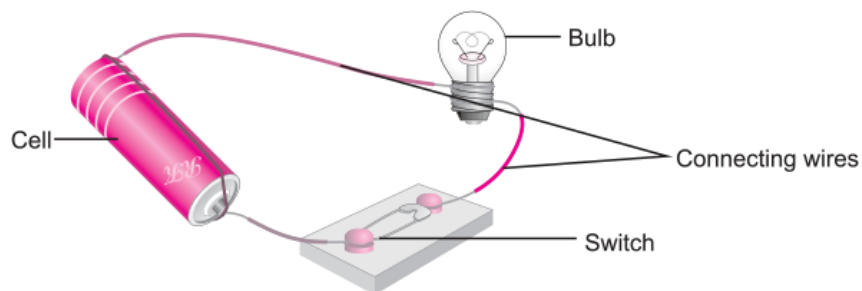


## Short Answer Questions

**Q.1. You are provided with a bulb, a cell, a switch and some connecting wires. Draw a diagram to show the connections between them to make the bulb glow.**

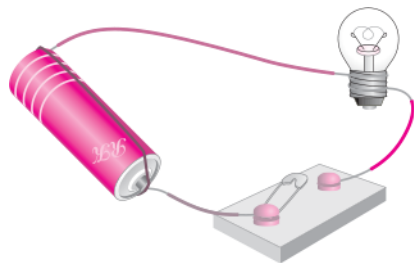
[NCERT Exemplar]

**Ans.**



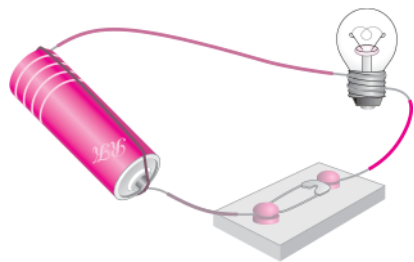
**Q.2. Will the bulb glow in the circuit shown below? Explain.**

[NCERT Exemplar]



**Ans.** No. The bulb will not glow in this circuit because the switch is open and the circuit is incomplete. Due to this there will be no current flow.

**Q.3. An electric bulb is connected to a cell through a switch as shown in figure below. When the switch is brought in 'ON' position, the bulb does not glow. What could be the possible reason/s for it? Mention any two of them.**



**Ans.** The reasons could be

- I. the bulb is fused.
- II. the cell is a used one.
- III. break in connecting wire.
- IV. loose connections. (Any two)

**Q.4. A torch requires 3 cells. Show the arrangement of the cells, with a diagram, inside the torch so that the bulb glows.** [NCERT Exemplar]

**Ans.**



**Q.5. When the chemicals in the electric cell are used up, the electric cell stops producing electricity. The electric cell is then replaced with a new one. In case of rechargeable batteries (such as the type used in mobile phones, camera and inverters), they are used again and again. How?** [NCERT Exemplar]

**Ans.** Rechargeable batteries can be recharged by providing them appropriate current.

**Q.6. Paheli connected two bulbs to a cell as shown in the figure given below.**



She found that filament of bulb B is broken. Will the bulb A glow in this circuit? Give reason. [NCERT Exemplar]

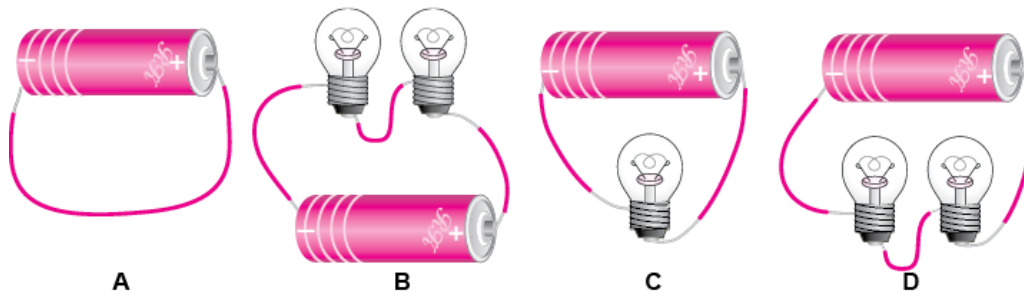
**Ans.** No, bulb A will not glow as the circuit is not complete.

**Q.7. Why do bulbs have two terminals?**

[NCERT Exemplar]

**Ans.** Bulbs have two terminals to connect the filament with the circuit so that the current can pass through it and get accumulated.

**Q.8. Which of the following arrangements A, B, C and D given below should not be set up? Explain, why.** [NCERT Exemplar]



**Ans.** Arrangement A is not desirable and should not be set up. This will exhaust the cell very quickly.

**Q.9. A fused bulb does not glow. Why?**

[NCERT Exemplar]

**Ans.** In a fused bulb the filament is broken and the circuit is incomplete. The current will not flow and the bulb will not glow.

**Q.10. Paheli wanted to glow a torch bulb using a cell. She could not get connecting wires, instead, she got two strips of aluminium foil. Will she succeed? Explain, how.**

[NCERT Exemplar]

**Ans.** Yes. Aluminium foils can act as connecting wires as it is a good conductor of electricity.

**Q.11. What are the essential components of an electric circuit?**

**Ans.** Connecting wires, bulb, switch and cell are the essential components of an electric circuit.

**Q.12. Why should you not touch electric appliances and switches with wet hands?**

**Ans.** Water is a good conductor of electricity and current passes very quickly through wet hands. Therefore, it can give us an electric shock.

**Q.13. Write two precautions that you must follow while handling electricity.**

**Ans.**

- I. Wear rubber gloves or slippers.
- II. Never touch switches with wet hands.

**Q.14. When a bulb is fused, it does not light up. Explain why?**

**Ans.** When a bulb is fused its filament breaks, which in turn breaks the electric circuit. Thus, current does not pass through it.

**Q.15. Why does a cell stop producing electricity after sometime?**

**Ans.** When the chemicals in the electric cell are used up, the electric cell stops producing electricity. Since all the chemicals are used, no chemical reaction takes place which will produce energy.

**Q.16. Write any two uses of electricity?**

**Ans.** Two uses of electricity are:

- I. To operate pumps that lift water from wells or from ground level to the roof top tank.
- II. Electricity makes it possible to light our homes, that makes our tasks easier.