




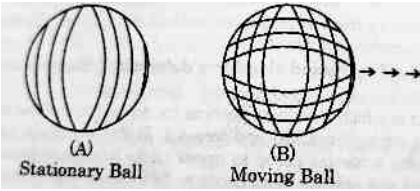
Time: 3 hrs.


M.M.: 70

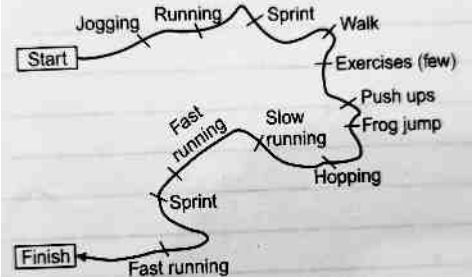

**General Instructions:-**

- I. The question paper consists of 5 sections and 34 Questions.
- II. Section A consists of questions 1-18 carrying 1 mark each and is a multiple choice question. All questions are compulsory.
- III. Sections B consist of questions 19-21 carrying 4 marks each and case studies. There is internal choice available.
- IV. Sections C consist of questions 22-26 carrying 2 marks each and are very short answer type and should not exceed 60-90 words.
- V. Sections D consist of questions 27-31 carrying 3 marks each and are short answer type and should not exceed 100-150 words.
- VI. Section E consists of Question 32-34 carrying 5 marks each and are long answer type and should not exceed 200-300 words.

Q. No.	Questions	Marks
	<b>Section -A</b>	1
1.	Identify the odd one:  a.4. b.3 c.2. d. 1	1
2.	Given below are two statements, one of which is labelled as Assertion (A) and the other is labelled as Reason (R). <b>Assertion (A):</b> Explosive strength is a combination of strength and speed abilities. <b>Reason (R):</b> It is used in swimming, long distance races and cycling events. a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A) b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A) c. Assertion (A) is true, but Reason (R) is false d. Assertion (A) is false, but Reason (R) is true	1
3.	Which of the following is an advantage of doing isokinetic exercise? a. They strengthen the muscles throughout their range of motion b. They can be performed anywhere and require no special equipment. c. They are simple to perform and do not require coaching d. They develop both explosive strength and strength endurance	1
4.	Given below are the two statements labelled Assertion (A) and Reason (R).	1

	<p><b>Assertion (A):</b> Aggression is part of human behaviour and is necessary for an individual to live and struggle for higher achievements.</p> <p><b>Reason (R):</b> Aggression is inevitable and inseparable in sport activities. In the context of the above two statements, which one of the following is correct?</p> <p>(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.</p>	
5.	<p>What is the formula to divide an odd number of teams in the upper half for a knockout fixture?</p> <p>a. <math>(N + 1)/2</math>    b. <math>(N-1) /2</math>    c. <math>N(N-1)/2</math>.    d. <math>N(N+1)/2</math></p>	1
6.	<p>The first Special Olympics Games were held in:</p> <p>a. New York.    b. Paris    c. Chicago.    d. Washington DC</p>	1
7.	<p>Johnson-Metheny Test battery does not consist of motor stunts.</p> <p>a. Front Roll.    b. Back Roll    c. Side Roll.    d. Jumping Full-Turns</p>	1
8.	<p>When the sum of forces acting upon the object and sum of the movements acting upon the body are both equal to zero then the body is said to be in:</p> <p>a. equilibrium.    b. static equilibrium          c. dynamic equilibrium    d. None of these</p>	1
9.	<p>Which is not a long term effect of exercise on the muscular system?</p> <p>a. Increase in lactic acid tolerance          b. Increase in muscle size          c. Increase in myoglobin storage          d. Increase in muscle temperature</p>	1
10.	<p>Given below are two statements, one of which is labelled as Assertion (A) and the other is labelled as Reason (R).</p> <p><b>Assertion (A):</b> Fartlek training method was developed by Gosta Holmer in 1930's.  <b>Reason (R):</b> Fartlek training method lays emphasis on both aerobic and anaerobic systems.</p> <p>a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)          b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A)          c. Assertion (A) is true, but Reason (R) is false          d. Assertion (A) is false, but Reason (R) is true</p>	1
11.	<p>Which of these is a type of endurance?</p> <p>a. Static.    b. Dynamic    c. Specific.    d. Relative</p>	1
12.	<p>The amount of blood pumped out by each side of the heart in 1 minute is known as:</p> <p>a. blood pressure    b. cardiac output    c. blood volume.    d. oxygen intake</p>	1
13.	<p>Study the pictures given below</p>  <p>(A) Stationary Ball    (B) Moving Ball</p> <p>Which law of motion will be applied to initiate motion of the ball as depicted in the illustration (A)</p>	1

