

1. If the switch in a circuit is OFF, the circuit is

- a) Closed b) Open c) Short circuit d) Parallel

2. Which device protects circuits from excessive current?

- a) Cell b) Fuse c) Bulb d) Switch

3. When two bulbs are connected in series and one bulb fuses, the other bulb

- a) Glows brighter b) Glows dim
c) Stops glowing d) Explodes

4. Assertion: Electric current flows only in a closed circuit.

Reason: A break in the circuit stops the flow of charges.

5. Assertion: A fuse wire melts when too much current flows.

Reason: Fuse wire has a low melting point.

6. Why are connecting wires coated with plastic?

- a) To increase resistance b) To make circuit open
c) To increase current d) To prevent electric shock

7. When resistance in a circuit increases, the current will

- a) Increase b) Decrease c) Remain same d) Stop immediately

8. In which situation will the bulb NOT glow?

- a) Open circuit with metal wire b) Closed circuit with metal wire
c) Closed circuit with copper wire d) Closed circuit with aluminium wire

9. Assertion: Electric current can pass through graphite.

Reason: Graphite is a form of carbon that does not conduct electricity.

10. Assertion: An LED has two long wires.

Reason: The LED must be connected correctly for current to flow and light to be produced.

11. **CASE STUDY:** Aman opened his torch to check why it was not working. He noticed that one cell was placed in the wrong direction. After placing the cell correctly, the torch started glowing.

1. Which part of the cell must be connected properly for current to flow? (1)
2. What is the direction of current flow in a circuit? (1)
3. Draw a circuit diagram including 1 bulb, 2 cells and a switch as in a torch. (2)
4. Name the component that converts electrical energy into light in the torch. (1)