



#### SHORT ANSWER TYPE QUESTIONS

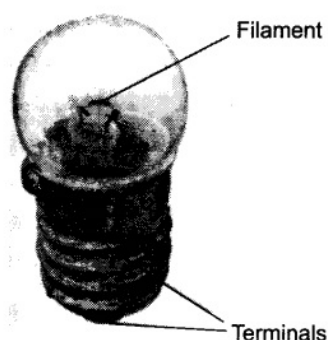
1. Mention two advantages of a dry cell.

Ans:

1. It converts chemical energy into electrical energy.
2. It is light and small in size.

2. Draw a diagram showing the two terminals of a bulb.

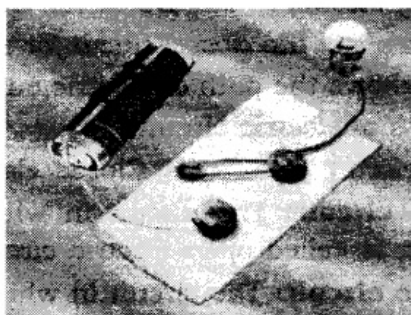
Ans:



**Fig. 12.12** Torch bulb

3. Draw the circuit diagram for operating a bulb with the help of a dry cell.

Ans:



**Fig. 12.13** An electric circuit with a switch

4. Define conductors and insulators. Give one example of each.

Ans: A conductor is that which easily allows the passage of current through it. Example: Aluminium or any metal.

An insulator is that which does not allow the passage of current through it. Example: Rubber.

5. Identify conductors and insulators from the following: Eraser, paper, matchstick, copper wire, pencil lead, polythene

Ans: Conductors: Copper wire, pencil lead.

Insulator: Eraser, paper, matchstick, polythene.

6. Name the scientist who invented electric cell and the scientist who invented electric bulb.

Ans: Electric cell: Alessandro Volta.

Electric bulb: Thomas Alva Edison.

7. Give one activity to prove that air is an insulator.

Ans: Take an electric circuit, keep the terminals unconnected in the air. The bulb do not glow, as air is an insulator and does not allow the current to flow through it.

8. In any electric circuit, when the switch is on and the current flows through it why do the wire, switches, bulb or devices become hot?

Ans: This is because electric energy changes into heat energy.

9. The headlights of a car have reflectors behind the bulb. What is the function of reflectors?

Ans: The reflector helps in reflecting the light into a focussed area.

10. If you touch an electric wire carrying current you get a shock, but if on the same wire the birds sit they do not get any shock/current. Explain why?

Ans: When we hold the wire carrying current then the circuit is closed and the current flows from our body and enters earth but the birds sitting on the same wire do not get any current as the circuit is not complete. If the bird touches the earth wire, it will also die due to electric shock.

#### LONG ANSWER TYPE QUESTIONS

1. (1) What is electric circuit?

(2) How many types of electric circuit are there? Define them.

(3) Draw a diagram to show the closed circuit for switch, bulb and dry cell.

Ans: (1) The diagram that shows the path of electric current is called electric circuit.

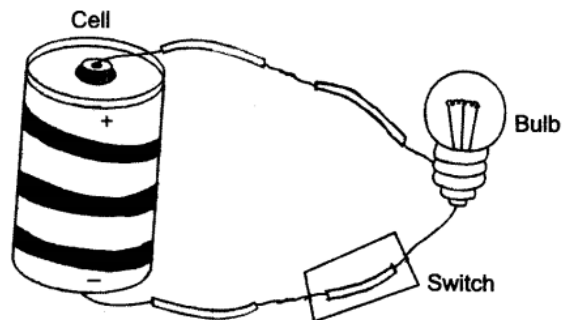
(2) There are two types of electric circuit:

(a) Open electric circuit

(b) Closed electric circuit

(a) Open electric circuit: The circuit in which electrical contact at any point is broken is called open electric circuit.

(b) Closed electric circuit: The circuit in which electric current flows from one terminal of a cell or battery to the other is called a closed circuit.



**Fig. 12.14**

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