । राजस्व-प्राप्ति व आर्थिक विकास में यह अत्यंत सहायक है । परंतु मनोरंजक कारणों से नदी का प्रयोग उस पर नकारात्मक प्रभाव डाल रहा है ।  
एक सामाजिक सर्वे में ऐसा पाया गया कि राफ्टिंग और कैम्पिंग क्रियाओं के परिणामस्वरूप जल-दूषण, हरियाली का कम होना, सांस्कृतिक-हास, वन्य जीवों का पलायन आदि अनेक समस्याएँ उत्पन्न हुई ।  
यद्यपि नदी की पवित्रता व आस-पास के वातावरण को शुद्ध बनाए रखने के लिए अनेक नियम और अधिनियम बनाए गए, परंतु लगातार इनका उल्लंघन परिस्थितियों व पर्यावरण के लिए बड़ा खतरा है ।  
निम्नलिखित प्रश्नों के उत्तर दीजिए :
- (1) रिवर-राफ्टिंग व कैम्पिंग आदि वाणिज्यिक गतिविधियाँ, गंगा नदी के लिए किस प्रकार खतरा उत्पन्न करती हैं ? 1
- (2) उपरोक्त अनुच्छेद द्वारा किन मूल्यों की शिक्षा प्राप्त होती है ? 1
- (3) पर्यावरण सुधार के लिए आप किस प्रकार के मापदंड सुझाएँगे ? 1
- The river rafting belt of River Ganga in Uttarakhand near Rishikesh is a popular venue among adventure-lovers and thousands of National and International tourists visit every year. It helps a lot in generating revenue and developing state's economy. But, use of the river for recreational purposes is impacting the river environment negatively.
- An important social survey conducted recently found water pollution, loss of vegetation, cultural degradation and displacement of wildlife, resulting directly due to rafting and camping activities.
- Despite there being rules and regulations to maintain the holy river and its surroundings, violation of these norms is regularly happening, due to which there is great threat to the ecology and the river environment.
- Answer the following questions.**
- (1) What are the threats posed to the River Ganga due to commercial river rafting and camping ?
- (2) What values do you learn from the above passage ?
- (3) What measures will you suggest to improve this environment ?
14. 'अस्थि-सुषिरता' का क्या अभिप्राय है ? महिलाओं में अस्थि-सुषिरता के संदर्भ में विभिन्न कारकों की भूमिका का वर्णन करें । 3  
What is Osteoporosis ? Explain factors, those lead to Osteoporosis in women.
15. हारवर्ड स्टेप टेस्ट की विस्तृत व्याख्या करें । 3  
Write a detail note on Harvard Step Test.
16. प्रक्षेप्य-पथ किसे कहते हैं ? प्रक्षेप्य-पथ को प्रभावित करने वाले किन्हीं तीन कारकों का वर्णन करें । 3  
What is projectile ? Explain any three factors that affect a projectile trajectory.

17. व्यक्तित्व के विभिन्न आयाम कौन से हैं ? किन्हीं दो का वर्णन करें । 3  
What are the different dimensions of personality ? Write in brief about any two.
18. 'फार्टलेक विधि' से आप क्या समझते हैं ? संक्षिप्त वर्णन करें । 3  
What is Fartlek training ? Write in brief.
19. 'सहन-क्षमता' से आपका क्या तात्पर्य है ? इसके प्रकारों का उल्लेख करें । 3  
What is Endurance ? Explain its types.
20. 'स्वस्थ-भार' से आप क्या समझते हैं ? स्वस्थ जीवन-यापन के लिए शरीर-भार को नियंत्रित करने हेतु आप किन विधियों का प्रयोग करेंगे ? 5  
What do you mean by 'Healthy-Weight' ? Explain the methods to control 'Healthy-Body Weight to lead healthful-living'.
21. 'चपटे-पैर' और 'घुटनों का आपस में टकराना' – इन विकृतियों के कारण बताइए । किन शारीरिक गतिविधियों द्वारा इनका समाधान किया जा सकता है ? वर्णन करें । 5  
What are the causes of 'Flat-Foot' and 'Knock-Knees' ? Suggest physical Activities as corrective measures for these deformities.
22. बच्चों पर व्यायाम के शारीरिक एवं शरीर-क्रियात्मक लाभ कौन-कौन से होते हैं ? विस्तार से लिखें । 5  
Exercises have numerous physiological and physical benefits on children. Explain in detail.
23. 'ऑक्सीजन-ग्रहण' व 'ऑक्सीजन-अंतरग्रहण' का अभिप्राय स्पष्ट करें । व्यायाम का श्वसन-संस्थान पर क्या प्रभाव पड़ता है ? बताएँ । 5  
What do you mean by 'Oxygen-Intake' and 'Oxygen-Uptake' ? Explain the effects of exercise on Respiratory system.
24. 'खेल-चोटों, के कारणों का उल्लेख करें तथा इनसे बचाव के उपाय सुझाएँ । 5  
What are the causes of 'Sports-Injuries' ? How Sports-Injuries can be prevented ? Explain briefly.
25. 'दौड़ने' व 'चलने' में क्या अंतर है ? दौड़ने की क्रिया का यांत्रिक विश्लेषण करें । 5  
What is the difference between Running and Walking ? Explain mechanical Analysis of 'Running'.
26. "क्रॉस-वेबर टेस्ट" क्या है ? इसके, विभिन्न परीक्षणों का निर्देशन आप किस प्रकार करेंगे ? वर्णन करें । 5  
What is 'Kraus-Weber-Test' ? Explain the administration of Kraus-Weber test in detail.

