



INDIAN SCHOOL AL WADI AL KABIR



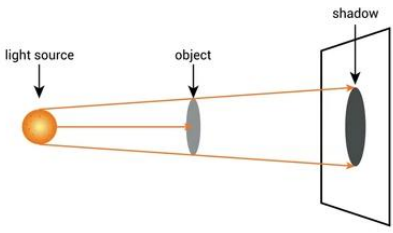
CLASS: VII	DEPARTMENT: SCIENCE	MAX. MARKS: 80
DATE: 22-9-2026	MID-TERM EXAM ANSWER KEY-SET II	TIME: 2 1/2 HOUR

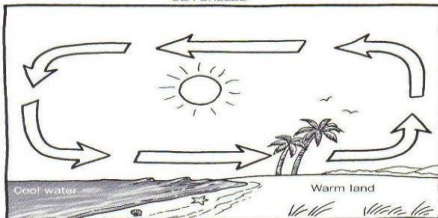
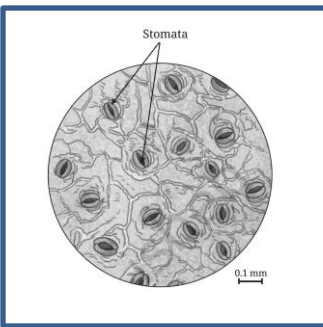
MARKING SCHEME

	SECTION A (1X20=20)	MARKS
1.	(b) Curiosity and questioning	1
2.	(c) Electrical conductivity	1
3.	(b) It changes red litmus to blue.	1
4.	(a) P is acidic and Q is basic	1
5.	(a) Record the observation and repeat the experiment.	1
6.	(c) Test tube C as the solution is an acid.	1
7.	(b) Gravel has larger, well-connected spaces that allow water to pass through easily.	1
8.	(d) The contraction of muscles in the wall of the food pipe.	1
9.	(b) Evaporation → Condensation → Cloud formation → Precipitation	1
10.	(b) It is hotter and less dense than the surrounding air	1
11.	(a) They are digested into simpler substances and then absorbed into the blood.	1
12.	(b) Most light will pass through, so a dark shadow will not form.	1
13.	(a) Release of carbon dioxide.	1
14.	(b) Starch	1
15.	(b) Diaphragm relaxes and moves upward → chest cavity becomes smaller → air moves out of the lungs.	1
16.	(b) Multiple reflections of light.	1
17.	(B) Both A and R are true, but R is not the correct explanation of the assertion.	1
18.	(B) Both A and R are true, but R is not the correct explanation of the assertion.	1
19.	(C) A is true, but R is false.	1
20.	(A) Both A and R are true, and R is the correct explanation of the assertion.	1

	<u>SECTION B (2X6=12)</u>											
21.	a) Sundial b) It is an ancient timekeeping device that indicates time of day by using the shadow cast by the sun.	1 1										
22.	a) The substances whose odour changes in an acidic or basic medium are called olfactory indicators. b) Acids have a sour taste. They are corrosive in nature. They turn blue litmus red. Acids are soluble in water. Heat is produced when a strong acid is mixed with water. [Any 2 properties]	1 $\frac{1}{2} + \frac{1}{2} = 1$										
23.	A – CONDUCTION: The process by which heat is transferred from the hotter end to the colder end of an object without actual movement of particles.	2										
24.	a) <table border="1"><tr><td>Breathing</td><td>Respiration</td></tr><tr><td>Physical process</td><td>Chemical process</td></tr><tr><td>Takes place in the lungs</td><td>Takes place in cells</td></tr><tr><td>Involves inhaling and exhaling</td><td>Involves releasing energy</td></tr><tr><td>(Any 1)</td><td></td></tr></table> b) Chapathi contains starch. Our saliva contains digestive juice that helps break down starch into sugar. This is why chapathi tastes sweet after chewing for some time.	Breathing	Respiration	Physical process	Chemical process	Takes place in the lungs	Takes place in cells	Involves inhaling and exhaling	Involves releasing energy	(Any 1)		1 1
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25.	a) The digestive juice of the stomach breaks down protein present in the food into simpler components. b) Because the oxygen inhaled is used up for breakdown of glucose and the carbon dioxide produced during respiration process is exhaled.	1 1										
26.	a) Pin hole camera, it works on the principle that light travels in a straight line (rectilinear propagation of light). b) The nature of the image is real and inverted.	1 1										

