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Electricity and Circuits

ORAL QUESTIONS

A. Answer these questions orally.

1. Who made the first cell?
2. What is the source of energy to generate electricity in a hydropower plant?
3. What is the combination of two or more cells called?
4. Name one of the simplest electrical devices.
5. What is the switch in its disconnected state called?

B. State true or false.

1. The first source of electric current was the voltaic cell.
2. An electric circuit is a device which is used to put a device on or off.
3. If the filament of a bulb breaks, the bulb continues to glow on passing electric current.
4. Copper is an insulator.
5. A closed path for the flow of electric current is called an electric circuit.

PUZZLE/QUIZ

C. You have learnt many new terms in this chapter. Find atleast eight such terms from the word maze given below.

F	U	S	E	D	B	U	L	B	M	C	O
I	A	P	O	H	A	F	G	E	K	O	P
L	G	P	H	Q	T	F	N	O	E	N	E
A	F	S	W	I	T	C	H	D	A	D	N
M	W	I	B	X	E	M	Y	Z	D	U	C
E	J	M	N	K	R	L	C	C	P	C	I
N	C	A	V	I	Y	B	J	K	L	T	R
T	E	R	M	I	N	A	L	S	J	O	C
U	L	I	N	S	U	L	A	T	O	R	U
Q	L	Z	Q	O	N	R	P	I	L	T	I
T	E	D	X	R	G	X	V	S	X	U	T
C	I	R	C	U	I	T	H	R	B	W	S

CLASS TEST

D. MCQ–Tick (✓) the correct option.

1. The first source of continuous flow of electricity, cell was devised by
   (a) Alessandro Volta ☐
   (b) Thomas Alva Edison ☐
   (c) Sir Isaac Newton ☐
   (d) Michael Faraday ☐
2. Which of the following materials in an insulator?
   (a) Copper ☐ (b) Gold ☐
   (c) Silver ☐ (d) Wood ☐
3. Which of the following is a conductor of electricity?
   (a) Rubber ☐ (b) Paper ☐
   (c) Graphite ☐ (d) Plastic ☐
4. The combination of two or more cells is called
   (a) Torch ☐ (b) Battery ☐
   (c) Switch ☐ (d) Circuit ☐

E. Very short answer questions.

1. What is an open circuit?

   _____

2. What is a closed circuit?

   _____

3. What is a filament?

   _____

4. What is a fused bulb?

   _____

5. What is an electric power point?

   _____

6. What do you understand by an electric current?

   _____

F. Short answer questions.

1. Why does an electric bulb not glow sometimes even if it is not fused?

2. What are the essential requirements to make an electric circuit?

3. What is the direction of flow of electric current in a closed circuit?

4. Name at least three good conductors of electricity, other than metals.

5. Metals are good conductors of electricity. Is this property of metals useful to us in any way?

6. Rubber and plastics are insulators. Is this property of rubber and plastics useful to us in any way?

7. Which of these are conductors and insulators of electricity?

   Rubber, Glass, Aluminium, Salt solution, Dry air, Moist air, Plastic, Wood, Copper Wire, Cotton, Paper, Gold, Silver.

G. Long answer questions.

1. When is a cell called a 'dead cell'?

2. How does a cell produce an electric current?

3. Draw a dry cell and explain what is present inside a dry cell.

4. List the precautions we must take while working with electricity.

5. Conductors and insulators are very important to us. Justify this statement.

HOME ASSIGNMENT

H. Think and answer.

1. Ravi connected a fused bulb with an electric circuit. He found that the bulb did not glow. What could be the reason?

2. Simi connected a bulb with an electric circuit. She found that the bulb did not glow. What could be the possible reasons?

3. Pushkar was trying to put a metal key into an electrical socket. John told him not to do so. Why?

WORKSHEET

I. Give reasons for the following.

1. Pliers have plastic handles.

2. The workers who operate the electrical machines in industries and factories are provided with thick foot mats of insulating materials.