**SENIOR SCHOOL CERTIFICATE EXAMINATION**

**MARKING SCHEME -2017**

**PHYSICAL EDUCATION**

**(Local)**

**Instructions**

**code-75/1**

1. Marking Scheme carries only suggested value points for the answers. These are only Guidelines and do not constitute the complete answer. The students can have their own expression and if the expression is correct, the marks be awarded accordingly.
2. As orders of the Hon'ble Supreme Court, the candidates would now be permitted to obtain photocopy of the Answer Book on request on payment of the prescribed fee. All examiners/Head Examiners are once again reminded that they must ensure that evaluation is carried out strictly as per value points for each answer as given in the Marking Scheme.
3. All the Head Examiners/Examiners are instructed that while Evaluating the answer scripts, if the answer is found to be totally incorrect, the (x) should be marked on the incorrect answer and awarded '0' marks.

**PHYSICAL EDUCATION**

**Max. marks- 70**

**75/1**

**SET -4**

Q1 Fixtures are the schedule, fixed for the matches. What is a Bye? 1

Ans. A Bye in a fixture means that the team which gets a bye is exempted from playing the first round and enters the second round directly.

**OR**

Byes are given in the first round by which the number of teams playing in the 2<sup>nd</sup> round is reduced to power of two.

(Or any relevant statement)

Q2 What are renewable resources? 1

Ans. Renewable resources are those natural resources which can be used repeatedly, since it is replaced naturally/ replenished over time by some natural power eg. Sunlight, water, air etc.

Q3 Fats are derived from two sources. Name them. (½ + ½ =1)

Ans. Animals sources – Ghee, Butter, Curd, Fish Oil, Milk, Meat, Egg  
Vegetable Sources- Soyabean, Olive, Mustard, Coconut, Groundnut, etc.

Q4 What is Lordosis? Explain 1

Ans. Lordosis is a postural deformity of the spine. In this deformity, the spine curvature is increased inward in the lumbar region.

Q5 Define Motor Development. 1

Ans. Development of child's bones, muscles and ability to move around and manipulate his/her environment. (Gross motor development Fine motor development)

**OR**

Development of general body control, fine motor skills and large muscle movements

Q6 What is Menopause? 1

Ans. Menopause is a natural physiological change in women of age between 45-55 years, where there is a permanent cessation of menstruation cycle /primary functions of the ovaries due to hormonal changes.

Q7 What motor quality does a senior citizen lack, who finds difficulty in tying the shoe laces while sitting on a chair? 1

Ans. Lower body flexibility/ flexibility.

Q8 What is hypertrophy of muscles? 1

Ans. Increase in number of muscle fibres and size of muscle components resulting into enlargement of skeletal muscles.

Q9 What is contusion? 1

Ans. A soft tissue injury in which blood vessels in the muscles are broken and internal bleeding may occur on the injured part generally caused by direct hit with blunt object.

Q10 Define Friction and name its types. (½ + ½ = 1)

Ans. The force that develops at the surfaces of contact of two bodies and opposes their relative motion is called friction

- i. Static friction
- ii. Dynamic friction

Q11 What does the word “Coping strategies” mean, when talking about sports psychology? 1

Ans. The thoughts and the actions we usually use to deal with a threatening situation is called coping strategies

**OR**

Making conscious efforts to solve personal and inter personal problems and seeking to minimize or tolerate stress or conflict is coping strategies.

Q12 Write three differences between Intramurals and Extramurals. 3  
Ans.