	SECTION C (3X7=21)	
27.	a) Rotation of earth causes day and night. b) Examples-Melting of ice, folding of paper, dissolving salt in water, inflating and deflating a balloon, stretching a rubber band etc. c) A turmeric stain changes from yellow to red when washed with soap because turmeric is a natural indicator. Soap is basic in nature, and turmeric turns red in a basic substance.	1 1 1
28.	a) Excessive use of chemical fertilisers made the soil acidic. b) When the soil is too acidic, it can be treated with lime. If the soil is basic, organic matter like manure and composted leaves are added to it.	1 1+1=2
29.	a) i) Room heater warms the air near the floor. When the warm air rises up, the cool air sinks to the floor, which results in effective heating of the room. ii) Exhaust fans are fitted near the ceiling for hot air to escape. iii) Sea breeze iv) Land breeze (Any two) b) Infiltration is the process by which water from the surface seeps into the soil and moves down into rocks beneath the ground.	1+1 1
30.	a) A- Trachea or wind pipe B- Lungs b) i) Villi are small finger-like projections present in the inner walls of the small intestine. ii) Its function is to increase the surface area of the small intestinal wall to absorb the digested food.	$\frac{1}{2} + \frac{1}{2} = 1$ 2
31.	X – Carbon dioxide Y – Sunlight Z – Glucose Process – Photosynthesis-The process by which plants make their own food from carbon dioxide, water and minerals by using sunlight, in the presence of chlorophyll is called photosynthesis.	3
32.	a) (i) Plane mirror forms an erect image. (ii) It forms a virtual image. (iii) Size of the image is the same as that of the object. (iv) Image is formed at the same distance behind the mirror as the object stands in front of it. (v) Image formed is a laterally inverted image i.e., right-hand side of the object seems to be the left-hand side and vice-versa. (Any 4) b) Distance between mirror and image-15 cm When the pencil is moved 9 cm towards the mirror New object distance-15-9=6 cm. So, distance between object and image=6+6=12 cm	$\frac{1}{2} \times 4 = 2$ 1

33.	a)  b) A dark outline or patch formed by an opaque object that blocks light coming from a source of light is called a shadow. Any two conditions are- • A source of light, • An opaque object, and • A screen to observe a shadow.	1 $1 + \frac{1}{2} + \frac{1}{2} = 2$																								
	SECTION D (5X3=15)																									
34.	a) The reactions in which an acid and a base react to produce salt and water are called neutralisation reactions. $\text{Acid} + \text{Base} \rightarrow \text{Salt} + \text{Water}$ (heat is evolved) b) <table border="1"> <thead> <tr> <th>S.No.</th><th>Test Solution</th><th>Effect on Red rose extract</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Sodium Hydroxide</td><td>Green</td></tr> <tr> <td>2</td><td>Salt solution</td><td>No Change</td></tr> <tr> <td>.</td><td></td><td></td></tr> <tr> <td>3</td><td>Hydrochloric acid</td><td>Red</td></tr> <tr> <td>.</td><td></td><td></td></tr> <tr> <td>4</td><td>Lime water</td><td>Green</td></tr> <tr> <td>.</td><td></td><td></td></tr> </tbody> </table> c) Litmus is a natural substance obtained from lichens. It is commonly used as natural indicator.	S.No.	Test Solution	Effect on Red rose extract	1.	Sodium Hydroxide	Green	2	Salt solution	No Change	.			3	Hydrochloric acid	Red	.			4	Lime water	Green	.			1 $\frac{1}{2} \times 4 = 2$ 2
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35.	a)  b) i) Porcelain is a poor conductor of heat, so it does not allow heat to escape quickly, keeping the tea hot for a longer time. ii) Because light colours are poor absorbers of heat and dark colours are good absorbers. c) Thermometer A will record higher temperature. When water at the bottom gets heated, it becomes lighter and rises upward. This hot water reaches the top and touches the thermometer, making it record a higher temperature.	2 2 1
36.	a) i) Sodium hydroxide absorbs carbon dioxide from the air inside the setup. ii) Carbon dioxide is necessary for photosynthesis, as the leaf deprived of carbon dioxide does not produce starch. b) Xylem carries water and minerals from the roots to the aerial parts, while phloem transports prepared food from the leaves to different parts of the plant. c) 	2 2 1
SECTION E (4X3=12)		
37.	i) A periscope is an optical instrument used to see objects that are not directly visible to the observer. It is used in submarines to observe objects above the water surface while remaining underwater. ii) The mirrors are placed at an angle of 45° to the tube. iii) Periscope works on the principle of multiple reflection.	4

38.	i) Liver produces bile juice which help in the digestion of fats by breaking large fat droplets into smaller droplets. Pancreas produces pancreatic juice, which contains enzymes that help digest carbohydrates, proteins and fats. ii) The pancreas is a gland located below the stomach. iii) The pancreatic juice is basic in nature and helps neutralise acids present in the food.	4
39.	i) After applying Vaseline for a week, Sana noticed that the plant had completely withered, turned yellow, and died, despite having plenty of water, soil nutrients, and sunlight. ii) Stomata help in the exchange of gases. iii) Photosynthesis and respiration.	4