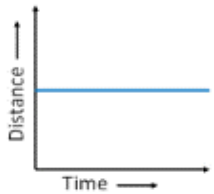
INDIAN SCHOOL AL WADI AL KABIR

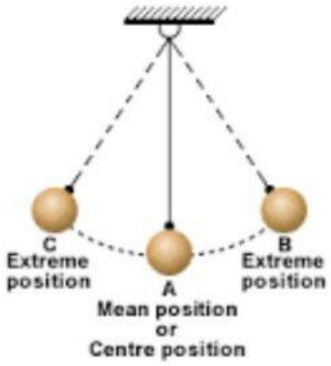
MID TERM EXAMINATION(2024-25)

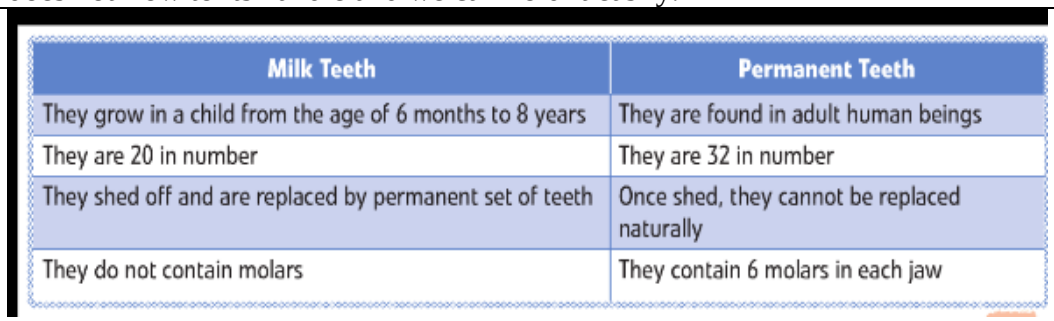
CLASS: VII **Sub: SCIENCE** **MAX.MARKS: 80**

DATE: 22/09/2024 **Set -I** **TIME: 2 ½ HOUR**

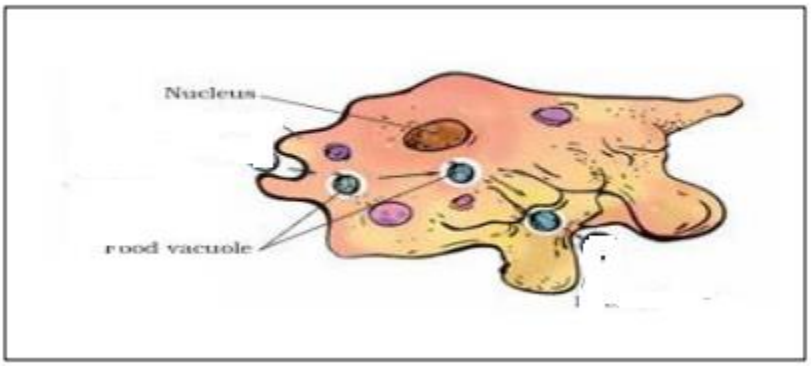
SECTION A (1X20=20)

1	a) Nutrition	1
2	c) White fabric	1
3	c) Molars and premolars	1
4	d) Colourless and pink	1
5	d)Not flow from iron ball to water or from water to iron ball.	1
6	a)The test tube got hot.	1
7	c) Convection	1
8	b)Acid rain	1
9	c) 1.6 s	1
10	d) 	1
11	b) Odometer	1
12	c) Spiracles	1
13	a) No, as other coloured leaves also have chlorophyll and can perform photosynthesis.	1
14	b) 15-18 times in a minute	1
15	a)Due to anaerobic respiration in yeast.	1
16	c) In the presence of sunlight, chlorophyll-containing cells of leaves use carbon dioxide and water to synthesise carbohydrates	1
17	(iii) A is true but R is false.	1
18	iv) A is false but R is true.	1
19	i) Both A and R are true and R is the correct explanation of the assertion.	1
20	ii) Both A and R are true but R is not the correct explanation of the assertion	1
	SECTION B (2X6=12)	
21	a) Growing crops inside large greenhouses provides the required temperature for crops and protects crops from wind, cold, insects, etc. b) A-guard cells B-stomatal opening	1 ½ + ½
22	a) Copper is a better conductor of heat than stainless steel. b) Two bodies should be in the solid state, they should be in direct contact with each other and their temperatures should be different. (Any two points)	1 ½ + ½

23	a) Pseudopodia are used by amoeba to capture their prey and also for movement. 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.	1 ½ + ½
24	a) Indicators are dyes (substances) that change their colour when it is in an acidic and basic solution. b) Great care should be taken while handling laboratory acids and bases because these are corrosive and can cause skin irritation and burns.	1 1
25		1+1(draw and label)
26	a) During drowsiness, our breathing rate slows down. The lungs do not get enough oxygen from the air, resulting in yawning. Yawning brings extra oxygen into the lungs and removes more carbon dioxide and thus, helps us to stay awake. b) A-Trachea or wind pipe B -Lungs	½ + ½ ½ + ½
	SECTION C(3X7=21)	
27	a) ACIDS- 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. BASES- Bases are slippery or soapy to touch. They taste bitter. They turn red litmus blue. They react with acids to produce salt and water.	Any two 1+1

