

NCERT solution

Class 6 chapter 12

**Question 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 1.**

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

**Question 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 2.**

- (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 thermo Col. False

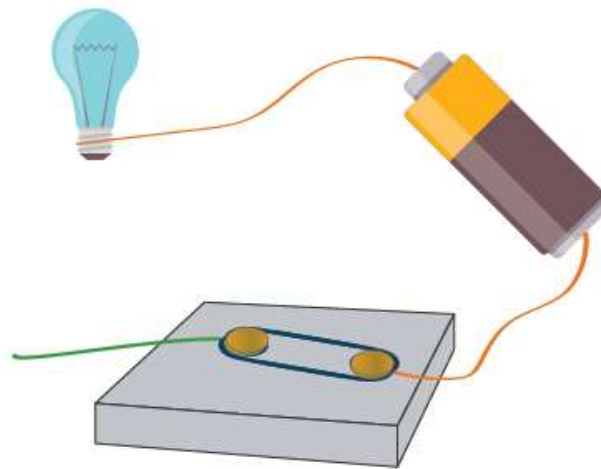
**Question 3. Explain why the bulb would not glow in the arrangement shown in Fig. 12.13.**



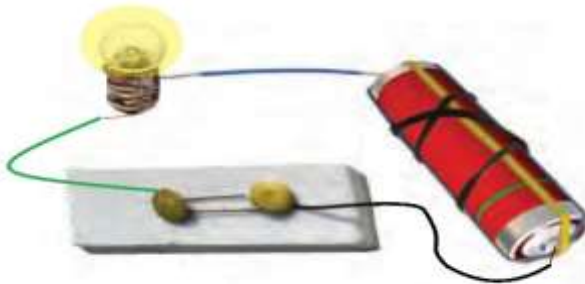
**Fig. 12.13**

**Solution 3.** In this arrangement the circuit is not complete because one wire is connected to an insulator which breaks down the circuit and does not allow the electric current to pass through the circuit. So, the bulb will not glow in this arrangement.

**Question 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 4.**



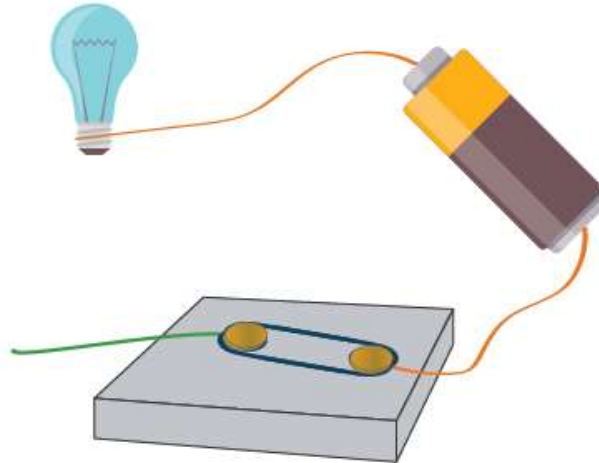
**Question 5. What is the purpose of using an electric switch? Name some electrical gadgets that have switches built into them.**

**Solution 5.** To complete or break a circuit, an electric switch is used.

Following are the electrical gadgets that have switches built into them:

- i. Fan
- ii. Refrigerator
- iii. Television
- iv. Microwave oven
- v. Electric cooker

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



**Solution 6.** No, if we use an eraser in place of safety pin the bulb will not glow because an eraser acts as an insulator.

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



**Fig. 12.15**

**Solution 7.** Yes, the circuit is complete hence the bulb will glow.

**Question 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 8.** The object is a conductor because the bulb begins to glow when the conduction tester is connected to the circuit and it completes the circuit allowing the electric current to pass through the circuit.

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

**Solution 9.** Our body act as a good conductor of electricity and may get electric shock when it comes to a contact with electricity. That is why while repairing an electric switch, an electrician should use rubber gloves because rubber is an insulator and will not allow any passage of current to the body.

**Question 10. If you touch an electric wire carrying current you get a shock, but if on the same wire the birds sit, they do not get any shock/current. Explain why?**

**Solution 10.** When we touch a current carrying electric wire then the circuit becomes closed and current enters the earth through our body that is why we get a shock. But if a bird sit on wire because it is not touched to earth it will not get any shock however, the bird will die due to the shock if it sits on earth wire.