



OSDAV Public School, Kaithal
December Exam 2024
Class: XII
Subject: Physical Education

SET:A

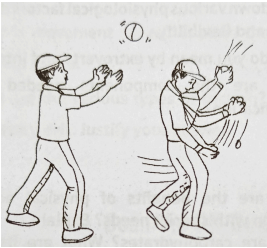
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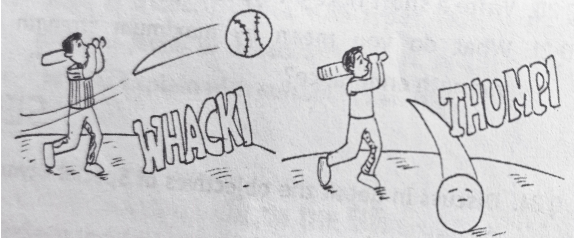

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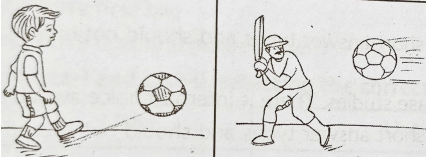
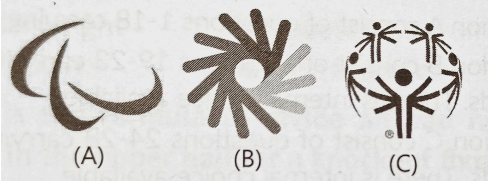
General Instructions:-

- 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
	Section -A	1
1.	Kyphosis is a deformity found in: a. shoulders. b. lumber region c thoracic region. d. hips	
2.	What is the height of the box used by boys in the Harvard step test? a. 16 inch. b. 18 inch c. 20 inch. d. 22 inch	1
3.	Psychological benefits of women participation in sports includes: a. cooperation. b. emotional control c. physical fitness. d communication	1
4.	The founder of Special Olympics was: a. Eunice Kennedy Shriver b. John F. Kennedy c. Lyndon B. Johnson d. Zurab Tsereteli	1
5.	Which fixture is also known as 'Berger system'? a. Knock-out fixture. b. Round robin fixture c. Combination fixture. d. Challenge tournament	1
6.	Logistics committee deals with: a. Accommodation. b. Transportation c. Medical Staff. d. All of these	1
7.	Which of the following asana should be performed for curing obesity? a. Surya Bhedana Pranayama b. Mandukasana c. Uttanpadasana d. Gomukhasana	1
8.	Aggression is displayed in sports through: a. assertion of views. b. use of abusive words c. walking away from the opponent d. strictly following the rules	1
9.	Given below are two statements, one of which is labeled as Assertion (A) and the other is labeled as Reason (R). Assertion (A): Micro nutrients are required in very small amounts.	1

	<p>Reason (R): Micro nutrients are extremely significant for normal functioning of the body.</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>											
10.	<p>Match the following vitamins with their functions:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">List-I</td> <td style="width: 50%;">List-II</td> </tr> <tr> <td>A. Vitamin K</td> <td>(i) Need for blood clotting</td> </tr> <tr> <td>B. Vitamin D</td> <td>(ii) For protection of cell wall</td> </tr> <tr> <td>C. Vitamin E</td> <td>(iii) For vision in dim light</td> </tr> <tr> <td>D. Vitamin A</td> <td>(iv) For Absorption of calcium and phosphorus</td> </tr> </table> <p>A B C D a (i) (iv) (iii) (ii) b.(i) (ii) (iii) (iv) c.(ii) (iv) (iii) (i) d.(i) (iv) (ii) (iii)</p>	List-I	List-II	A. Vitamin K	(i) Need for blood clotting	B. Vitamin D	(ii) For protection of cell wall	C. Vitamin E	(iii) For vision in dim light	D. Vitamin A	(iv) For Absorption of calcium and phosphorus	1
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B. Vitamin D	(ii) For protection of cell wall											
C. Vitamin E	(iii) For vision in dim light											
D. Vitamin A	(iv) For Absorption of calcium and phosphorus											
11.	<p>Identify the law of motion, shown in the illustration:</p>  <p>a. Law of inertia. b. Law of action and reaction c. Law of acceleration d. Both b. and c</p>	1										
12.	<p>Which of these is not a benefit of exercises related to cardiorespiratory fitness?</p> <p>a. Decreased resting heart rate b. Increased stroke volume c. Decreased heart size d. Increased cardiac output</p>	1										
13.	<p>Plank is an example of..... exercise.</p> <p>a. isotonic. b. isokinetic c. isometric . d. None of these</p>	1										
14.	<p>Q5. Given below are two statements, one of which is labeled as Assertion (A) and the other is labeled as Reason (R). Assertion (A): Long-term endurance is needed in sports activities lasting from 2 to 11 minutes. Reason (R): Sports activities such as marathon races require such type of endurance.</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										