	b**)** When an ant bites, it injects formic acid into the skin. Calamine solution contains zinc carbonate which is basic in nature. Therefore, it is applied on the skin to neutralise the effect of formic acid.	1
28	a) The presence of starch in leaves can be tested by iodine test. First, we need to boil the leaf in water and then we remove the chlorophyll from the leaf by boiling it in alcohol. Then add 2 drops of iodine solution, if its colour changes to blue then it indicates the presence of starch. b) The pitcher plant is green and carries out photosynthesis.The nitrogen requirement of Pitcher plants is provided by the insects that these plants capture. Pitcher plants have a pitcher-like structure which is a modified part of the leaf. The apex of the leaf forms a lid that can open or close the mouth of the pitcher. When an insect lands in the pitcher, the lid closes and the trapped insect gets entangled into the hair inside the pitcher. The insect is digested by the digestive juices secreted in the pitcher.	1½ 1 ½
29	a) Effect of carbon dioxide on lime water/ Carbon dioxide is given out during exhalation. b) The lime water in test tube 'B' turns milky but the water in test tube A' remains unchanged. It is because carbon dioxide present in the exhaled air, mixes with lime water in test tube 'B' and the lime water turns milky white due to the formation of calcium carbonate.	1 2
30	**a**) A-Sundial B -Sand clock b) Speed of the train = 200 km/h. Time taken = 12 h. Distance covered = Speed x Time = 200 x 12 = 2400 km.	½ + ½ ½ ½+ ½+½
31	a) SEA BREEZE - During the day, the land heats up much faster than seawater. So, the air above the land becomes hotter and rises up. The cool air above the sea surface moves towards land to fill the space. This flow of air from the sea towards the land is called **sea breeze**. (b)Plastic is a bad conductor of heat due to which the heat from the cooker does not flow to its handle and we can hold it easily.	2 1
32		2

Milk Teeth	Permanent Teeth
They grow in a child from the age of 6 months to 8 years	They are found in adult human beings
They are 20 in number	They are 32 in number
They shed off and are replaced by permanent set of teeth	Once shed, they cannot be replaced naturally
They do not contain molars	They contain 6 molars in each jaw

	b) Cellulose is a carbohydrate that can be digested only by ruminants and not by humans. This is because humans lack the cellulose-digesting bacteria in their stomachs. Ruminants have a large sac-like structure between small and large intestines called caecum where the food containing cellulose is digested by the action of certain bacteri	½ + ½
33	a) Cuscuta doesn't have chlorophyll. It takes readymade food from the plant on which it climbs. It deprives its host of valuable nutrients. b) i) Saprotrophic nutrition. ii) The saprophytes secrete digestive juices on the decaying and dead matter. These juices convert the matter into a solution. The saprophytes then absorb the nutrients from the solution	1 ½ 1½
	SECTION D(5X3=15)	
34	a)  b) Amoeba feeds on some microscopic organisms. When it senses food, it pushes out pseudopodia around the food particle and engulfs it. The food becomes trapped in a food vacuole. Digestive juices are secreted into the food vacuole. They act on the food and break it down into simpler substances. Gradually, digested food is absorbed and used for growth, maintenance, and multiplication. c) When digestion is completed, carbohydrates get broken into glucose, fats into fatty acids, and glycerol and proteins into amino acids.	1+1 (drawing, Labelling) 1½ 1½
35	a) (i) SIMILARITIES: i) Both thermometers consist of long narrow uniform glass tubes. ii) Both have a bulb at one end with mercury. iii) Both use the Celsius scale on the glass tube.	½ +½

	(ii)DIFFERENCES: <table><tr><th>LABORATORY THERMOMETER</th><th>CLINICAL THERMOMETER</th></tr><tr><td>i) The range of a laboratory thermometer is generally from -10˚C to 110˚C</td><td>i) The range of a clinical thermometer is from 35˚C to 42˚C</td></tr><tr><td>ii) Kink is absent</td><td>ii) Kink is present</td></tr><tr><td>iii)It is used for measuring the temperature of other objects</td><td>iii)It is used only for measuring human body temperature</td></tr></table> b) The two thin blankets joined together will have a layer of air trapped in between them. Air doesn't allow our body heat to escape to the cold surroundings and hence keep us warm.	½ x 4=2 2
36	a) We often sneeze when we inhale a lot of dust-laden air to expel the foreign particles. These particles get past the hair in the nasal cavity and irritate the lining of the cavity which results in sneezing. b) The pain in her legs could be due to the accumulation of lactic acid in the muscles. During heavy exercise, our body does not get enough oxygen to produce the required energy. To get the additional energy, the muscle cells respire anaerobically. During this process, partial breakdown of glucose occurs to produce lactic acid which on accumulation causes muscle cramps. b) As we take in the air (inhalation) it fills up the lungs. This moves the ribs up and outwards while the diaphragm moves downwards. The lungs while releasing air (exhalation) from the body, move the ribs down and inward while the diaphragm moves into its original position.	1 2 1 +1
	SECTION E (3X4=12)	
37	i) Plants cannot use nitrogen in the manner they use carbon dioxide. They need nitrogen in soluble form. ii) As plants absorb mineral nutrients from the soil, their amounts in the soil keep on declining. Fertilisers and manures contain plant nutrients that need to be added from time to time to enrich the soil. iii) A bacterium called Rhizobium, living in the roots of legumes like peas and beans, can convert atmospheric nitrogen into a usable form for plants. In return, the plants provide Rhizobium with food and shelter, forming a symbiotic relationship.	1+1+2
38	i) Bases like quick lime (calcium oxide) or slaked lime (calcium hydroxide). ii) Organic matter releases acids that neutralises the basic nature of the soil. iii) The wastes of many factories contain acids. If they are allowed to flow into the water bodies, the acids will kill fish and other organisms. The factory wastes are, therefore, neutralised by adding basic substances.	½ + ½ 1 2
39	a) The advantage of distance-time graphs is that they give information	1

	about the nature of the motion of an object like uniform or non-uniform motion. The motion of an object can be represented by its distance-time graphs**.** b) A, The steeper the graph's slope, the faster the object moves, c) If a body covers unequal distances in equal intervals of time, then its motion is called non-uniform motion	1 2