	a)First law    b) Second Law    c) Third Law    d) None of these																																																																	
14.	Match List-I with List-II and select the correct answer from the codes given below: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">List-I</th> <th colspan="4" style="text-align: center;">List-II</th> </tr> </thead> <tbody> <tr> <td style="width: 25%;">A. Extraversion</td> <td style="width: 25%;"></td> <td style="width: 25%;">(i) Enthusiasm</td> <td style="width: 25%;"></td> <td style="width: 25%;">(i) Enthusiasm</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>B. Conscientiousness</td> <td></td> <td>(ii) Responsible</td> <td></td> <td>(ii) Responsible</td> <td></td> <td></td> <td></td> </tr> <tr> <td>C. Agreeableness</td> <td></td> <td>(iii) Compassionate behaviour</td> <td></td> <td>(iii) Compassionate behaviour</td> <td></td> <td></td> <td></td> </tr> <tr> <td>D. Neuroticism</td> <td></td> <td>(iv) Emotional Stability</td> <td></td> <td>(iv) Emotional Stability</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">A   B   C   D</td> <td></td> <td style="text-align: center;">A   B   C   D</td> <td></td> <td style="text-align: center;">A   B   C   D</td> <td></td> <td style="text-align: center;">A   B   C   D</td> <td></td> </tr> <tr> <td>a. (i)   (ii)   (iii)   (iv)</td> <td></td> <td>b. (iv)   (iii)   (ii)   (i)</td> <td></td> <td>b. (iv)   (iii)   (ii)   (i)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>c. (iii)   (iv)   (ii)   (i)</td> <td></td> <td>d. (ii)   (iii)   (iv)   (i)</td> <td></td> <td>d. (ii)   (iii)   (iv)   (i)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	List-I				List-II				A. Extraversion		(i) Enthusiasm		(i) Enthusiasm				B. Conscientiousness		(ii) Responsible		(ii) Responsible				C. Agreeableness		(iii) Compassionate behaviour		(iii) Compassionate behaviour				D. Neuroticism		(iv) Emotional Stability		(iv) Emotional Stability				A   B   C   D		A   B   C   D		A   B   C   D		A   B   C   D		a. (i)   (ii)   (iii)   (iv)		b. (iv)   (iii)   (ii)   (i)		b. (iv)   (iii)   (ii)   (i)				c. (iii)   (iv)   (ii)   (i)		d. (ii)   (iii)   (iv)   (i)		d. (ii)   (iii)   (iv)   (i)				1
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	(i)..... is recommended to check Mr. Balachandran's fitness. (ii)..... series of tests are prescribed in the fitness test for Mr. Balachandran? (iii) The 8 foot up and Go test, as shown in the picture is performed to assess..... (iv) Chair stand test is used for..... strength. Or Rikli and Jones developed various test for senior citizens in.....																																																																	

20	 <p>(i) From the given picture, it is identified as ..... training method.  (ii) This training method was developed by.....  (iii) The above training method helps in increasing the .....  (iv) In the above training method, ..... plays an important role.  Or  The Swedish word meaning 'speed play' is</p>	4
21	<p>Below given is the details of different types of vitamins required for our body:</p>  <p>i) The vitamins and minerals are collectively known as..... foods.  (ii) Fat soluble vitamins are.....  (iii) Which vitamins were consumed the most during covid?  a. Vitamin C and D    b. Vitamin B and C  c. Vitamin A and B    d. Vitamin B and D  (iv) Which Vitamin was discovered by Dr. McCollum?</p>	4
Section C		
22	Elaborate the effects of exercise on our heart.	2
23	Explain briefly the two types of aggression in sports.	2
24	Differentiate between locomotor ability and acceleration ability.	2
25	Explain any two types of bone injury.	2
26	<p>Explain the procedure of a six minute walk test.  Or  Fats are derived from two sources. Name them. Give two examples of each source.</p>	2
Section D		
		3
27	Write in detail the aims and objectives of the Paralympic Committee.	3
28	Write briefly about protein as an essential component of diet.	3
29	Your school is organising 'Run for Unity', explain the responsibilities of the accreditation, technical and finance committee.	3

30	Write a detailed note on mental imagery and goal setting.	3
31	Discuss in detail short-term effects of exercise on the respiratory system. Or Suggest exercises as corrective measures for Kyphosis and Bow legs	
	Section E	
		5
32	Describe the procedure for performing Gomukhasana along with its benefits and contraindications.	5
33	With the help of suitable examples, discuss the application of Newton's Laws of Motion in sports	5
34	Define flexibility and explain the methods of flexibility development. Or What is a projectile? Explain the factors affecting projectile trajectory with suitable examples	

O.S.D.A.V. Public School Kaithal  
Pre Board (2025)  
Set A  
Physical Education  
Answer Key/Marking Scheme

Question	Answer	Mark Distribution
	Section A	
1	c. 2	1
2	c. Assertion (A) is true, but Reason (R) is false.	1
3	d. They develop both explosive strength and strength endurance	1
4	b. Both (A) and (R) are true, but (R) is not the correct explanation of (A).	1
5	a ( N + 1)÷2	1
6	c. Chicago	1
7	c. Side Roll	1
8	b. static equilibrium	1
9	d. Increase in muscle temperature.	1
10	b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion	1
11	c. Specific	1
12	b. cardiac output	1
13	a. First law	1
14	a. A-(i), B-(ii), C-(iii), D-(iv)	1
15	a. 1:2:1	1
16	d. 1977	1
17	d. Anorexia Nervosa	1
18	c. Overweight	1