<u><b>Intramurals</b></u>	<u><b>Extramurals</b></u>
1. Activities within the wall/compound of the campus	1. Activities outside the Campus
2. Activities are organized only for the members of the schools / colleges / institutions.	2. Activities are organized for more than two schools / colleges / institutions.
3. Provides ample opportunities for every member of the school/institution to	3. Only selected members participate in the extramural activities.

participate in the activities.	
4. It may not be played under fixed rules and regulations of the game.	4. Played under fixed rules and regulations of the game.
5. Specific skills, techniques strategies may not be required.	5. Required specific skills, techniques and tactics.
6. Objective is recreation or talent hunt	6. Objective is to enhance performance of individual or team
7. Example : Inter -house , Inter-class etc.	7. Example : Zonal , District ,State etc

(Any three differences; 1 mark each)

Q13 The river rafting belt of River Ganga in Uttarakhand near Rishikesh is a popular venue among adventure-lovers and thousands of National and International tourists visit every year. It helps a lot in generating revenue and developing state's economy. But, use of the river for recreational purposes is impacting the river environment negatively.

An important social survey conducted recently found water pollution, loss of vegetation, cultural degradation and displacement of wildlife, resulting directly due to rafting and camping activities.

Despite there being rules and regulations to maintain the holy river and its surroundings, violation of these norms is regularly happening, due to which there is great threat to the ecology and the river environment.

Answer the following questions.

(1) What are the threats posed to the River Ganga due to Commercial River rafting and camping? ( ½ + ½ = 1)

Ans.

- Water pollution
- Loss of vegetation
- Cultural degradation
- Displacement of wild life
- Disturbance to ecological system (Any two)

(2) What values do you learn from the above passage? ( ½ + ½ = 1)

Ans.

- Eco friendly



- Significance of nature
- Respect and protect nature
- Conservation of natural resources
- Maintain the eco system. (Any two)

(3) What measures will you suggest to improve this environment? ( $\frac{1}{2} + \frac{1}{2} = 1$ )

Ans.

- Do not pollute the water bodies with human or other manmade wastes.
  - Do not disturb the wildlife habitat.
  - Do not cut trees , plants , herbs and shrubs
  - Do not throw non- biodegradable items.
  - Do not create noise / sound pollution or Air pollution. (Any two)
- ( Any other relevant answer)

Q14 What is Osteoporosis ? Explain factors, those lead to Osteoporosis in women. (1+2=3)

Ans. Osteoporosis is weakening of the bones due to the loss of bone density

Factors those lead to Osteoporosis in women :

- Insufficient calcium in diet
- Lack of Vitamin D
- Sedentary life style.
- Side effects of medication
- Thyroid condition
- Due to the menstrual dysfunctioning in women.
- Eating disorders like anorexia bulimia/ poor nutrition

(Give one mark for each explanation, Any two)

Q15 Write a detail note on Harvard Step Test. 3

Ans Harvard Step Test was developed by Brouha in 1943. It measures the cardiovascular fitness or Aerobic fitness by checking the recovery pulse rate. In this test an athlete stands in front of a box or bench which is 16 inches (female) to 20 inches (male) in height and steps up and down for 5 minutes at a rate of 30 steps/ minute. The pulse rate is counted 1- 1 ½ minutes, 2- 2 ½ minutes and 3 – 3 ½ minutes immediately after the test is administrated.

The fitness Index score is calculated by a simple formula:

$$\frac{100 \times \text{test duration in seconds}}{2 \times (\text{sum of the heart beats taken in the recovery period})}$$

Q16 What is projectile? Explain any three factors that affect a projectile trajectory. (1+2=3)

Ans. An object thrown into the air at any angle against the action of gravity is called projectile.

Factors affecting projectile Trajectory:

- Angle of projectile- the angle at which it is projected.
- Projection and landing surface relation.
- Initial velocity
- Gravity
- Spin
- Air resistance

(Explain any two points in second part)

Q17 What are the different dimensions of personality? Write in brief about any two.

Ans. The dimensions of personality are as follows: - (1+2=3)

- Physical dimension
- Mental dimension
- Social dimension
- Emotional dimension

(Give one mark for listing the dimensions of personality and any two to be explained-2 marks)

Q18 What is Fartlek Training? Write in brief. (1+2=3)

Ans.

