

**Chapter-12**

**ELECTRICITY AND CIRCUITS**

QUESTION 1 List the components of an electric circuits?

Ans. The various components of an electric circuit are bulb, cell, battery, switch and wires.

QUESTION 2 What are the uses of an electric cell?

Ans Electric cell provides electricity to the bulb of a torch. Electric cell are also used in alarm clocks, wristwatches, transistor radios, cameras and many other devices.

QUESTION 3 What does an electric cell look like?

Ans. An electric cell has a metal cap on one side and a metal disc on other side.

QUESTION 4 How many terminals are there in an electric cell?

Ans All electric cells have two terminals; positive and negative. The metal cap is the positive terminal of the cell. The metal disc is the negative terminal.

QUESTION 5 How does an electric cell produces electricity?

Ans An electric cell produces electricity from the chemicals stored inside it. When the chemicals in the electric cell are used up, the electric cell stops producing electricity. The electric cell then has to be replaced with a new one.

QUESTION 6 What is filament of the bulb?

Ans A thin wire that gives off light is called the filament of the bulb. The filament is fixed to two thicker wires, which also provide support to it.

QUESTION 7 How are terminals formed in an electric bulb?

Ans One of the thick wires which is supporting filament is connected to the metal case at the base of the bulb. The other thick wire is connected to the metal tip at the centre of the base. The base of the bulb and the metal tip of the base are the two terminals of the bulb. These two terminals are fixed in such a way that they do not touch each other.

QUESTION 8 Why does an electric cell and an electric bulb has two terminals each?

Ans An electric cell and an electric bulb have two terminals to form an electric circuit.

QUESTION 9 What is an electric circuit?

Ans An electric circuit is an arrangement which provides a complete path for electricity or current to pass between the two terminals of electric cell.

QUESTION 10 What is current?

Ans Flow of charges from an electric cell constitutes current.

QUESTION 11 What is the direction of electric current?

Ans The direction of current is taken to be from the positive to negative of the electric cell.

QUESTION 12 When does a bulb glow?

Ans When the terminals of the bulb are connected with that of the electric cell by wires, the current passes through the filament of the bulb. This makes the bulb glow.

QUESTION 13 What is an electric switch?

Ans A switch is a simple device that either breaks the circuit or completes it.

QUESTION 14 What are electric conductors?

Ans Electric conductors are materials which allow electricity to pass through them.

QUESTION 15 What are electric insulators?

Ans Electric insulators are materials which do not allow electricity to pass through them. Examples of insulators are paper, rubber, glass, wood etc.

QUESTION 16 What are the uses of conductors and insulators?

Ans Conductors and insulators are equally important to us .Switches electrical plugs and sockets are made of conductors. On other, rubber and plastics are used for covering electrical wires, plug tops, switches and other parts of electrical appliances, which people might touch.

QUESTION 17 Why does a bulb not glow when it is fused?

Ans An electric bulb may fuse due to many reasons. One reason for bulb to fuse is a break in its filament.