Section B		
19	(a) Rikli and Johns Test (b) 6 (c) agility (d) Lower body strength OR 2001	4x1=4
20	(a) fartlek (b) Gosta Holmer (c) endurance (d) self-discipline Or (A) Fartlek	4x1=4
21	(a) protective (b) Vitamin A,D, E and K (c) a. Vitamin C and D. (d) Vitamin A	4x1=4
Section C		
22	The effects of exercise on our heart are as follows: (i) Long-term aerobic exercises increase the size and strength of our heart, especially during moderately to vigorously intense exercise.  (ii) Exercise makes the body work harder and therefore muscles require more oxygen to continue to work effectively. As a result, the heart rate increases.	2
23	Types of Aggression in Sports: There are two types o. aggression in sports:  (i) Hostile or Reactive Aggression: In hostile aggression, the main aim is to cause harm or injury to the opponent. It is usually an unplanned, impulsive reaction towards a player who may have become a threat in achieving the goal.  (ii) Instrumental or Channelled Aggression: In instrumental aggression, the main aim is displaying aggressive behaviour in order to achieve a goal	2
24	The difference between locomotor ability and acceleration ability are as follows:	2

	(Table)	
25	<p>(i) Greenstick Fracture: A greenstick fracture occurs when a bone bends and cracks, instead of breaking completely into separate pieces.</p> <p>(ii) Comminuted Fracture: Comminuted fracture is characterised by the breaking of a bone into several small pieces and is the result of high velocity injuries, such as car accidents, falls from a height, etc.</p>	2
26	<p>This test measures the aerobic endurance of the senior citizens. The participant is asked to walk for six minutes around the 50 yard rectangular area, with cones placed at regular intervals to indicate distance covered. The aim of this test is to walk as quickly as possible for six minutes to cover as much ground as possible. Measure the total distance covered in six minutes to the nearest metre.</p> <p>Or</p> <p>The two sources of fats are:</p> <p>(i) Animals: Ghee, butter, curd, eggs, milk and meat.</p> <p>(ii) Vegetables: Coconut, soybean, mustard and groundnut</p>	2
	Section D	
27	<p>The aims and objectives of the Paralympic Committee are as follows:</p> <p>(i) To promote and contribute to the development of sport opportunities and competitions, from the start to elite level.</p> <p>(ii) To develop opportunities for athletes with a severe disability in sport at all levels and in all structures.</p> <p>(iii) To promote the self-governance of each Paralympic sport federation as an integral part of the national sport movement, whilst at all times safeguarding and preserving its own identity.</p> <p>(iv) To ensure the spirit of fair play prevails, the health risk of the athletes is managed and fundamental ethical principles are upheld.</p>	3



	(v) To identify disabled athletes throughout India imparting necessary training to them or preparing them to take part in State, National and International Sports meets.	
28	<p>Proteins is a compound which contains the elements namely carbon, hydrogen, oxygen, nitrogen and sulphur. They are known as the building blocks of the body as they are needed for growth, development and repair of tissues. They are the main constituent of antibodies that protect our body against pathogens, thus preventing infections.</p> <p>The sources of protein include grains, legumes, pulses, soybeans whereas we can also get proteins from the animal sources such as meat, eggs, milk etc.</p>	3
29	<p>Responsibilities of Accreditation Committee</p> <p>(i) Accreditation Committee: It is overall responsible for organising the 'Run for Unity' event. It makes sure that ethics, rules and regulations are followed throughout the event. It is also responsible for registering the participants and managing the production and distribution of the validation passes.</p> <p>(ii) Technical Committee: This committee responsible for ensuring that the field of play safe for competitors and officials. It also ensures the quality of equipment's.</p> <p>(iii) Finance Committee: This committee is assigned to make the budget for the event and handle the expenses</p>	3
30	<p>(i) Mental imagery involves the athlete imagining themselves in an environment performing a specific activity using their senses (sight, hear, feel and smell). The images could have the athlete performing successfully and feeling satisfied with their performance. Mental imagery can be helpful in:</p> <p>(a) developing self-confidence and motivating the athlete</p> <p>(b) reducing negative thoughts and removing stress-related reactions</p> <p>(c) developing pre-competition and competition strategies</p> <p>(d) refocussing or concentrating on a particular skill</p>	3