- Gosta Holmer developed Fartlek training in 1937.
- Fartlek training method is used for developing endurance
- It is a combination of Aerobic and Anaerobic / Continuous and interval training.
- Fartlek is derived from Swedish word which means 'speed play'
- Athletes speed or pace is not preplanned and is decided according to the surroundings
- Self discipline is most important while undertaking the training.
- The range of heart beat should be 140 to 180 / minute
- Example

Jogging, slow running – 5 to 10 minutes

Steady, hard running – 1.5 to 2.5/ km

Rapid walking – 5 minutes

Sprints for about 50 to 60mts

Full speed up hill running for 175 to 200 mts

Free running / easy running

Fast pace/ minute

(Relevant information may be considered)

Q19 What is Endurance? Explain its types. (1+2=3)

Ans. The ability to sustain a physical activity over longer period of time resisting fatigue is called Endurance

a) **Endurance according to Nature of activity**

- Basic Endurance
- General Endurance
- Specific Endurance

b) **Endurance according to duration of activity**

- Long term Endurance
- Medium term Endurance
- Short term Endurance
- (please consider Speed Endurance and Strength Endurance also )  
(Explain any two of them)

Q20 What do you mean by 'Healthy-Weight' Explain the methods to control 'Healthy Body Weight to lead healthful-living'. (1+4=5)

Ans. Healthy weight is that body weight which allows an individual to lead a healthy life without any risk of diseases.

The healthy weight is known with the use of height and weight chart or calculates the BMI using the height, weight data.

**Method to control 'Healthy Body Weight'**

- Set appropriate goal
- Monitor the calorie intake.
- Health is more important than losing weight
- Healthy life style
- Regular physical exercise
- Pranayam
- Balance diet
- Avoid skipping meals.

(Any four to be explained in second part, if only points mentioned give ½ marks)

Q21 What are the causes of 'Flat-Foot' and 'Knock-Knees'? Suggest physical Activities as corrective measures for these deformities. (1+1+1 ½ + 1 ½ =5)

Ans. Cause of flat foot

- Genetic

- Weak muscles
- Over weight
- Improper foot wear
- Carrying heavy weight
- Forcing child to stand up at very early stage.

Cause of Knock knee

- Chronic illness
- Deficiency of calcium, vitamin D
- Mal nutrition
- Flat foot
- Carrying heavy weight at early age

(Any two causes for each deformity; give ½ marks for each)

Corrective measures for flat foot

- Walking on heels
- Walking on toes
- Rope skipping
- Jumping on toes
- Perform vajrasan, Tada asana
- Picking pebbles by toes
- Running on inclined plane / Stairs
- Cycling

Corrective measures for knock knees

- Horse riding
- Kicking football by instep kick
- Putting a pillow between the knees
- Padmasan , Gomukhasana
- Walking on inner side of the foot.

(Any three corrective measures for each deformity and give ½ marks for each)

Q22 Exercises have numerous physiological and physical benefits on children. Explain in detail. (5)

Ans. Physical Benefits:

- Good Motor development
- Posture alignment and good body image , improves physical appearance
- Reduces fatigue
- Increases alertness

- Weight management, prevents obesity
- Increases bone density and prevent from osteoarthritis
- Tolerance of hot and cold climatic conditions.
- Improves muscle Tone and minimizes the risk of injuries
- Improves neuromuscular co- ordination.

**Physiological Benefits:**

- Stronger immunity, reduces the chances of diseases
- Increase lactic acid tolerance
- Increase in size of fibres and connective tissues
- More blood supply
- Density of blood vessels increases
- Myoglobin increases.
- Oxidation of carbohydrate increases
- Improves muscle composition

(Any 5 points to be explained)

Q23 What do you mean by 'Oxygen-Intake' and 'Oxygen-Uptake'? Explain the effects of exercise on Respiratory system. (1+1+3=5)

Ans. **Oxygen intake:**

The amount of oxygen intake by an athlete from the atmosphere is called oxygen intake. It depend upon lungs size, strength of muscles and number of alveoli

**Oxygen uptake:**

The amount of oxygen which can be absorbed and consumed by the working muscles from the blood is called oxygen uptake

