

Exercise Questions

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1. Fill in the blanks:

- (a) A device that is used to break an electric circuit is called _____.
- (b) An electric cell has _____ terminals.

Solution:

- (a) A device that is used to break an electric circuit is called **switch**.
- (b) An electric cell has **two** terminals.

2. Mark 'True' or 'False' for following statements:

- (a) Electric current can flow through metals.
- (b) Instead of metal wires, a jute string can be used to make a circuit.
- (c) Electric current can pass through a sheet of thermo Col.

Solution:

- (a) True
- (b) False
- (c) False

3. Explain why the bulb would not glow in the arrangement shown in Fig. 12.13.

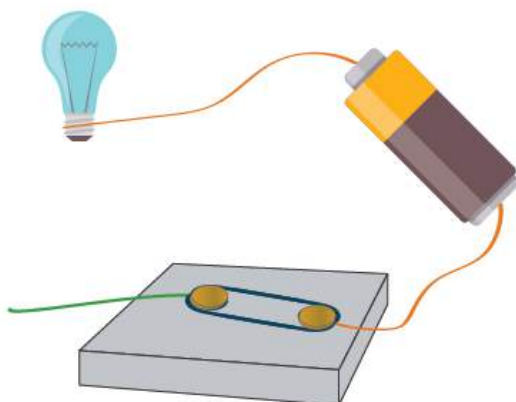


Fig. 12.13

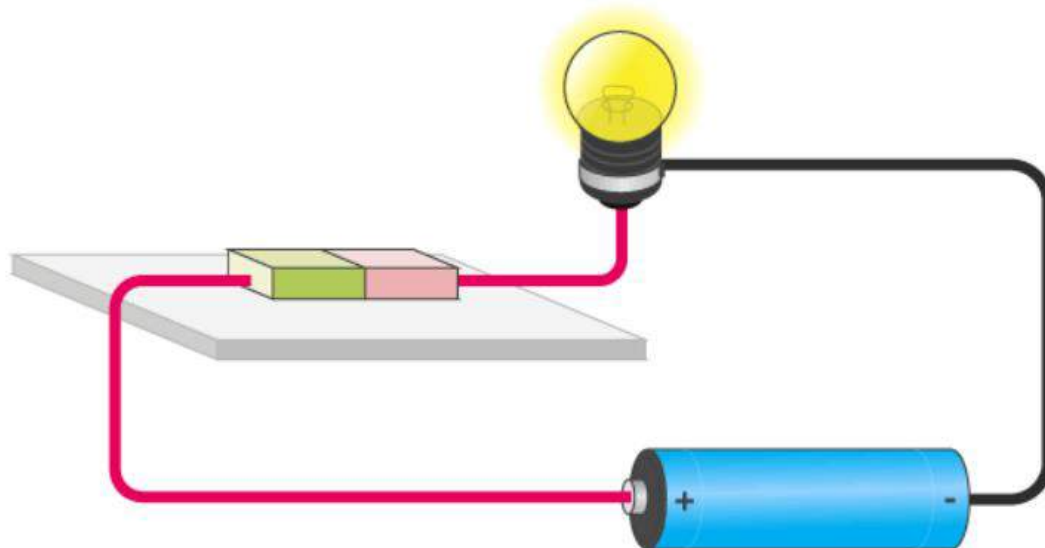
Solution:

The bulb would not glow in the arrangement because the circuit is not complete due to the presence of an insulator in the centre.

4. Complete the drawing shown in Fig 12.14 to indicate where the free ends of the two wires should be joined to make the bulb glow.



Solution:

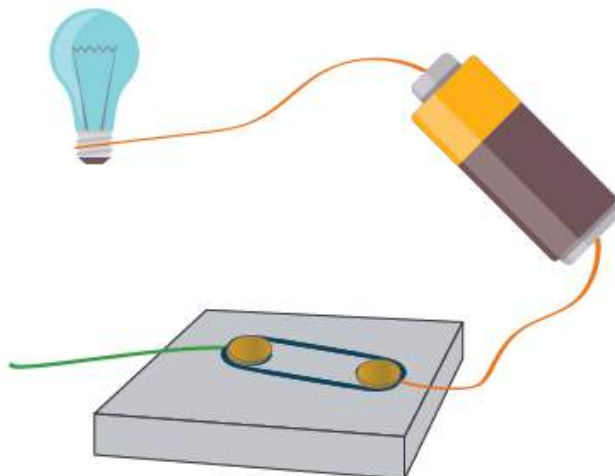


5. What is the purpose of using an electric switch? Name some electrical gadgets that have switches built into them.

Solution:

The purpose of an electric switch is to complete or break the circuit. Electrical gadgets that have switches built into them are fans, refrigerators, television, microwave ovens, and electric cookers.

6. Would the bulb glow after completing the circuit shown in Fig. 12.14 if instead of a safety pin we use an eraser?



Solution:

No, the bulb will not glow as the eraser is an insulator.

7. Would the bulb glow in the circuit shown in Fig. 12.15?



Fig. 12.15

Solution:

No, the bulb will not glow.

8. Using the “conduction tester” on an object it was found that the bulb begins to glow. Is that object a conductor or an insulator? Explain.

Solution:

The object is a conductor because the bulb glows only when the conductor is used but not when the insulator is used.

9. Why should an electrician use rubber gloves while repairing an electric switch at your home? Explain.

Solution:

An electrician uses rubber gloves while repairing an electric switch at your home because rubber gloves are insulators. This protects him from avoiding electric shocks.

10. The handles of the tools like screwdrivers and pliers used by electricians for repair work usually have plastic or rubber covers on them. Can you explain why?

Solution:

Tools like screwdrivers and pliers are used by electricians for repair work because plastic is an insulator, and plastic handles protect the electrician from electric shocks.