	<p>(e) promoting rest, recovery and recuperation.</p> <p>(ii) Goal Setting: Goal setting is the process of systematically planning ways to achieve specific accomplishments within a certain amount of time. Research suggests that goals should be specific, measurable, difficult but attainable, time-based, and written down. Each long- term goal should also have a series of short- term goals that progress in difficulty. So, the sportsperson should be encouraged to set few ambitious but achievable long-term goals</p>	
31	<p>Short term effects of exercise in respiratory system are as follows:</p> <p>(i) Respiratory Rate Increases: Our body requires more oxygen during exercise, and to meet this increased demand, the respiratory rate (breathing rate) increases. The normal respiration rate for an adult at rest is 12 to 20 breaths per minute but during exercises it increases to 40 bearsl per minutes.</p> <p>(ii) Tidal Volume Increases: The amount of air inhaled and exhaled in one breath is known as tidal volume. Tidal volume increases as a result of exercise to take in more oxygen and remove carbon dioxide from our body.</p> <p>(iii) Rate of Exchange of Gas Increases: Regular exercise increases the rate of exchange of gas in lungs.</p> <p>Or</p> <p>Corrective Measures for Kyphosis:</p> <p>(i) Perform Dhanurasana regularly.</p> <p>(ii) Bend your head backward in standing position.</p> <p>(iii) Foam roll is used to release tension in the thoracic region.</p> <p>(iv) Hold arms at the shoulder level and bend your elbows.</p> <p>Corrective Measures for Bow Legs:</p> <p>(i) Balanced diet should be taken.</p> <p>(ii) Vitamin D should be taken in required amount.</p> <p>(iii) It can be corrected by walking on the inner edge of the feet.</p> <p>(iv) One should walk by bending the toes inward.</p> <p>(v) Use of braces and modified shoes</p>	3
	Section E	
32	<p>Procedure of Gomukhasana:</p> <p>(i) Siit erect on the ground with your legs stretched out in front of you.</p> <p>(ii) Now gently bend your left leg, and place it under your right hip.</p> <p>(iii) Fold your right leg and place it over your left thigh.</p>	5

	<p>(iv) Place both your knees close together as they are stacked one on top of the other.</p> <p>(v) Gently fold your left arm and place it behind your back.</p> <p>(vi) Take your right arm over your right shoulder, and stretch it as much as you can until it reaches your left hand. With practice, you will be able to not just reach, but also catch your left hand.</p> <p>(vii) Keep the trunk erect, expand your chest, and lean slightly back.</p> <p>(viii) Hold this pose for as long as you are comfortable, as you breathe slowly and deeply. Concentrate on your breathing.</p> <p>Benefits of Gomukhasana:</p> <p>(i) It helps to stretch and strengthen the muscles of the ankles, hips and thighs, shoulders, triceps, inner armpits and chest.</p> <p>(ii) Regular practice of this asana aids in the treatment of sciatica.</p> <p>(iii) It enhances the working of the kidneys by stimulating it, thus helping those suffering from diabetes.</p> <p>(iv) Practising this asana regularly can reduce stress and anxiety.</p> <p>Contraindications of Gomukhasana:</p> <p>(i) Do not attempt this asana in case of neck, knee hip and shoulder injury.</p> <p>(ii) Avoid this asana in case of migraine or spinal disorders.</p>	
33	<p>Application of Newton's Law of Motion in Sports:</p> <p>(i) First Law: Tennis: A tennis ball will remain at rest in the court until the unbalanced force of player's hand picks it up and moves it. A tennis ball hit by the player will stay in motion until it hits the unbalanced force of opposing player's racquet.</p> <p>(ii) Second Law: Baseball: A baseball hit with a swinging bat will accelerate more than a baseball that is bunted because the swinging bat has more force. If equal force is applied to the baseball (more mass) and t-ball (less mass), then t-ball will accelerate more.</p> <p>(iii) Third Law: Soccer: When a soccer ball hits a goalie's hand, the action is the ball hitting the goalie's hand and the reaction force is the hand hitting the ball in the opposite direction.</p>	5
34	<p>Flexibility is the range of movement. It is the ability of joints to move in the maximum range. Developing methods of flexibility are:</p>	5

(i) Ballistic Method: It is the oldest form of doing stretching exercises. This method involves jerk in movement. A joint or muscle is stretched with just rhythmic actions or movements around a joint. Before performing such exercise, appropriate warm-up is essential.

(ii) Slow-Stretching Method: In this method, the muscle or joint involved is stretched to the maximum possible limit using slow movement. It has an advantage over the ballistic method as it minimises the chances of overstretching of the muscle or joint, preventing injury to the tissue.

(iii) Slow-Stretching and Holding Method: It is the extension of slow-stretching method. Here, the muscle is stretched to its maximum limit and then the position is held for few seconds before returning to the original position.

(iv) Post-Isometric Stretching: This method of flexibility development is based on the principle of proprioceptive neuromuscular facilitation. In this procedure, the muscle is first contracted maximally for 6-8 seconds using isometric method. Then the muscle is gradually stretched to its maximum limit and held in this position for 8-10 seconds. This process is to be repeated 4 to 8 times for each muscle group.

Or

Any object thrown into the space either horizontally or at an acute angle under the action of gravity is called a projectile.

Factors affecting Projectile Trajectory:

i) Angle of Projection: A projectile when released at an angle of  $45^\circ$  makes a parabolic path and covers the maximum distance, as compared to when it is released at any other angle (the initial velocity having been kept constant).

(ii) Initial Velocity: The distance traversed by the projectile also depends upon the velocity by which it is thrown. If the velocity is more, it would cover greater distance as compared to when thrown by a lesser velocity.

	<p>(iii) Gravity: The trajectory of the projectile is also affected by the gravitational pull of the earth. It directly depends upon the weight of the object thrown. The greater the weight of the object, the greater would be the gravitational resistance or pull.</p>	
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(iv) Air Resistance: When a projectile moves through the air, it is slowed down by air resistance. Air resistance decreases the horizontal component of a projectile.

