

## Case study based questions

Q1 -7 under different case study read and answer

There is a variety of materials that are used to make components of electrical circuits. These materials have good electrical conductivity. In spite of having the largest conductivity among metals, silver is not used to make electric wires. Aluminium copper and are generally used to make electric wires. Not only conductors, insulators are also important. The electrical wires are covered with plastic and rubber like materials. This is used to prevent short circuit and also to protect the user.

1. What kinds of materials are used to make electrical wires in an electric circuit?

- (a) Insulators
- (b) Conductors
- (d) All of these
- (c) Electrolytes

2. Insulation is used in electric wire to prevent from

(a) a short circuit (b) electric shock (c) fuse (d) both (a) and (b)

Fuse is a simple device for protecting electric circuits from overloads and short-circuits. A fuse consists of one or several fuse links, an insulating body and terminals for connecting the fuse to an electric circuit. Fuses are connected in an electric circuit and break the circuit when the fuse links melt.

3. Among these the main characteristics of fuse link is/are

- (a) low melting point
- (b) high conductivity
- (c) both (a) and (b)
- (d) none of these

4. A material best suited for the manufacturing of the fuse is

- (a) brass
- (b) copper
- (c) aluminium
- (d) gold

5. Fuses work only

(a) When excess current flowing in the circuit

(b) Low current flowing in the circuit

(c) Both (a) and (b)

(d) None of these

PASSAGE-III: There are electrical appliances like heaters, fans, refrigerators and coolers. These run on electricity supplied to our homes from the power station through the mains. There is another set of appliances that runs on cells, like torches, toys, alarm clocks and mobile phones. You can easily handle appliances that run on cells. However, you may get bad shock if you touch an electrical socket or a live wire attached to the mains.

6. \_\_\_\_\_ supply a very small amount of electrical energy.

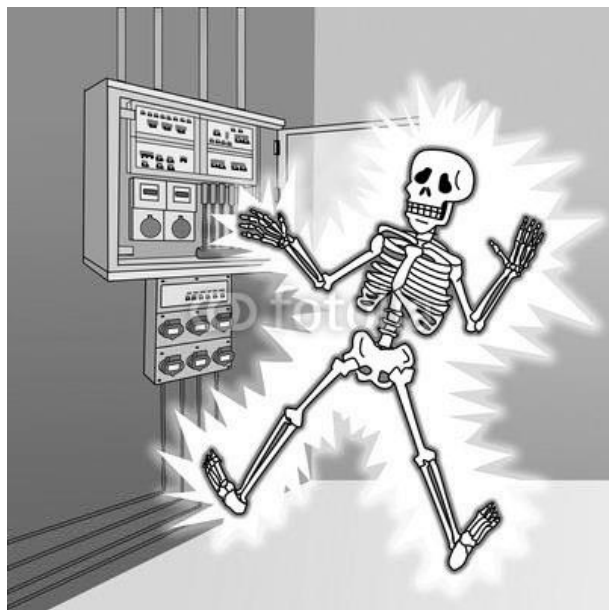
- (a) Battery
- (b) Main supply
- (c) Dry cell
- (d) None of these

7. Safety measure to avoid shock from an electric circuit is

- (a) plastic insulation over live wire
- (b) earthing of the heavy load instruments
- (c) using rubber gloves and shoes while working
- (d) all of these.

8. Write the essential parts of electric bulb.

9. We get electric shock from uncovered live wire-why?



10. With one activity describe that an object is electric conductor or insulator.

**Solve NCERT exercise and explain the keywords**