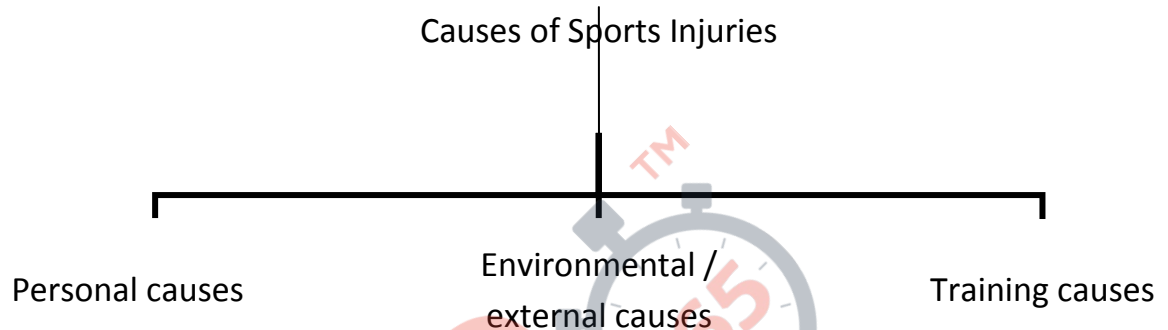
**Effect of exercise on respiratory system:**

- Increase depth of respiration
- Decrease rate of respiration
- Improve vital capacity
- Improve tidal volume capacity
- Increase pulmonary diffusion
- Supply more O<sub>2</sub> to muscles
- Strengthen the respiratory muscles
- Unused alveoli become active
- Avoid second wind with strong will power
- Faster recovery rate
- Increases residual air volume

- Increase size of lungs and chest
  - Maximum minute ventilation increased
  - Strengthens diaphragm muscles
- (Any three to be explained in second part; give 1 mark to each explanation)

Q24 What are the causes of ‘Sports-Injuries’? How Sports-Injuries can be prevented?  
Explain briefly. (2 + 3 =5)

Ans.



**Personal causes**

- Improper warm up –and cool- down
- Not following the rules and regulation.
- Protective clothing and equipment
- Knowing the limits
- Improper rest and relaxation
- Healing previous injury or inadequate rehabilitation
- Lack of conditioning
- Drug abuse.

**Environmental / external causes**

- Improper ground or poorly maintained facilities
- Extreme cold or heat
- Inadequate first – aid care
- Expectation of spectators
- Lack of medical check- up
- Improper diet

**Training causes**

- Without considering individual differences
- Lack of proper supervision

- Wrong method of training /poor coaching
- Lack of Systematic and scientific training
- Lack of psychological preparation.
- Improper load and recovery

**Prevention of Sports Injuries**

- Overall conditioning
- Pre participation physical examination / medical check-up
- Coaching under expert trainer/ physio/ coach
- Stress on proper physical fitness.
- Balance diet
- Acclimatization with environment/ coaching according to climatic conditions
- Training according to periodisation
- Intake of sufficient fluid
- Adequate clothing and equipments
- Standardized play field/ court
- Documentation of injuries
- Knowledge of First aid.
- Protective sport gears.

Q25 What is the difference between Running and Walking? Explain mechanical Analysis of Running'. (2+3)

Ans.

<b><u>Running</u></b>	<b><u>Walking</u></b>
<ul style="list-style-type: none"><li>• Running is process in which both feet are in the air at one point of time</li><li>• Double swing phase</li><li>• Movement in the limbs is faster</li><li>• Range of motion is greater</li><li>• Duration of swing phase is longer</li></ul>	<ul style="list-style-type: none"><li>• Walking is a process in which atleast one foot remains in contact with the ground</li><li>• Single swing phase</li><li>• Movement in the limbs is slower</li><li>• Range of motion is less</li><li>• Duration of stance phase is longer</li></ul>

(Any two differences)

**Mechanical analysis of running**

1. Stance phase
  - Initial contact stage
  - Absorption stage
  - Mid stance stage
  - Propulsive stage
2. Swing phase

Q26 What is 'Kraus-Weber-Test'? Explain the administration of Kraus-Weber test in detail. (1+4=5)

Ans.

Dr. Harns Kraus and Dr. Sonja Weber developed the Kraus Weber test in 1950's.

Kraus Weber test is used to measure the general muscular fitness of an individual.

It helps to measure the strength and flexibility of muscles.

This test consists of 6 items, and each item is administered by a score 0-10.

**Administration of test**

Test no. 1: Strength of Abdominal and Psoas Muscles (Sit ups)

Test no. 2: Strength of Abdominal minus Psoas Muscles (bends knees sit ups)

Test no. 3: Strength of Psoas and lower Abdominal Muscles: - lie supine position raise the feet 10 inches above ground and hold for 10 counts

Test no. 4: Strength of Upper back Muscles: - lie prone lift upper body and hold for 10 counts.

Test no. 5: Strength of Lower back Muscles: - lie prone position – lift the lower body- hold for 10 counts.

Test no. 6: Floor touch Test–Flexibility.