(v) Spin: The spin also affects the flight of the projectile. The amount and direction of spin acting on a projectile directly affects the distance covered or travelled by a projectile.



OSDAV Public School, Kaithal  
Pre Board Exam 2025  
Class: XII  
Subject: Physical Education

SET:B

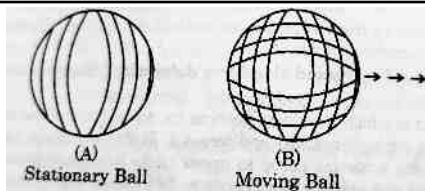
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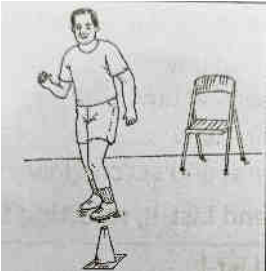
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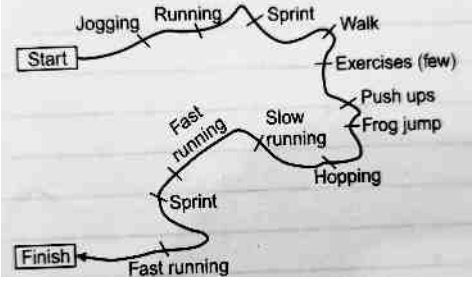
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3.	The first World Winter Special Olympics Games were held in: a. 1962.    b. 1987    c. 1960.    d. 1977	1																																																																
4.	What is the ratio of carbon, hydrogen and oxygen in carbohydrates? a. 1:2:1.    b. 2:2:1    c. 2:1:1.    d. 1:2:2	1																																																																
5.	Match List-I with List-II and select the correct answer from the codes given below: <table border="1" style="width: 100%;"><thead><tr><th colspan="4">List-I</th><th colspan="4">List-II</th></tr></thead><tbody><tr><td>A. Extraversion</td><td></td><td></td><td></td><td>(i) Enthusiasm</td><td></td><td></td><td></td></tr><tr><td>B. Conscientiousness</td><td></td><td></td><td></td><td>(ii) Responsible</td><td></td><td></td><td></td></tr><tr><td>C. Agreeableness</td><td></td><td></td><td></td><td>(iii) Compassionate behaviour</td><td></td><td></td><td></td></tr><tr><td>D. Neuroticism</td><td></td><td></td><td></td><td>(iv) Emotional Stability</td><td></td><td></td><td></td></tr><tr><td>A    B    C    D</td><td></td><td></td><td></td><td>A    B    C    D</td><td></td><td></td><td></td></tr><tr><td>a. (i)    (ii)    (iii)    (iv)</td><td></td><td></td><td></td><td>b. (iv)    (iii)    (ii)    (i)</td><td></td><td></td><td></td></tr><tr><td>c. (iii)    (iv)    (ii)    (i)</td><td></td><td></td><td></td><td>d. (ii)    (iii)    (iv)    (i)</td><td></td><td></td><td></td></tr></tbody></table>	List-I				List-II				A. Extraversion				(i) Enthusiasm				B. Conscientiousness				(ii) Responsible				C. Agreeableness				(iii) Compassionate behaviour				D. Neuroticism				(iv) Emotional Stability				A    B    C    D				A    B    C    D				a. (i)    (ii)    (iii)    (iv)				b. (iv)    (iii)    (ii)    (i)				c. (iii)    (iv)    (ii)    (i)				d. (ii)    (iii)    (iv)    (i)				1
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6.	Study the pictures given below	1																																																																




	<p>Which law of motion will be applied to initiate motion of the ball as depicted in the illustration (A)</p> <p>a) First law    b) Second Law    c) Third Law    d) None of these</p>	
7.	The amount of blood pumped out by each side of the heart in 1 minute is known as: a. blood pressure    b. cardiac output    c. blood volume.    d. oxygen intake	1
8.	Which of these is a type of endurance? a. Static.    b. Dynamic    c. Specific.    d. Relative	1
9.	<p>Given below are two statements, one of which is labelled as Assertion (A) and the other is labelled as Reason (R).</p> <p><b>Assertion (A):</b> Fartlek training method was developed by Gosta Holmer in 1930's.</p> <p><b>Reason (R):</b> Fartlek training method lays emphasis on both aerobic and anaerobic systems.</p> <p>a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)</p> <p>b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A)</p> <p>c. Assertion (A) is true, but Reason (R) is false</p> <p>d. Assertion (A) is false, but Reason (R) is true</p>	1
10.	Which is not a long term effect of exercise on the muscular system? a. Increase in lactic acid tolerance b. Increase in muscle size c. Increase in myoglobin storage d. Increase in muscle temperature	1
11.	When the sum of forces acting upon the object and sum of the movements acting upon the body are both equal to zero then the body is said to be in: a. equilibrium.    b. static equilibrium c. dynamic equilibrium    d. None of these	1
12.	Johnson-Metheny Test battery does not consist of motor stunts. a. Front Roll.    b. Back Roll    c. Side Roll.    d. Jumping Full-Turns	1
13.	The first Special Olympics Games were held in: a. New York.    b. Paris    c. Chicago.    d. Washington DC	1
14.	What is the formula to divide an odd number of teams in the upper half for a knockout fixture? a. $(N + 1)/2$ b. $(N-1) / 2$ c. $N(N-1)/2$ .    d. $N(N+1)/2$	1
15.	<p>Given below are the two statements labelled Assertion (A) and Reason (R).</p> <p><b>Assertion (A):</b> Aggression is part of human behaviour and is necessary for an individual to live and struggle for higher achievements.</p> <p><b>Reason (R):</b> Aggression is inevitable and inseparable in sport activities. In the context of the above two statements, which one of the following is correct?</p> <p>(a) Both (A) and (R) are true and (R) is the correct explanation of (A).</p> <p>(b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).</p>	1