15.	Which of these is a physiological factor determining flexibility? a. Internal environment. b. Age c. Joint structure. d. All of the above	1
16	An athlete performing a hammer throw is an example of which law of motion? a. Law of inertia. b. Law of acceleration c. Law of reaction. d. None of these	1
17	Physical education teacher of ABC school was teaching the students about Newton's laws of motion. While explaining he showed the students this picture and tried to explain how there is a difference in the speed of an object due to their weight. Can you name the law? 	1
18	Name the lifestyle disease(s) prevented by performing this asana. 	1
	a. Diabetes. b. Obesity c. Both a and b. d. Asthma	
Section B		
19	ABC School is one of the reputed schools in their location for the number of sports facilities it provides to its stakeholders. Keeping that in consideration CBSE Sports cell has given them the responsibility of conducting CBSE Football cluster. 33 teams have sent their entry for participation in the tournament. (i) Due to the large number of teams willing to participate, the school is conducting the competition byfixture. (ii) Total number of matches will be..... (iii) Total number of rounds will be (iv) How many byes will be given in the lower half? Or How many teams will be placed in 3rd quarter?	4
20	The teachers as well as coaches always make their best efforts to improve the performance of their students in various competitive games and sports. They can help to improve the performance of students if they have adequate knowledge of biomechanics.	4

	 <p>(i) The more force one exerts on the downward bounce, the higher the ball bounces into the air. Which law is this statement being referred to? (ii) Among the above given pictures, Newton's 3rd law is depicted in..... (iii) Newton's second law is also known as..... (iv) The study of the human body and various forces acting on it is..... Or A high jumper can jump higher off a solid surface because it opposes his or her body with as much force as he or she is able to generate. This example refers to which law of Motion?</p>	
21	<p>In relation to the pictures, answer the following questions:</p>  <p>(i) Logo shown in picture..... refers to the Special Olympic. (ii) Who was the founder of the Special Olympics? (iii) According to figure 'B', the hand shapes of 'OK', 'Good' and 'Great' that overlap each other in a circle, represent the original sign for..... (iv) How many countries participated in the first Paralympic Games in Rome (Italy) in 1960?</p>	4
Section C		
22	Write down various physiological factors determining speed and flexibility.	2
23	What do you mean by extroverts and introverts?	2
24	What are the components needed in talent identification?	2
25	What do you mean by dislocation? Name the different types of dislocations.	2
26	<p>Explain the procedure for carrying out the Plate Tapping Test in point form. Or Explain the points regarding the importance of water</p>	2
Section D		
27	What are the benefits of physical activities for children with special needs? Explain.	3
28	What are carbohydrates? What are its types and what are its sources?	3
29	Write down the role of any three committees after a tournament.	3
30	What do you mean by mental imagery? How is it useful for athletes?	3
31	<p>"Regular physical exercise can delay your ageing process". Justify your answer in light of the effect of activities on physiological changes. Or What do you mean by 'Round Shoulders'? Suggest any four physical activities for correcting round shoulders.</p>	3
Section E		

32	Briefly explain the administration of Pawanmuktasana along with its contraindications and draw stick diagram.	5
33	Rakshit is working on a project to collect data for assessing physical fitness amongst boys and girls in his residential complex. He plans to administer test for assessing their arm, shoulder and abdominal strength as well as endurance. List the two tests, he should conduct and also explain in detail the procedure of its administration along with scoring system	5
34	What is movement speed? Explain the methods to develop speed. Or What are the various types of friction? 'Friction is a necessary evil'. Justify your answer.	5



