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केन्द्रीय विद्यालय संगठन कोलकाता संभाग

KENDRIYA VIDYALAYA SANGATHAN, KOLKATA REGION

सत्रांत परीक्षा / SESSION ENDING EXAMINATION, 2025-26

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कक्षा / CLASS-VII   अधिकतम अंक/Max. Marks: 60

विषय/Sub.: विज्ञान / SCIENCE   समय/Time: 2 ½ घंटे / Hrs.

1. All questions are compulsory (Internal choices are given wherever necessary).
2. The paper has 5 sections A, B, C D & E (Total 28 questions).
3. Section A has 14 questions of one mark each.
4. Section B has 4 questions of 2 marks each.
5. Section C has 5 questions of 3 marks each.
6. Section D has 2 questions of 4 marks each.
7. Section E has 3 questions of 5 marks each.

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SECTION: A (MCQs-1X14=14)

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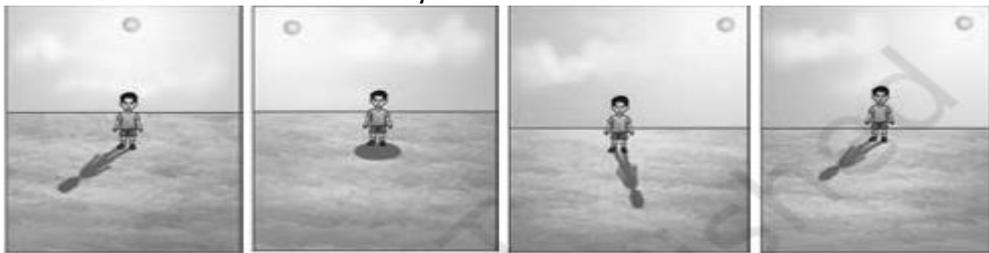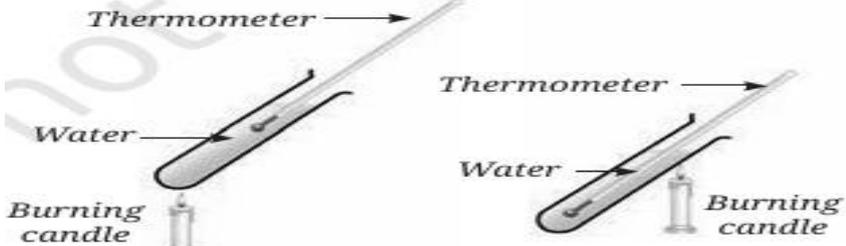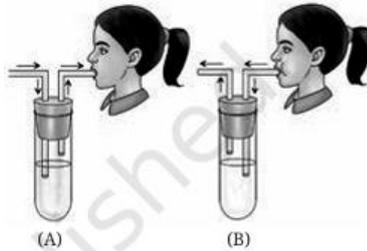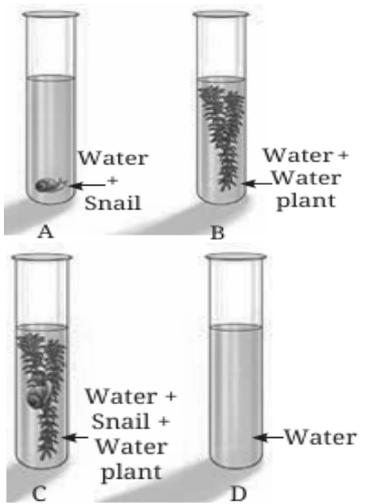| Q.No.	Questions	Marks
01	Pins are stuck to a metal strip with wax and a burning candle is kept below the rod, as shown in Figure given. Which of the following will happen? (a) All the pins will fall almost at the same time (b) Pins I and II will fall earlier than pins III and IV (c) Pins I and II will fall later than pins III and IV (d) Pins II and III will fall almost at the same time	1
02	If we denote speed by S, distance by D and time by T, then the relationship between these quantities is (a) S = D X T (b) T = D / S (c) S = (1/T) X D (d) S = T / D	1
03	What is the name of the star that appears fixed in the sky? (a) Sirius (b) Alpha Centauri (c) Pole Star (d) Vega	1
04	The given figure shows an oscillating pendulum. Time taken by the bob to move from A to C is t1 and from C to O is t2. The time period of this simple pendulum is (a) t1+ t2 (b) 3(t1+ t2) (c) 2 (t1+ t2) (d) 4 (t1+ t2)	1
05	An object of height 120cm is placed at a distance of 1 m in front of a plane mirror, the height of the image formed by the mirror will be (a) 2.4 m (b) 1 m (c) 1.2 m (d) 12 m	1
06	The small balloon-like sacs in the lungs where gas exchange occurs are called: (a) Bronchi (b) Windpipe (c) Alveoli (d) Nasal passage	1

