



INDIAN SCHOOL SOHAR
TERM II EXAMINATION (2022-23)
SCIENCE

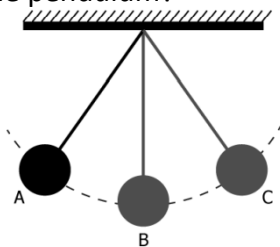
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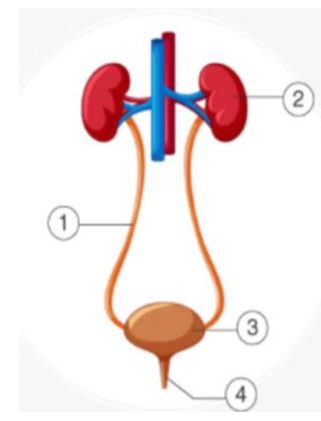
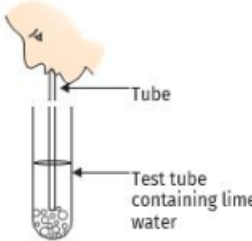
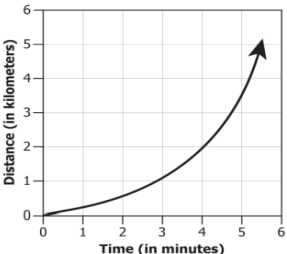
CLASS : VII
DATE: 07/03/2023

MAX. MARKS: 80
TIME: 3 HOURS

General Instructions:

- i. This question paper consists of 39 questions in 5 sections.
- ii. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- iii. **Section A** consists of 20 objective type questions carrying 1 mark each.
- iv. **Section B** consists of 6 very short questions carrying 2 marks each. Answers to these questions should be in the range of 30 to 50 words.
- v. **Section C** consists of 7 short answer type questions carrying 3 marks each. Answers to these questions should be in the range of 50 to 80 words.
- vi. **Section D** consists of 3 long answer type questions carrying 5 marks each. Answers to these questions should be in the range of 80 to 120 words.
- vii. **Section E** consists of 3 source-based/case-based questions of 4 marks each with sub-parts.

SECTION – A		
Select and write one most appropriate option out of the four options given for each of the questions 1 - 20		
1	Normal range of breathing rate per minute in an average adult person at rest is: (a) 21-24 (b) 9-12 (c) 30-33 (d) 15-18	1
2	A student notices the swing of a pendulum as shown in the image. She notices that the bob of the pendulum starts from position A to C and then back to A in 2 seconds. What is the time period of the pendulum?  (a) 0.5 second (b) 2 seconds (c) 1 second (d) 4 seconds	1
3	On adding phenolphthalein indicator to a colourless solution, no change is observed. What is the nature of this solution? (a) Either basic or neutral (b) Either acidic or basic (c) Either acidic or neutral (d) Basic	1
4	A student observed that a pond with clear water got covered up with green algae within a week. By which method of reproduction did the algae spread so rapidly? (a) Pollination (b) Fragmentation (c) Budding (d) Sexual reproduction	1