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Class: XII
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SET:B

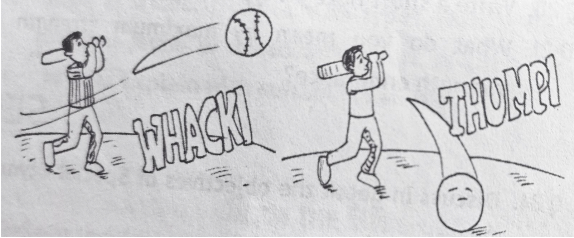
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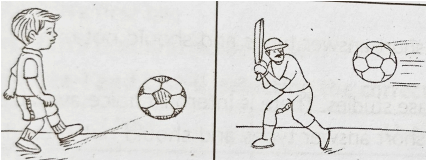
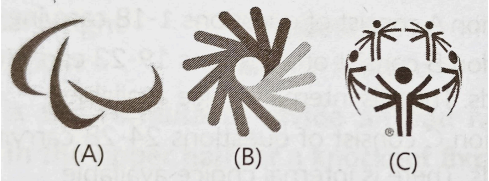
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19	<p>ABC School is one of the reputed schools in their location for the number of sports facilities it provides to its stakeholders. Keeping that in consideration CBSE Sports cell has given them the responsibility of conducting CBSE Football cluster.</p> <p>33 teams have sent their entry for participation in the tournament.</p> <p>(i) Due to the large number of teams willing to participate, the school is conducting the competition byfixture.</p> <p>(ii) Total number of matches will be.....</p> <p>(iii) Total number of rounds will be</p> <p>(iv) How many byes will be given in the lower half?</p> <p>Or</p> <p>How many teams will be placed in 3rd quarter?</p>	4
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O.S.D.A.V. Public School Kaithal
December Exam 2024
Physical Education
Answer Key/Marking Scheme
Set A

Question	Answer	Mark Distribution
1	c. thoracic region	1
2	c. 20 inch	1
3	b. emotion control	1
4	a. Eunice Kennedy Shriver	1
5	b. Round robin fixture	1
6	d. All of these	1
7	a. Surya Bhedana Pranayama	1
8	b. use of abusive words	1
9	b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).	1
10	d. A-(i) B-(iv) C-(ii) D-(iii)	1
11	c. Law of acceleration	1
12	c. Decreased heart size	1
13	c. isometric	1
14	d. Assertion (A) is false. but Reason (R) is true	1
15	d. All of the above	1
16	b. Law of acceleration	1
17	B. Newton's second law of motion	1
18	c.Both a and b	1
	Section A	

Section B		
19	(a) Knockout Tournament (b) 32 (c) 6 (d) 16 Or 8	4x1=4

20	(a) Third Law (b) First Picture c) Law of Acceleration (d Biomechanics/ Kinesiology Or Third law	4x1=4
21	(a) C (b) Eunice Kennedy Shriver c) Deaflympics (d) 23	4x1=4
	Section C	
22	Speed is determined by the following physiological factors: (i) Mobility of the nervous system (ii) Explosive strength Flexibility is determined by: (i) Muscle strength (ii) Structure of joint	2
23	Extroverts are the persons who have a tendency to be friendly, talkative and social in nature. They are generous, supportive and courageous. On the other hand, introverts are shy, socially withdrawn and talk less. They are sensible and future- oriented.	2
24	The key components to identify talent are as follows: (i) Physical characteristics such as size, height, weight, body structure etc. (ii) Physiological skills such as speed, strength, flexibility, endurance, agility and fitness. iii) Cognitive skills such as game understanding. desire to learn, maturation level, perception etc. (iv) Technical skills such as dribbling, passing, control and shooting, along with defensive skills.	2
25	Dislocation means partial or total separation of al joint. A joint is formed by the meeting of two or more bones of the skeleton. There are the following types of dislocations: (i) Dislocation of shoulder joint (ii) Dislocation of hip joint (iii) Dislocation of lower jaw	2