07	A smoke detector is a device that detects smoke and sounds an alarm. Suppose you are fitting a smoke detector in your room. The most suitable place for this device will be: (a) On the ceiling (b) In the middle of a wall (c) Near the floor (d) Anywhere in the room	1
08	Water and minerals are transported from roots to other parts of the plant by (a) phloem (b) xylem (c) chlorophyll (d) stomata	1
09	Look at the images shown in Figure given below and select the correct image showing the shadow formation of the boy. (a) Option a & b (b) Option b & c (c) All of the above (d) Option d only	1
10	Which of the following raw materials is available in the air for respiration? (a) Oxygen (b) Hydrogen (c) Nitrogen (d) Carbon dioxide	1
11	If the Earth's rotation were to speed up, how would the days change? (a) The days would become shorter, and the length of a day would decrease. (b) The days would become longer, and the Earth would rotate faster. (c) There would be no noticeable effect on the length of the day. (d) The days would become irregular in length.	1
12.	What is the role of saliva in digestion? (a) It digests proteins. (b) It breaks down fats. (c) It moistens food and begins starch digestion. (d) It neutralises stomach acid.	1
	Question No. 13 to 14 consist of two statements – Statement A and Statement B. Answer these questions selecting the appropriate option given below: (a) Both statements are true (b) Both statements are false (c) Statement A is true, but statement B is false. (d) Statement A is false, but statement B is true.	1
13	**Statement A:** Image formed by a plane mirror is laterally inverted. **Statement B**: Images of alphabets T and P appear identical to themselves in a plane mirror.	1
14	**Statement A**: The pancreas is a part of the respiratory system. **Statement B**: The pancreas produces pancreatic juice which is basic in nature.	1

SECTION: B(SA-2X4=8)

15	Two test tubes with water are heated by a candle flame as shown in Fig. Which thermometers will record a higher temperature? Explain. Thermometer → Water → Burning candle Thermometer → Water → Burning candle	2 (1+1)
16	Calculate the speed of a bullet that covered 1.6 km in 8 seconds. Express your answer in km/h.	2 (1+1)
17	X is broken down using Y to release carbon dioxide, Z, and energy. **X + Y → Carbon dioxide + Z + Energy** X, Y, and Z are three different components of the process. (i) What do X, Y, and Z stand for? (ii) Identify the process.	2 (1/2x4)
18	Give any two differences between Solar & Lunar Eclipse. <u>OR</u> Abhay noticed that when it was daytime in India, his uncle who was in the USA was generally sleeping as it was night-time there. What is the reason behind this difference?	2 (1+1)

SECTION-C(SA-3X5=15)

19	Distinguish between uniform and non-uniform motion using the example of a car moving on a straight highway with no traffic and a car moving in city traffic.	3 (2+1)
20	Radhika designed an experiment taking two clean test tubes, A and B and filled them with lime water as shown in the figure. In test tube A, the surrounding air that we inhale was passed on by sucking air from the pipe, and in test tube B, the exhaled air blown through the pipe. (a) What do you think she is trying to investigate? (b) How can she confirm her findings? Explain (A)　　(B)	3 (1+2)
21	Ananya took four test tubes and filled three-fourth of each test tube with water. She labelled them A, B, C, and Din the figure given. In test tube A, she kept a snail; in test tube B, she kept a water plant; in test tube C, she kept both a snail and a plant. In test tube D, she kept only water. Ananya added a carbon dioxide indicator to all the test tubes. She recorded the initial colour of water and observed if there are any colour changes in the test tubes after 2–3 hours. (i) What do you think she wants to find out? (ii) How will she know if she is correct? Water + Snail (A)　Water + Water plant (B) Water + Snail + Water plant (C)　Water (D)	3 (1+2)

22	Suppose you are given a tube of the shape shown in the figure given and two plane mirrors smaller than the diameter of the tube.
	    (i) Can this tube be used to make a periscope?
	    (ii) Mention how many mirrors should he use to see the objects?
	    (iii) State what must be the angle w.r.t. the incident light at which he should place the mirrors?
		3
		(1+1+1)

23	Use a torch and a ball in a dark room to show how only half of the Earth receives sunlight. Describe your observation and also draw the diagram. OR A student observed the Moon in the night sky for a month and noticed changes in its shape every night. (i) What is this changing appearance of the Moon called and why does it happen? (ii) Explain how the positions of the Earth, Moon and Sun affect what we see from Earth	3 (1+2) OR 3 (2+1)

SECTION-D (CBQ- 4X2=8)

24	Oxygen which is essential for the survival of all organisms is produced during photosynthesis. In the absence of photosynthesis, life would be impossible on the earth. During photosynthesis, chlorophyll containing cells of leaves, in the presence of sunlight, use carbon dioxide and water to synthesise carbohydrates. During the process oxygen is released. The presence of starch in leaves indicates the occurrence of photosynthesis. Starch is also a carbohydrate. (i) Which component is essential for the survival of all the living organisms? (a) Oxygen (b) Carbon dioxide (c) Carbon Monoxide (d) Hydrogen (ii) Name the green pigment present in leaves. (iii)How we come to know the occurrence of photosynthesis in a plant? (iv)Write the word equation of photosynthesis.	4 (1x4)

25	The time-table of two trains in equal time intervals of 10 minutes is given below:	4 (1x4)

Time (AM)	Train X		Train Y	
	Position (km)	Distance (km)	Position (km)	Distance (km)
10:00	0	0	0	0
10:10	20	20	20	20
10:20	40	20	35	15
10:30	60	20	50	15
10:40	80	20	75	25
10:50	100	20	95	20
11:00	120	20	120	25

(a) Which of the two trains show uniform motion between 10 am to 11 am?
(b) The odometer reading of train X was 12560 km at 10:10 am. Find the reading of odometer at 10:50 am.
(c) Calculate the average speed (km/h) of train Y and convert the speed into m/s.

SECTION –E (LA 5X3=15)

26	Explain various methods of transfer of heat with suitable examples. OR Explain the process of Land Breeze & Sea Breeze with labelled diagram.	5
27	Explain the process of digestion in human being with labelled diagram	5
28	List down & explain five characteristics of images formed by a Plane Mirror.	5

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