5	<p>Which of the following labelled part performs the function of filtration of blood?</p> <p>(a) 1 (b) 2 (c) 3 (d) 4</p>		1
6	<p>Siddhant got an injury on his knee while playing football in the ground. Blood oozed out from the injured site, but after a few minutes, he observed a brown coloured clot on the same site. Which component of the blood might have formed this clot?</p> <p>(a) plasma (b) white blood cells (c) red blood cells (d) platelets</p>	1	
7	<p>A student sets up an experiment to study human respiration. He fills freshly prepared lime water in a test tube and blows air through a glass tube into it. He observed that the solution turns milky. What can be evaluated from this observation?</p> <p>(a) Oxygen is exhaled during respiration. (b) Water vapour is produced during respiration. (c) Carbon dioxide is exhaled during respiration. (d) Glucose is produced during respiration.</p>		1
8	<p>James and John were given one mirror each by their teacher. James found his image to be erect and of the same size whereas John found his image erect and smaller in size. This means that the mirrors of James and John are, respectively</p> <p>(a) plane mirror and convex mirror (b) concave mirror and convex mirror (c) plane mirror and concave mirror (d) convex mirror and Plane mirror</p>	1	
9	<p>A woman baked a cake by following the steps given below: Step 1: Mix flour, water, eggs, sugar and milk in a bowl. Step 2: Place the batter in a baking tray and bake a cake in the oven. Which types of changes do each of these steps represent?</p> <p>(a) 1: physical change, 2: chemical change (b) 1: physical change, 2: physical change (c) 1: chemical change 2: chemical change (d) 1: chemical change, 2: physical change</p>	1	
10	<p>The graph represents time taken by a car to cover a certain distance.</p>  <p>Which of these statements is true for the speed of the vehicle?</p> <p>(a) It has a uniform speed as time and distance both are increasing. (b) It has a uniform speed as speed of the vehicle keeps on changing. (c) It has a non-uniform speed as time and distance both are decreasing. (d) It has a non-uniform speed as speed of the vehicle keeps on changing.</p>	1	

11	Select the option that indicates the correct pathway of water transport through a plant. (a) root hair cell --> xylem --> stomata (b) stomata --> root hair cell --> xylem (c) xylem --> stomata --> root hair cell (d) root hair cell --> phloem --> stomata	1
12	A student found a mixture that contains pieces of paper and some pins. He wants to separate the pins from the mixture without handpicking them. Which of these procedures would help him to separate the pins from pieces of paper? (a) Place wires carrying electricity into the mixture (b) Place an electric bulb in the mixture (c) Build an object that uses electricity to heat (d) Build a magnet using electricity	1
13	A researcher wants to study asexual reproduction. He prepares two slides for microscopic observations, from the following samples: Sample for slide A: Bread dough raised by adding yeast. Sample for slide B: Bread slice which was left for a longer period of time in moisture. Select the correct option for his observations. (a) Slide A- Budding, Slide B-Fragmentation (b) Slide A- Spore formation, Slide B-Budding (c) Slide A- Budding, Slide B-Spore Formation (d) Slide A- Fragmentation, Slide B-Spore Formation	1
14	Which mark is necessary on electric appliances? (a) AGMARK (b) ISI (c) ISS (d) IIS	1
15	Products of neutralization reaction are always: (a) acid and base (b) acid and salt (c) salt and water (d) salt and base	1
16	Our body has a network of blood vessels. Pick out the blood vessels that have thick elastic walls. (a) arteries (b) capillaries (c) veins (d) atria	1
<p>Q. no 17 to 20 are Assertion - Reasoning based questions. These consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (a) Both A and R are true and R is the correct explanation of A (b) Both A and R are true and 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>		
17	Assertion(A) : We can see a source of light through a bent tube. Reason(R) : Light travels in a straight line.	1
18	Assertion(A) : Turmeric stain on white shirt turns red on washing with soap. Reason(R) : The soap solution is basic in nature.	1
19	Assertion(A) : Cutting of paper into very small piece is an irreversible change. Reason(R) : Physical change are always reversible.	1
20	Assertion(A) : There is a partition between the chambers of heart. Reason(R) : The partition between the chambers helps to avoid mixing up of oxygenated and deoxygenated blood.	1

SECTION – B

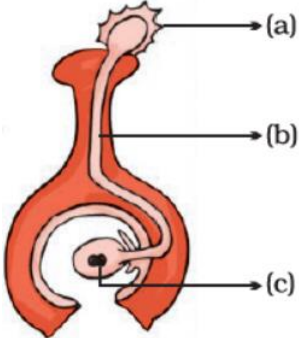
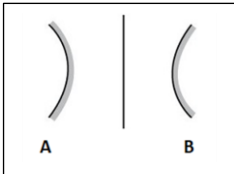
Q. no. 21 to 26 are very short answer questions.


