KALPAVRUKSHA MODEL SCHOOL

Answers of Online Class Assignment-2

Class: VII **Sub: Physics** **Date: 30.8.2021**

Topic: ELECTRIC CURRENT AND ITS EFFECTS

I. Answers:

1) **What is heating effect?**

ANS: When an electric current flows through a conductor some part of it is converted into heat energy. This effect is known as heating effect.

2) What is a fuse wire made up of?

ANS: Fuse wire is an alloy made of an alloy of lead and tin. It has high resistance and low melting point.

3) State the principle of an electric fuse.

ANS: The electric fuse works on the principle of heating effect of current.

4) List few devices that work on heating effect of electric current?

ANS: Electric iron, heater coil, electric toaster, hot plates, geyser electric hairdryer and electric ovens.

5) **List the common sources of electrical energy.**

ANS: Electric power house, domestic generators, cell and batteries.

6) What is the function of a switch in a circuit?

ANS: Switch is a simple device which helps to open the circuit. It helps in saving electricity when not in use.

7) In which direction does current flow from a cell in a circuit?

ANS: Electric current flows from positive terminal to the negative terminal when the two terminals are connected to each other through metallic wire.

Prepared By: POORNIMA S Verified By: Aruna B. M (Science HOD)

8) Why do we create a vacuum inside an electric bulb?

ANS: Bulbs used for lighting purpose have a filament inside. The space inside the bulb is a vacuum or filled with nitrogen or an inert gas. This is done to save the filament from oxidation on heating.

9) Give reasons for the following.

a) An electric current does not flow in a circuit when the switch in the circuit is open.

ANS: An electric current does not flow in a circuit when the switch in the circuit is open because for current to flow there should not be any discontinuity, when switch is “open”, there is a discontinuity and current does not flow in the circuit.

b) The wire in an electric fuse is made of a material that melts easily.

ANS: The wire in an electric fuse is made of a material that melts easily; it is designed such that only a certain amount of current can flow through it, if the current exceeds this amount the heating in the wire causes it to melt. This breaks the circuit and stops the flow of current in the circuit.

c) An electric bulb feels hot to touch after it has been on for some time.

ANS: An electric bulb feels hot to touch after it has been on for some time because in a bulb an electric current passes through a very thin wire made of special material called the filament. When the bulb is switched on, the filament gets heated. This is due to the heating effect of the electric current.

.