CBSE NCERT Solutions for Class 6 Science Chapter 12

Back of Chapter Questions

Fill in the blanks:

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

Solution:

Electric switch

Switch is a simple device that is used to either break the electric circuit or to complete it.

two

An electric cell has two terminals, one negative terminal and one positive terminal.

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:

True

Metals are good conductor of electricity so electric current can flow through metals.

False

Jute is a bad conductor of electricity so electric current will not flow through it.

False

Thermocol is a bad conductor of electricity so electric current will not pass through it.

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

Solution:
To glow the electric bulb, electric current should flow in the circuit. Electric current does not pass through bad conductors like wood, plastic etc. As we can see in the figure, one end of cell is connected to tester holder which is a bad conductor of electricity, so electric current will not flow in circuit. Hence, bulb will not glow in this case.

2. 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:
As we can see this circuit is not complete, so we will complete the circuit to glow the bulb. One end of switch is connected to positive terminal of cell and another end of terminal is connected to negative end of the cell. The complete closed circuit is shown in figure.

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

Solution:
Electric switch is used to open or close circuit for the flow of electric current. If switch is in ON condition, then current can flow through the circuit and if switch is in OFF condition, then current cannot flow through the circuit. We use so many electrical gadgets which have switch built into them. Example: table fan, torch light, juicer, washing machine, fridge etc.

4. Would the bulb glow after completing the circuit shown in Fig. if instead of safety pin we use an eraser?
Solution:
Eraser is a bad conductor of electrical current. If safety pin is replaced with eraser, current will not flow in the circuit and circuit becomes the open circuit.

5. Would the bulb glow in the circuit shown in Fig.?

Solution:
As we can see in the figure that two terminals of cell are connected to single terminal of bulb which is same as cell and bulb are not connected. Bulb will not glow in this situation.

6. 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:
When “conduction tester” is touched with an object and the bulb glows in tester which means that current is flowing through object. The current will flow only if object is conductor of electricity. As given in the question, bulb glows when conduction tester is touched so the object is a conductor.

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

Solution:
Electric switch is an electrical appliance which is used to open or close the circuit. It conducts electricity through internal parts so if it is touched with naked hands, it may cause electric shock. Electrician use rubber gloves while repairing electric switch or any other electrical appliance because rubber is a bad conductor of electricity.

8. 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:**

The handles of the tools like screwdrivers and pliers used by electricians for repair work usually have plastic or rubber covers on them because rubber is a bad conductor of electricity. Rubber or plastic do not allow current to pass through them which protects from electric shocks.