	(c) (A) is true, but (R) is false. (d) (A) is false, but (R) is true.	
16	Which of the following is an advantage of doing isokinetic exercise? a. They strengthen the muscles throughout their range of motion b. They can be performed anywhere and require no special equipment. c. They are simple to perform and do not require coaching d. They develop both explosive strength and strength endurance	1
17	Given below are two statements, one of which is labelled as Assertion (A) and the other is labelled as Reason (R). <b>Assertion (A):</b> Explosive strength is a combination of strength and speed abilities. <b>Reason (R):</b> It is used in swimming, long distance races and cycling events. a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A) b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A) c. Assertion (A) is true, but Reason (R) is false d. Assertion (A) is false, but Reason (R) is true	1
18	Identify the odd one:  a.4. b.3 c.2. d. 1	1
Section B		
19	Mr. Balachandran, aged 65 years worked as a civil engineer in a construction company. He had to walk and climb a lot as part of his job. After retirement, he settled with his son spending time with his grandchildren. Nowadays he is experiencing difficulty in doing certain chores which involve physical movement.  (i)..... is recommended to check Mr. Balachandran's fitness. (ii)..... series of tests are prescribed in the fitness test for Mr. Balachandran? (iii) The 8 foot up and Go test, as shown in the picture is performed to assess..... (iv) Chair stand test is used for..... strength. Or Rikli and Jones developed various test for senior citizens in.....	4



20	 <p>(i) From the given picture, it is identified as ..... training method.  (ii) This training method was developed by.....  (iii) The above training method helps in increasing the .....  (iv) In the above training method, ..... plays an important role.  Or  The Swedish word meaning 'speed play' is</p>	4
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21	<p>Below given is the details of different types of vitamins required for our body:</p>  <p>i) The vitamins and minerals are collectively known as..... foods.  (ii) Fat soluble vitamins are.....  (iii) Which vitamins were consumed the most during covid?  a. Vitamin C and D    b. Vitamin B and C  c. Vitamin A and B    d. Vitamin B and D  (iv) Which Vitamin was discovered by Dr. McCollum?</p>	4
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Section C

22	Elaborate the effects of exercise on our heart.	2
23	Explain briefly the two types of aggression in sports.	2
24	Differentiate between locomotor ability and acceleration ability.	2
25	Explain any two types of bone injury.	2
26	Explain the procedure of a six minute walk test. Or Fats are derived from two sources. Name them. Give two examples of each source.	2

Section D

		3
27	Write in detail the aims and objectives of the Paralympic Committee.	3
28	Write briefly about protein as an essential component of diet.	3
29	Your school is organising 'Run for Unity', explain the responsibilities of the accreditation, technical and finance committee.	3

30	Write a detailed note on mental imagery and goal setting.	3
31	Discuss in detail short-term effects of exercise on the respiratory system. Or Suggest exercises as corrective measures for Kyphosis and Bow legs	
	Section E	
		5
32	Describe the procedure for performing Gomukhasana along with its benefits and contraindications.	5
33	With the help of suitable examples, discuss the application of Newton's Laws of Motion in sports	5
34	Define flexibility and explain the methods of flexibility development. Or What is a projectile? Explain the factors affecting projectile trajectory with suitable examples	

O.S.D.A.V. Public School Kaithal  
Pre Board (2025)  
Set B  
Physical Education  
Answer Key/Marking Scheme

Question	Answer	Mark Distribution
	Section A	
1	c. Overweight	1
2	d. Anorexia Nervosa	1
3	d. 1977	1
4	a. 1:2:1	1
5	a. A-(i), B-(ii), C-(iii), D-(iv)	1
6	a. First law	1
7	b. cardiac output	1
8	c. Specific	1
9	b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion	1
10	d. Increase in muscle temperature.	1
11	b. static equilibrium	1
12	c. Side Roll	1
13	c. Chicago	1
14	a ( N + 1)÷2	1
15	b. Both (A) and (R) are true, but (R) is not the correct explanation of (A).	1
16	d. They develop both explosive strength and strength endurance	1
17	c. Assertion (A) is true, but Reason (R) is false.	1
18	c. 2	1