26	<p>Procedure of plate typing test: The Sai Khelo India plate tapping test measures the speed and coordination of limb movement. Here's how to perform the test:</p> <ol style="list-style-type: none"> 1. Adjust the height of a table so that the participant can stand comfortably in front of it 2. 3. Place two yellow discs on the table, 60 cm apart 4. 5. Place a rectangle equidistant between the discs 6. 7. Have the participant put their non-preferred hand on the rectangle 8. 9. Have the participant move their preferred hand back and forth between the discs over the rectangle as quickly as possible 10. 11. Repeat this action for 25 full cycles (50 taps) 12. 13. Record the time it takes to complete the 25 cycles 	2
Section D		
27	<p>Following are the advantages of physical activities for children with special needs:</p> <p>(i) Improves Fitness: Involvement in physical activities help children to develop motor and physical fitness skills. These activities enhance hand-eye coordination, flexibility, strength and endurance.</p> <p>(ii) Reduce the Level of Anxiety: Physical activities helps in reducing the level of anxiety, stress and depression among children with disabilities.</p> <p>(iii) Improved Social Interaction: Social relations are developed during involvement in physical activities.</p>	3

	(iv) Reduce Risk of Health Complications: Physical activity reduces the risk of various health complications like high blood pressure and at the same time improve appetite and quality of sleep.	
28	<p>Carbohydrates are compounds that consist of carbon, oxygen and hydrogen atoms. They are known as energy giving nutrients and help in maintaining a healthy digestive system.</p> <p>There are two type of carbohydrates, i.e., simple carbohydrates (glucose, fructose, sucrose etc.) and complex carbohydrates (starch, glycogen and cellulose.)</p> <p>Fresh fruits like apples, oranges are rich sources of simple carbohydrates. Complex carbohydrates are found in beans peas oats brown rice etc.</p>	3
29	<p>The following are the roles of various committees after a tournament:</p> <p>(i) Logistics Committee: After the event the Logistics Committee supervises cleaning of the venue, and placing of the items back in their appointed places.</p> <p>(ii) Finance Committee: Once the event is over, the Finance Committee examines all records related to settlement of the bills and accounts, and prepares the financial report.</p> <p>(iii) Marketing Committee: Once the event is over, the Committee issues a press release, and may arrange for a retelecast of the event.</p>	3
30	<p>Mental imagining 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 useful to athletes in the following ways:</p> <p>(i) developing self-confidence (ii) motivating the athlete</p> <p>(iii) reducing negative thoughts</p> <p>(iv) developing pre-competition and competition strategies</p> <p>(v) refocussing or concentrating on a particular skill</p> <p>(vi) removing stress-related reactions</p> <p>(vii) promoting rest, recovery and recuperation</p>	3
31	<p>Some of the major effects are as follows:</p> <p>(i) Changes in Respiratory System: The efficiency of lungs diminishes with age. There is decreased oxygen uptake and oxygen exchange. The muscles of the ribcage become weak.</p>	3

	<p>Hence, the ability to breathe deeply is reduced.</p> <p>(ii) Changes in Cardiovascular System: With the growing age, the strength and efficiency of cardiac muscle is diminished. As a result, stroke volume, cardiac output and blood flow decrease with increase in age.</p> <p>(iii) Changes in Urinary System: With ageing, the mass of kidneys decreases. This leads to reduction in capacity of bladder and an increase in residual urine. The chances of urinary infections are increased and it takes a longer time for kidneys to dispose waste products from the body.</p> <p>Or</p> <p>Round shoulders is a postural deformity in which the shoulders become round as they are drawn forward, the head is extended with the chin pointing forward</p> <p>Physical activities for correcting round shoulder are as follows:</p> <p>(i) Keep your tips of fingers on your shoulder and encircle your elbows in clockwise and anticlockwise direction of same number of times.</p> <p>(ii) Hold the hanging position of horizontal bar sometime.</p> <p>(iii) Perform Chakrasana and Dhanurasana regularly.</p> <p>(iv) Sit on a chair, rest the back against it, pull the shoulders backward and see upwards</p>	
	Section E	
32	<p>Administration of Pawanmuktasana:</p> <p>(i) Lie on your back with your feet together and arms besides your body and relax, breathing deeply.</p> <p>(ii) With a deep inhalation raise your legs to 90° and completely exhale.</p> <p>(iii) Now with another inhalation bring both the knees close to your chest and press on the lower abdomen, holding the knees with your hands. Exhale completely.</p> <p>(iv) Remain with the bent knees for a few breaths. With every exhalation press the thighs and knees on the abdomen and hold them with your hands.</p> <p>(v) With a deep breath raise your head, neck and chest and bring them close to your knees. If possible, bring your chin in between</p>	4+1=5

