



## INDIAN SCHOOL AL WADI AL KABIR



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| CLASS: VI            | DEPARTMENT: SCIENCE<br>2023 - 2024         | DATE OF COMPLETION<br>01.02.2024 |
| TEXTBOOK Q & A       | TOPIC: <b>ELECTRICITY AND<br/>CIRCUITS</b> | NOTE: A4 FILE FORMAT             |
| NAME OF THE STUDENT: | CLASS & SEC:                               | ROLL NO.                         |

### 1. Fill in the blanks:

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

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

- a] Electric current can flow through metals. [True]
- b] Instead of metal wires, a jute string can be used to make a circuit. [False]
- c] Electric current can pass through a sheet of thermocol. [False]

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

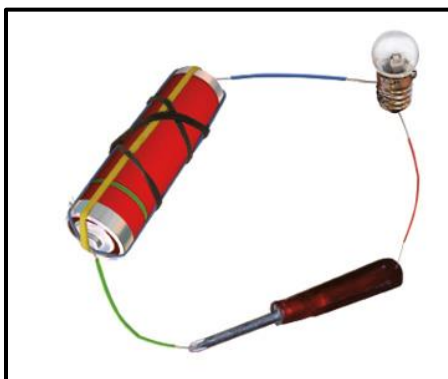


Fig. 12.13

Ans - The bulb would not glow in the arrangement shown in the figure because the one end of the tester/screwdriver is made up of plastic which does not allow the electric current to flow through it.

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.

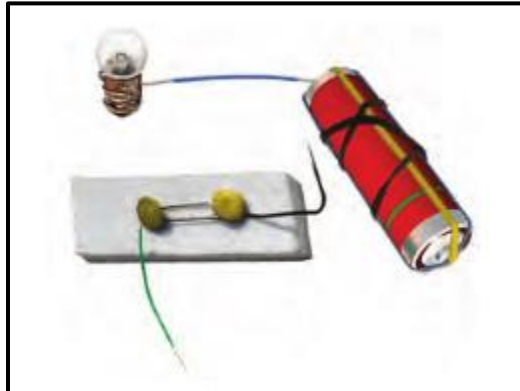
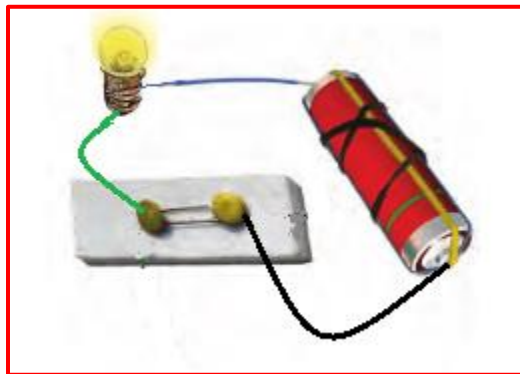


Fig. 12.14

Ans –



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

Ans – An electric switch helps in making as well as breaking the circuit without removing the connection. When the switch is ON, the current will flow and when the switch is OFF, the current will not flow in the circuit. Thus, it also saves electricity and makes the use of appliances easier.

Some electric gadgets are Televisions, Microwaves, Washing machines, Refrigerators etc.

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

Ans - No, since the eraser is an insulator it does not allow the current to pass. Hence the bulb will not glow.

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

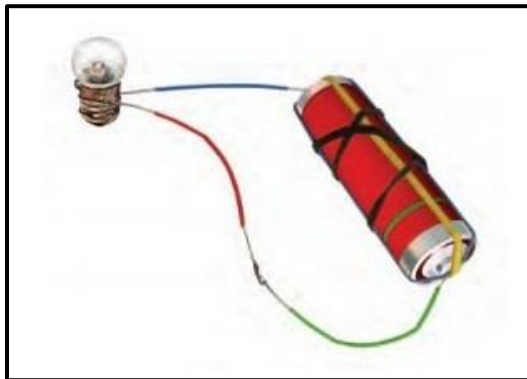


Fig. 12.15

Ans – No, because the wires are connected to the same terminal of the bulb and the circuit has not been completed.



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.

Ans - Yes, if the object is a good conductor of electricity then the current will pass through the conduction tester and the bulb will glow. Hence the object will be a conductor of electricity.

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

Ans - Our body is a good conductor of electricity and rubber is an insulator. During repairing work if the body comes in contact with current carrying wire then there will

not be any accident as rubber does not allow the passage of current through it. Hence electrician uses rubber gloves while repairing an electric switch.

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

**Ans - Plastic or rubber is an insulator which does not allow an electric current to pass through it. The handles of the tools like screwdrivers and pliers used by electricians for repair have a covering of plastic or rubber so that electric current may not pass through these tools to the body of the electricians to harm them.**

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