21	<p>Suresh became exhausted and lethargic after heavy exercise. He got relief after taking a hot bath and proper rest.</p> <p>(a) What is the scientific reason behind it?</p> <p>(b) He felt hungry after such heavy exercise. Give reason</p> <p align="center">OR</p> <p>(a) Give any one difference between respiration and breathing.</p> <p>(b) Observe the given figures A and B and identify which of them indicates the process of inhalation and which shows the process of exhalation?</p>	2
22	<p>Draw an electric circuit diagram which includes the following and show the direction of flow of current.</p> <p>A battery, a bulb, an open switch</p>	2
23	<p>A person placed his index finger of the right hand on the inner side of his left wrist, and then he felt rhythmic throbbing movements. What terminology can be used for these movements, and what could be the reason for feeling them?</p>	2
24	<p>(a) What makes convex mirror best suitable to be used as a rear view mirror?</p> <p>(b) Rohan is observing his image in a plane mirror. The distance between the mirror and his image is 5 m. If he moves 3m towards the mirror then what will be the distance between Rohan and his image?</p>	2
25	<p>Study the activities given below and answer the questions that follow.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> P </div> <div style="text-align: center;"> Q </div> <div style="text-align: center;"> R </div> <div style="text-align: center;"> S </div> </div> <p>(a) Write the type of motions in activities: P,Q, R and S.</p> <p align="center">OR</p> <p>(a) Draw a graph showing the motion of a car moving at constant speed.</p> <p>(b) Name the time measuring device which is based on the study of the shadow cast by the sun?</p>	2
26	<p>(a) Why does the colour of copper sulphate change from blue to green when an iron nail is dipped in copper sulphate solution?</p> <p>(b) Write the word/chemical equation involved in the above change.</p>	2

SECTION - C

Q.no. 27 to 33 are short answer questions.

27	<p>Observe the figures given below and answer the following questions.</p> <div style="display: flex; justify-content: center; align-items: center; gap: 50px;"> <div style="text-align: center;"> A </div> <div style="text-align: center;"> B </div> </div> <p>Identify and explain the type of pollination shown in the figures A and B.</p>	3
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28	(a) How does the movement of water differ from the movement of food in a plant? (b) Which side of the heart has carbon dioxide rich blood? (c) What prevents the backflow of blood inside the heart during contraction?	3
29	(a) A student is stung by an ant while playing and is suffering from burning pain. An elderly person suggests rubbing moist baking soda in the region to get quick relief. (i) What could be the reason for the burning pain? (ii) What does moist baking soda do to the sting of an ant? (b) After carrying out the neutralisation reaction, the test tube is immediately found to be somewhat hot. Explain why. OR (a) What is the chemical composition of : (i) slaked lime (ii) calamine solution (iii) milk of magnesia (iv) baking soda (b) Name the source from which litmus dye is obtained.	3
30	(a) A teacher told students that the seed dispersal in Xanthium plant takes place by animals; however, seed dispersal in maple trees takes place by air. What features of these plants make their mode of seed dispersal different? (b) How does water reaches the greater heights in very tall trees?	3
31	(a) Differentiate between uniform motion and non-uniform motion. (b) Monika takes 20 minutes from her house to reach her school on a bicycle. If the bicycle has a speed of 3m/s, calculate the distance between her house and the school.	3
32	In the diagram given below, label the parts marked (a), (b) and (c). 	3
33	Sonal observed that most of the fish in the pond of her village were gradually dying. She also observed that the waste of a factory in her village is flowing into the pond which probably caused the fish to die. (a) What is the nature of the waste released by factory? (b) How can it be neutralised? (c) Explain why the fish were dying.	3
SECTION – D Q.no. 34 to 36 are Long answer questions		
34	(a) Give reason for the following: (i) Dentists use concave mirrors. (ii) If we raise our right hand in front of a mirror, the left hand of our image seems to be raised. (iii) Convex mirrors are used as rear view mirror in vehicles. (b) Identify the figures A and B. Write any one characteristics of image formed by each of them.  OR (a) Name any two letters of English alphabet in which the image formed in a plane mirror appears exactly like the letters. (b) If you are given two lenses – convex and concave, to read a dictionary, which lens would you choose and why?	5