	Section B	
19	(a) Rikli and Johns Test (b) 6 (c) agility (d) Lower body strength OR 2001	4x1=4
20	(a) fartlek (b) Gosta Holmer (c) endurance (d) self-discipline Or (A) Fartlek	4x1=4
21	(a) protective (b) Vitamin A,D, E and K (c) a. Vitamin C and D. (d) Vitamin A	4x1=4
	Section C	
22	The effects of exercise on our heart are as follows: (i) Long-term aerobic exercises increase the size and strength of our heart, especially during moderately to vigorously intense exercise.  (ii) Exercise makes the body work harder and therefore muscles require more oxygen to continue to work effectively. As a result, the heart rate increases.	2
23	Types of Aggression in Sports: There are two types o. aggression in sports:  (i) Hostile or Reactive Aggression: In hostile aggression, the main aim is to cause harm or injury to the opponent. It is usually an unplanned, impulsive reaction towards a player who may have become a threat in achieving the goal.  (ii) Instrumental or Channelled Aggression: In instrumental aggression, the main aim is displaying aggressive behaviour in order to achieve a goal	2
24	The difference between locomotor ability and acceleration ability are as follows:	2

	(Table)	
25	<p>(i) Greenstick Fracture: A greenstick fracture occurs when a bone bends and cracks, instead of breaking completely into separate pieces.</p> <p>(ii) Comminuted Fracture: Comminuted fracture is characterised by the breaking of a bone into several small pieces and is the result of high velocity injuries, such as car accidents, falls from a height, etc.</p>	2
26	<p>This test measures the aerobic endurance of the senior citizens. The participant is asked to walk for six minutes around the 50 yard rectangular area, with cones placed at regular intervals to indicate distance covered. The aim of this test is to walk as quickly as possible for six minutes to cover as much ground as possible. Measure the total distance covered in six minutes to the nearest metre.</p> <p>Or</p> <p>The two sources of fats are:</p> <p>(i) Animals: Ghee, butter, curd, eggs, milk and meat.</p> <p>(ii) Vegetables: Coconut, soybean, mustard and groundnut</p>	2
	Section D	
27	<p>The aims and objectives of the Paralympic Committee are as follows:</p> <p>(i) To promote and contribute to the development of sport opportunities and competitions, from the start to elite level.</p> <p>(ii) To develop opportunities for athletes with a severe disability in sport at all levels and in all structures.</p> <p>(iii) To promote the self-governance of each Paralympic sport federation as an integral part of the national sport movement, whilst at all times safeguarding and preserving its own identity.</p> <p>(iv) To ensure the spirit of fair play prevails, the health risk of the athletes is managed and fundamental ethical principles are upheld.</p>	3

	(v) To identify disabled athletes throughout India imparting necessary training to them or preparing them to take part in State, National and International Sports meets.	
28	<p>Proteins is a compound which contains the elements namely carbon, hydrogen, oxygen, nitrogen and sulphur. They are known as the building blocks of the body as they are needed for growth, development and repair of tissues. They are the main constituent of antibodies that protect our body against pathogens, thus preventing infections.</p> <p>The sources of protein include grains, legumes, pulses, soybeans whereas we can also get proteins from the animal sources such as meat, eggs, milk etc.</p>	3
29	<p>Responsibilities of Accreditation Committee</p> <p>(i) Accreditation Committee: It is overall responsible for organising the 'Run for Unity' event. It makes sure that ethics, rules and regulations are followed throughout the event. It is also responsible for registering the participants and managing the production and distribution of the validation passes.</p> <p>(ii) Technical Committee: This committee responsible for ensuring that the field of play safe for competitors and officials. It also ensures the quality of equipment's.</p> <p>(iii) Finance Committee: This committee is assigned to make the budget for the event and handle the expenses</p>	3
30	<p>(i) Mental imagery involves the athlete imagining themselves in an environment performing a specific activity using their senses (sight, hear, feel and smell). The images could have the athlete performing successfully and feeling satisfied with their performance. Mental imagery can be helpful in:</p> <p>(a) developing self-confidence and motivating the athlete</p> <p>(b) reducing negative thoughts and removing stress-related reactions</p> <p>(c) developing pre-competition and competition strategies</p> <p>(d) refocussing or concentrating on a particular skill</p>	3

	<p>(e) promoting rest, recovery and recuperation.</p> <p>(ii) Goal Setting: Goal setting is the process of systematically planning ways to achieve specific accomplishments within a certain amount of time. Research suggests that goals should be specific, measurable, difficult but attainable, time-based, and written down. Each long- term goal should also have a series of short- term goals that progress in difficulty. So, the sportsperson should be encouraged to set few ambitious but achievable long-term goals</p>	
31	<p>Short term effects of exercise in respiratory system are as follows:</p> <p>(i) Respiratory Rate Increases: Our body requires more oxygen during exercise, and to meet this increased demand, the respiratory rate (breathing rate) increases. The normal respiration rate for an adult at rest is 12 to 20 breaths per minute but during exercises it increases to 40 bearsl per minutes.</p> <p>(ii) Tidal Volume Increases: The amount of air inhaled and exhaled in one breath is known as tidal volume. Tidal volume increases as a result of exercise to take in more oxygen and remove carbon dioxide from our body.</p> <p>(iii) Rate of Exchange of Gas Increases: Regular exercise increases the rate of exchange of gas in lungs.</p> <p>Or</p> <p>Corrective Measures for Kyphosis:</p> <p>(i) Perform Dhanurasana regularly.</p> <p>(ii) Bend your head backward in standing position.</p> <p>(iii) Foam roll is used to release tension in the thoracic region.</p> <p>(iv) Hold arms at the shoulder level and bend your elbows.</p> <p>Corrective Measures for Bow Legs:</p> <p>(i) Balanced diet should be taken.</p> <p>(ii) Vitamin D should be taken in required amount.</p> <p>(iii) It can be corrected by walking on the inner edge of the feet.</p> <p>(iv) One should walk by bending the toes inward.</p> <p>(v) Use of braces and modified shoes</p>	3
	Section E	
32	<p>Procedure of Gomukhasana:</p> <p>(i) Siit erect on the ground with your legs stretched out in front of you.</p> <p>(ii) Now gently bend your left leg, and place it under your right hip.</p> <p>(iii) Fold your right leg and place it over your left thigh.</p>	5

