

Class : 7

**BASIC SCIENCE**

Time: 2 Hrs 15 minutes

**Instructions**

- 15 minutes cool-off time is allotted for reading and understanding the activities.
- Answer any six questions.
- Questions 3 and 4 have two parts (A & B). Answer any one of them.

1.

a) In which of the following organ does digestion complete?

A. Small intestine      B. Stomach      C. Liver      D. Large intestine

b) Food in the mouth undergo changes. Complete the table showing the organs in the mouth and their roles.

Organs	Role in digestion
Lips	A. ....
B. ....	Chewing
C. ....	D. ....

c) Certain characteristics of human teeth are given below. Examine them and list them under suitable headings.

- A. A tooth that develops around six months of age.  
 B. A tooth that will not develop again when it breaks or gets loose.  
 C. 20 teeth  
 D. 32 teeth

2. a) Plan an experiment to identify conductors and insulators and prepare a note.

(You can use Blade, Safety pin, a piece of wood, tiles, charcoal, pencil graphite, glass bangle, metal bangle, wet paper and anklet)

b) Classify and tabulate the materials you have used for the experiment under suitable titles.

c) Statement – All metals are conductors.

Reason – Metals are insulators.

- A. Statement is correct and reason is wrong.      B. Statement and reason are wrong.  
 C. Statement is wrong and reason is correct.      D. Statement and reason are correct.

3. Question 3 has two parts 3 (A) &amp; 3 (B). Write either 3 (A) or 3 (B).

3. (A) a) The table prepared by a student on the basis of transmission or reflection of light by the objects is given below. Examine the table and identify the correct match.

Object		Peculiarity	
1	Cardboard	a	Translucent object
2	Kaleidoscope	b	Transparent object
3	Butter paper	c	Multiple reflection
4	Glass slab	d	Opaque object



A. 1 b, 2 c, 3 a, 4 d

B. 1 d, 2 c, 3 a, 4 b

C. 1 c, 2 c, 3 a, 4 b

D. 1 d, 2 a, 3 c, 4 b

- b) A table showing the angle of measurement and the number of images formed by the arrangement of two plane mirrors are given below. Examine the table and write your inferences.

Angle	Number of images
$30^{\circ}$	11
$60^{\circ}$	5
$90^{\circ}$	3
$120^{\circ}$	2

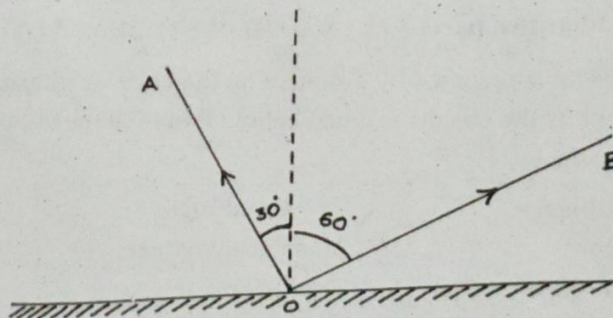
- c) Which device is used by the sailors travelling in submarines in the deep sea to find enemies? What characteristics of plane mirror is used here?

OR

3. (B). Observe the figure.



- a) What property of plane mirror is used to write **ECNALUBMA** on the front of this vehicle? How does this help drivers of the vehicles moving in front of this vehicle?
- b) The distance from an object to the front of a plane mirror is 10 cm and the height is 3 cm. Then, what will be the distance from the mirror and the height of the image?
- A. Distance is 10 cm and height is 3 cm      B. Distance is 5 cm and height is 3 cm  
C. Distance is 5 cm and height is 6 cm      D. Distance is 20 cm and height is 3 cm
- c) Regular reflection of light falling on a plane mirror is shown in the figure below. Identify the mistakes and draw correctly.



4. Question 4 has two parts 4 (A) & 4 (B) Write either 4 (A) or 4 (B).

4. (A)

a)

Though teeth have the hardest material called enamel, why do they decay?



What explanation would you give to the child's doubt?

b) What type of teeth help the organisms obtain their food?

1. Cow, 2. Lion

c) Which category does the hardest material, enamel in the human body belong to?

- A. Calcium compound      B. Carbohydrate  
C. Protein                      D. Fat

OR

4. (B)

a) The following table contains different stages and organs involved in the process of nutrition. Find the correct match.

Stages		Organs	
1	Turning food into a paste form	a	Large intestine
2	Completion of digestion	b	Stomach
3	Absorption	c	Small intestine
4	Absorption of water and salts from the digestive waste	d	Villi

- A. 1 c, 2 b, 3 d, 4 a      B. 1 b, 2 c, 3 d, 4 a  
C. 1 a, 2 d, 3 c, 4 d      D. 1 d, 2 a, 3 b, 4 c

- b) Through which organ does food reach the stomach from the mouth? What kind of movement enable this? Explain.  
c) Digestive juices which help in digestion and the organs that secrete them are given below. Complete the table.

Digestive juice	Secreting organ
Saliva	A. ....
Bile	B. ....
C. ....	Pancreas
Hydrochloric acid	D. ....



5. Two steel tumblers which could not be separated easily got separated when they were immersed in hot water.

a) What property of heat is benefited here?

- A. Thermal expansion      B. Conduction  
C. Convection                D. Radiation

b) Classify the following objects based on transmission of heat and give suitable heading.

(Iron, Paper, Bakelite, Copper, Wood, Aluminium, cloth)

A. ....	<b>Poor conductors</b>
Iron	Paper
B. ....	C. ....
D. ....	Cloth

c) How is heat loss prevented in a hot box?

6. a) Dates, leafy vegetables, seeds and dried fruits are food items that are rich in iron. What is the role of iron in the circulatory system?

b) A table on circulatory system is given below. Complete the table appropriately.

Component of blood	Peculiarity	Function
Plasma	Liquid part of the blood	A. ....
White blood cell	B. ....	C. ....
D. ....	Disc shaped	Exchange of oxygen and carbon dioxide

c) Name the double membrane which covers the heart.

- A. Pericardium                B. Pleura  
C. Meninges                    D. Epidermis