	<p>(c) State the correct sequence (1-7) of band of colours formed by the prism, shown in the figure. Also name the term given to the band of seven colours obtained.</p> 										
35	<p>(a) When magnesium ribbon is burnt, a new substance 'Z' is formed which is basic in nature.</p> <p>(i) Name Z.</p> <p>(ii) Name the type of change involved in the reaction.</p> <p>(b) State any two applications of neutralization reaction in day to day life.</p> <p>(c) Why it is advised to handle acids and bases carefully?</p> <p style="text-align: center;">OR</p> <p>(a) State three conditions on which the amount of heat produced in a wire depends on.</p> <p>(b) Write any one application each of heating and magnetic effect of electricity.</p>	5									
36	<p>(a) State two conditions necessary for the rusting of iron objects. Also, write the chemical equation.</p> <p>(b) Write the chemical symbols/formulae used for the following:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Magnesium oxide</td> <td style="width: 50%;">2. Calcium</td> </tr> <tr> <td>3. Water</td> <td>4. Carbon dioxide</td> </tr> </table>	1. Magnesium oxide	2. Calcium	3. Water	4. Carbon dioxide	5					
1. Magnesium oxide	2. Calcium										
3. Water	4. Carbon dioxide										
<p>SECTION - E</p> <p>Q.no. 37 to 39 are case - based/data -based questions with 2 to 3 short sub - parts. Internal choice is provided in one of these sub-parts.</p>											
37	<p>Wires made from some special materials melt quickly and break when large electric currents are passed through them. These wires are used for making electric fuses. In all buildings fuses are inserted in all electrical circuits. There is a maximum limit on the current which can safely flow through a circuit. If by accident the current exceeds this safe limit, the wires may become overheated and may cause fire. If a proper fuse is there in the circuit, it will blow off and break the circuit. A fuse is thus a safety device which prevents damages to electrical circuits and possible fires. Fuses of different kinds are used for different purposes.</p> <p>(a) Explain why, filament-type electric bulbs are not power efficient. Name any two types of electric lighting devices which are much more energy efficient than filament-type bulbs.</p> <p>(b) Which circuit breaker device is used in place of porcelain fuse in domestic electric wiring?</p> <p style="text-align: center;">OR</p> <p>(b) An electrician working in your home wants to replace a blown up fuse wire by a piece of copper wire. Would you agree? Give scientific justification for your response.</p>	4									
38	<p>The school organised an educational tour for the students. They arranged a bus scheduled to leave for the trip at around 8:00 am. The odometer reading of the bus at the start and end of the trip is provided in the table.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Time</th> <th>Odometer Reading</th> </tr> </thead> <tbody> <tr> <td>Start</td> <td>08:00 am</td> <td>247344</td> </tr> <tr> <td>End</td> <td>11:00 am</td> <td>247554</td> </tr> </tbody> </table> <p>(a) Calculate the average speed of the bus in km/hr during the trip.</p> <p>(b) Under what condition the distance-time graph of an object is a horizontal line parallel to the time axis?</p>		Time	Odometer Reading	Start	08:00 am	247344	End	11:00 am	247554	4
	Time	Odometer Reading									
Start	08:00 am	247344									
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	(c) Name the instrument used for the following: (i) To record the distance covered by a vehicle. (ii) To indicate the speed of a running vehicle.	
39	<p>A rainbow is not a chemical reaction but is an optical illusion. Newton cut a pinhole in his window shade to let in sunlight, which showed up on his wall as a round illuminated area. Refracted by a prism, it turned into an oblong area with a rainbow of colours. This shows that white light is a combination of seven separate colours.</p> <p>(a) If you make the light from a laser torch to fall on a prism, you are unable to observe the band of seven colours. Give reason.</p> <p>(b) Draw the diagrams representing converging and diverging light rays using appropriate lenses.</p> <p>(c) What acts as a prism, during formation of a rainbow?</p> <p style="text-align: center;">OR</p> <p>(d) Name the term given to the band of seven colours of rainbow.</p>	4
*****THE END*****		