	<p>(iv) Place both your knees close together as they are stacked one on top of the other.</p> <p>(v) Gently fold your left arm and place it behind your back.</p> <p>(vi) Take your right arm over your right shoulder, and stretch it as much as you can until it reaches your left hand. With practice, you will be able to not just reach, but also catch your left hand.</p> <p>(vii) Keep the trunk erect, expand your chest, and lean slightly back.</p> <p>(viii) Hold this pose for as long as you are comfortable, as you breathe slowly and deeply. Concentrate on your breathing.</p> <p>Benefits of Gomukhasana:</p> <p>(i) It helps to stretch and strengthen the muscles of the ankles, hips and thighs, shoulders, triceps, inner armpits and chest.</p> <p>(ii) Regular practice of this asana aids in the treatment of sciatica.</p> <p>(iii) It enhances the working of the kidneys by stimulating it, thus helping those suffering from diabetes.</p> <p>(iv) Practising this asana regularly can reduce stress and anxiety.</p> <p>Contraindications of Gomukhasana:</p> <p>(i) Do not attempt this asana in case of neck, knee hip and shoulder injury.</p> <p>(ii) Avoid this asana in case of migraine or spinal disorders.</p>	
33	<p>Application of Newton's Law of Motion in Sports:</p> <p>(i) First Law: Tennis: A tennis ball will remain at rest in the court until the unbalanced force of player's hand picks it up and moves it. A tennis ball hit by the player will stay in motion until it hits the unbalanced force of opposing player's racquet.</p> <p>(ii) Second Law: Baseball: A baseball hit with a swinging bat will accelerate more than a baseball that is bunted because the swinging bat has more force. If equal force is applied to the baseball (more mass) and t-ball (less mass), then t-ball will accelerate more.</p> <p>(iii) Third Law: Soccer: When a soccer ball hits a goalie's hand, the action is the ball hitting the goalie's hand and the reaction force is the hand hitting the ball in the opposite direction.</p>	5
34	<p>Flexibility is the range of movement. It is the ability of joints to move in the maximum range. Developing methods of flexibility are:</p>	5



(i) Ballistic Method: It is the oldest form of doing stretching exercises. This method involves jerk in movement. A joint or muscle is stretched with just rhythmic actions or movements around a joint. Before performing such exercise, appropriate warm-up is essential.

(ii) Slow-Stretching Method: In this method, the muscle or joint involved is stretched to the maximum possible limit using slow movement. It has an advantage over the ballistic method as it minimises the chances of overstretching of the muscle or joint, preventing injury to the tissue.

(iii) Slow-Stretching and Holding Method: It is the extension of slow-stretching method. Here, the muscle is stretched to its maximum limit and then the position is held for few seconds before returning to the original position.

(iv) Post-Isometric Stretching: This method of flexibility development is based on the principle of proprioceptive neuromuscular facilitation. In this procedure, the muscle is first contracted maximally for 6-8 seconds using isometric method. Then the muscle is gradually stretched to its maximum limit and held in this position for 8-10 seconds. This process is to be repeated 4 to 8 times for each muscle group.

Or

Any object thrown into the space either horizontally or at an acute angle under the action of gravity is called a projectile.

Factors affecting Projectile Trajectory:

i) Angle of Projection: A projectile when released at an angle of  $45^\circ$  makes a parabolic path and covers the maximum distance, as compared to when it is released at any other angle (the initial velocity having been kept constant).

(ii) Initial Velocity: The distance traversed by the projectile also depends upon the velocity by which it is thrown. If the velocity is more, it would cover greater distance as compared to when thrown by a lesser velocity.

	<p>(iii) Gravity: The trajectory of the projectile is also affected by the gravitational pull of the earth. It directly depends upon the weight of the object thrown. The greater the weight of the object, the greater would be the gravitational resistance or pull.</p>	
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(iv) Air Resistance: When a projectile moves through the air, it is slowed down by air resistance. Air resistance decreases the horizontal component of a projectile.

(v) Spin: The spin also affects the flight of the projectile. The amount and direction of spin acting on a projectile directly affects the distance covered or travelled by a projectile.