	<p>your knees. Ensure the head moves less and the knees come closer to the face. That way the pressure on the abdominal muscles will help in releasing the unwanted gas/wind around the abdominal organs.</p> <p>(vi) Remain in this posture for a few breaths focusing on maintaining the position of the head and neck in place. With every exhalation press the thighs closer and deeper into the chest and face deeper into the knees.</p> <p>(vii) Try to maintain the balance while breathing slowly and keeping the body relaxed.</p> <p>(viii) Now with an inhalation, release the neck and head and exhale completely. With another inhalation straighten the legs and bring them back to 90° and as you exhale release the leg from 90° to the relaxed posture. With complete exhalation, bring the legs stretched out on the floor and relax the neck.</p> <p>(ix) Take a few breaths, and then continue with the next round. The longer you hold in this posture the faster the muscles around the abdomen will loosen.</p> <p>Contraindications of Pawanmuktasana:</p> <p>To be avoided or performed under guidance by those suffering from:</p> <ul style="list-style-type: none"> (i) Severe migraine (ii) High or low blood pressure (iii) Asthma (iv) Slip disc (v) Advanced stages of spondylitis (vi) Girls/Women should avoid this asana or take the guidance of the teacher while practicing it during menstrual cycle. 	
33	<p>The tests that Rakshit should conduct are:</p> <ol style="list-style-type: none"> 1. partial curl up 2. Push ups 3. Modified push ups <p>(i) Push-ups for Boys: Its procedure are as follows:</p> <p>(a) Keep the hands and toes touching the floor, the body and legs in a straight line, feet slightly apart, and arms at shoulder width apart extended at right angle to the body.</p> <p>(b) Keeping the back and knees straight, lower the body until there is a 90° angle at the elbows, then return back to the starting position with the arms extended.</p>	1+2+2=5

	<p>(c) This action should be repeated, as test continues until exhaustion, or until they can do no more in rhythm or have reached the target number of push-ups.</p> <p>Scoring: Record the number of correctly completed push-ups.</p> <p>(ii) Modified Push-ups for Girls: Its procedure are as follows:</p> <p>(a) The push-up begins in a kneeling position, with the hands and knees touching the ground.</p> <p>(b) The knees are slightly apart, the arms are shoulder width apart and extended at right angle to the body.</p> <p>(c) The girl lowers the body until there is a 90° angle at the elbows and then returns to the starting position with the arms extended.</p> <p>(d) This action is repeated until exhaustion or until the time limit is reached.</p> <p>Scoring: Record the total number of correctly completed push-ups.</p>	
34	<p>Movement speed is the ability to perform a movement in minimum time. It depends upon technique, explosive strength, flexibility and coordinative abilities. It plays a vital role in boxing, wrestling, gymnastics, swimming. etc.</p> <p>Following methods are used to develop speed:</p> <p>(i) Acceleration Runs: Acceleration runs are usually practised to develop speed especially in attaining maximum speed from stationary position. Accelerated runs are repeated over and over again with sufficient intervals between runs. The number of acceleration runs can be fixed according to the age and experience and capacity of the athlete.</p> <p>(ii) Pace Runs or Races: Pace run means running the whole distance of a race at a constant speed. Generally, 800m and above races are included in pace runs. In longer races, an athlete must conserve his energy by reducing his speed. For example, if there is a runner of 800 m race and his best time is 1 minute 40 seconds. So, he/she should run the first 400 m in 49 seconds and the next 400 m in 51 seconds.</p> <p>Or</p> <p>There are following two types of friction in general:</p> <p>(i) Static Friction: The frictional force that comes into play when one body tends to move over the surface of the other body, but the actual motion has yet not started, is known as static friction.</p> <p>(ii) Dynamic Friction: The frictional force that comes into play when</p>	1+2+2=5

one object is actually moving (sliding or rolling) over the surface of the other body, is called dynamic friction.

Friction is Necessary: It reduces the efficiency of work done. For Example, athletes use spikes and footballers use studs, so that they can get appropriate friction from the surface and run fast. A weightlifter rubs lime powder on his hands before holding the rod and performing jerk and snatch. In the same way, even the gymnasts do the same before performing on horizontal bar, uneven bar, or roman rings, in order to get friction.

Friction is an Evil: It is an evil because of wastage of energy. Also, we have to spend a lot of money to move things due to friction. For example, in cycling there should be minimum friction between road and tires of cycles. If there is more friction, it will result in low performance and wastage of energy of the cyclist. Swimmers, also use goggles, cap and swimsuit to reduce the force of friction caused by water.

O.S.D.A.V. Public School Kaithal
December Exam 2024
Physical Education
Answer Key/Marking Scheme
Set B

Question	Answer	Mark Distribution
Section A		
1	c.Both a and b	1
2	c. thoracic region	1
3	c. 20 inch	1
4	b. emotion control	1
5	a. Eunice Kennedy Shriver	1
6	b. Round robin fixture	1
7	d. All of these	1
8	a. Surya Bhedana Pranayama	1
9	b. use of abusive words	1
10	b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).	1
11	d. A-(i) B-(iv) C-(ii) D-(iii)	1
12	c. Law of acceleration	1
13	c. Decreased heart size	1
14	c. isometric	1
15	d. Assertion (A) is false. but Reason (R) is true	1
16	d. All of the above	1
17	b. Law of acceleration	1
18	B. Newton's second law of motion	1

Section B		
19	(a) Decoration and Ceremony (b) Publicity Committee	4x1=4

	(c) reception (d) Ground and Equipment	
20	(a) law of inertia (b) 1st picture (c) law of acceleration (d) Force is directly proportional to mass.	4x1=4
21	(a) Sir Ludwig Guttmann (b) Spirit in Motion (c) The international Committee of Sports for the D (d) World Games for the Deaf	4x1=4
	Section C	
22	Speed is determined by the following physiological factors: (i) Mobility of the nervous system (ii) Explosive strength Flexibility is determined by: (i) Muscle strength (ii) Structure of joint	2
23	Extroverts are the persons who have a tendency to be friendly, talkative and social in nature. They are generous, supportive and courageous. On the other hand, introverts are shy, socially withdrawn and talk less. They are sensible and future- oriented.	2
24	The key components to identify talent are as follows: (i) Physical characteristics such as size, height, weight, body structure etc. (ii) Physiological skills such as speed, strength, flexibility, endurance, agility and fitness. iii) Cognitive skills such as game understanding. desire to learn, maturation level, perception etc. (iv) Technical skills such as dribbling, passing, control and shooting, along with defensive skills.	2
25	Dislocation means partial or total separation of al joint. A joint is formed by the meeting of two or more bones of the skeleton. There are the following types of dislocations: (i) Dislocation of shoulder joint (ii) Dislocation of hip joint	2

	(iii) Dislocation of lower jaw	
26	<p>Dislocation means partial or total separation of a joint. A joint is formed by the meeting of two or more bones of the skeleton.</p> <p>There are the following types of dislocations:</p> <p>(i) Dislocation of shoulder joint</p> <p>(ii) Dislocation of hip joint</p> <p>(iii) Dislocation of lower jaw</p>	2
	Section D	
27	<p>Following are the advantages of physical activities for children with special needs:</p> <p>(i) Improves Fitness: Involvement in physical activities help children to develop motor and physical fitness skills. These activities enhance hand-eye coordination, flexibility, strength and endurance.</p> <p>(ii) Reduce the Level of Anxiety: Physical activities helps in reducing the level of anxiety, stress and depression among children with disabilities.</p> <p>(iii) Improved Social Interaction: Social relations are developed during involvement in physical activities.</p> <p>(iv) Reduce Risk of Health Complications: Physical activity reduces the risk of various health complications like high blood pressure and at the same time improve appetite and quality of sleep.</p>	3
28	<p>Carbohydrates are compounds that consist of carbon, oxygen and hydrogen atoms. They are known as energy giving nutrients and help in maintaining a healthy digestive system.</p> <p>There are two types of carbohydrates, i.e., simple carbohydrates (glucose, fructose, sucrose etc.) and complex carbohydrates (starch, glycogen and cellulose.)</p> <p>Fresh fruits like apples, oranges are rich sources of simple carbohydrates. Complex carbohydrates are found in beans, peas, oats, brown rice etc.</p>	3
29	<p>The following are the roles of various committees after a tournament:</p> <p>(i) Logistics Committee: After the event the Logistics Committee supervises cleaning of the venue, and placing of the items back in their appointed places.</p> <p>(ii) Finance Committee: Once the event is over, the Finance Committee examines all records related to settlement of the bills</p>	3

	<p>and accounts, and prepares the financial report.</p> <p>(iii) Marketing Committee: Once the event is over, the Committee issues a press release, and may arrange for a retelecast of the event.</p>	
30	<p>Mental imagining 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 useful to athletes in the following ways:</p> <p>(i) developing self-confidence (ii) motivating the athlete</p> <p>(iii) reducing negative thoughts</p> <p>(iv) developing pre-competition and competition strategies</p> <p>(v) refocussing or concentrating on a particular skill</p> <p>(vi) removing stress-related reactions</p> <p>(vii) promoting rest, recovery and recuperation</p>	3
31	<p>Some of the major effects are as follows:</p> <p>(i) Changes in Respiratory System: The efficiency of lungs diminishes with age. There is decreased oxygen uptake and oxygen exchange. The muscles of the ribcage become weak. Hence, the ability to breathe deeply is reduced.</p> <p>(ii) Changes in Cardiovascular System: With the growing age, the strength and efficiency of cardiac muscle is diminished. As a result, stroke volume, cardiac output and blood flow decrease with increase in age.</p> <p>(iii) Changes in Urinary System: With ageing, the mass of kidneys decreases. This leads to reduction in capacity of bladder and an increase in residual urine. The chances of urinary infections are increased and it takes a longer time for kidneys to dispose waste products from the body.</p> <p>Or</p> <p>Round shoulders is a postural deformity in which the shoulders become round as they are drawn forward, the head is extended with the chin pointing forward</p> <p>Physical activities for correcting round shoulder are as follows:</p> <p>(i) Keep your tips of fingers on your shoulder and encircle your elbows in clockwise and anticlockwise direction of same number of times.</p>	3

	<p>(ii) Hold the hanging position of horizontal bar sometime.</p> <p>(iii) Perform Chakrasana and Dhanurasana regularly.</p> <p>(iv) Sit on a chair, rest the back against it, pull the shoulders backward and see upwards</p>	
	Section E	
32	<p>Administration of Pawanmuktasana:</p> <p>(i) Lie on your back with your feet together and arms besides your body and relax, breathing deeply.</p> <p>(ii) With a deep inhalation raise your legs to 90° and completely exhale.</p> <p>(iii) Now with another inhalation bring both the knees close to your chest and press on the lower abdomen, holding the knees with your hands. Exhale completely.</p> <p>(iv) Remain with the bent knees for a few breaths. With every exhalation press the thighs and knees on the abdomen and hold them with your hands.</p> <p>(v) With a deep breath raise your head, neck and chest and bring them close to your knees. If possible, bring your chin in between your knees. Ensure the head moves less and the knees come closer to the face. That way the pressure on the abdominal muscles will help in releasing the unwanted gas/wind around the abdominal organs.</p> <p>(vi) Remain in this posture for a few breaths focusing on maintaining the position of the head and neck in place. With every exhalation press the thighs closer and deeper into the chest and face deeper into the knees.</p> <p>(vii) Try to maintain the balance while breathing slowly and keeping the body relaxed.</p> <p>(viii) Now with an inhalation, release the neck and head and exhale completely. With another inhalation straighten the legs and bring them back to 90° and as you exhale release the leg from 90° to the relaxed posture. With complete exhalation, bring the legs stretched out on the floor and relax the neck.</p> <p>(ix) Take a few breaths, and then continue with the next round. The longer you hold in this posture the faster the muscles around the abdomen with loosen.</p> <p>Contraindications of Pawanmuktasana:</p>	4+1=5

	<p>To be avoided or performed under guidance by those suffering from:</p> <p>(i) Severe migraine</p> <p>(ii) High or low blood pressure</p> <p>(iii) Asthma</p> <p>(iv) Slip disc</p> <p>(v) Advanced stages of spondylitis</p> <p>(vi) Girls/Women should avoid this asana or take the guidance of the teacher while practicing it during menstrual cycle.</p>	
33	<p>The tests that Rakshit should conduct are:</p> <p>(i) Push-ups for Boys: Its procedure are as follows:</p> <p>(a) Keep the hands and toes touching the floor, the body and legs in a straight line, feet slightly apart, and arms at shoulder width apart extended at right angle to the body.</p> <p>(b) Keeping the back and knees straight, lower the body until there is a 90° angle at the elbows, then return back to the starting position with the arms extended.</p> <p>(c) This action should be repeated, as test continues until exhaustion, or until they can do no more in rhythm or have reached the target number of push-ups.</p> <p>Scoring: Record the number of correctly completed push-ups.</p> <p>(ii) Modified Push-ups for Girls: Its procedure are as follows:</p> <p>(a) The push-up begins in a kneeling position, with the hands and knees touching the ground.</p> <p>(b) The knees are slightly apart, the arms are shoulder width apart and extended at right angle to the body.</p> <p>(c) The girl lowers the body until there is a 90° angle at the elbows and then returns to the starting position with the arms extended.</p> <p>(d) This action is repeated until exhaustion or until the time limit is reached.</p> <p>Scoring: Record the total number of correctly completed push-ups.</p>	1+2+2=5
34	<p>Movement speed is the ability to perform a movement in minimum time. It depends upon technique, explosive strength, flexibility and</p>	1+2+2=5

coordinative abilities. It plays a vital role in boxing, wrestling, gymnastics, swimming. etc.

Following methods are used to develop speed:

(i) Acceleration Runs: Acceleration runs are usually practised to develop speed especially in attaining maximum speed from stationary position. Accelerated runs are repeated over and over again with sufficient intervals between runs. The number of acceleration runs can be fixed according to the age and experience and capacity of the athlete.

(ii) Pace Runs or Races: Pace run means running the whole distance of a race at a constant speed. Generally, 800m and above races are included in pace runs. In longer races, an athlete must conserve his energy by reducing his speed. For example, if there is a runner of 800 m race and his best time is 1 minute 40 seconds. So, he/she should run the first 400 m in 49 seconds and the next 400 m in 51 seconds.

Or

There are following two types of friction in general:

(i) Static Friction: The frictional force that comes into play when one body tends to move over the surface of the other body, but the actual motion has yet not started, is known as static friction.

(ii) Dynamic Friction: The frictional force that comes into play when one object is actually moving (sliding or rolling) over the surface of the other body, is called dynamic friction.

Friction is Necessary: It reduces the efficiency of work done. For Example, athletes use spikes and footballers use studs, so that they can get appropriate friction from the surface and run fast. A weightlifter rubs lime powder on his hands before holding the rod and performing jerk and snatch. In the same way, even the gymnasts do the same before performing on horizontal bar, uneven bar, or roman rings, in order to get friction.

Friction is an Evil: It is an evil because it is a waste of energy. Also, we have to spend a lot of money to move things due to friction. For example, in cycling there should be minimum friction between road and tyres of cycles. If there is more friction, it will result in low performance and wastage of energy of the cyclist. Swimmers also use goggles, cap and swimsuit to reduce the force of friction caused by water.