Physics - 10th Class Physics English Medium Chapter 14 Preparation

Q1. Difference between conductor and insulator.

Ans 1: Conductor: Such a material which allows electricity to pass through it, are called conductor e.g. metals are good conductors of electricity because they have free electrons.

Ans 2: Insulators.:Such a material which does not allow electricity to pass through it, are called insulators, They have no free electrons. e.g. all non metals are insulators.

Q2. Why does not diamond conduct electricity?

Ans 1: Diamond does not conduct electricity. Because it has no free electrons.

Q3. Define unit of resistance.

Ans 1: When a potential of one volt is applied across the end of conductor and one ampere of current passes through it, then its resistance will be one Ohm.

Q4. Define electric power.

Ans 1: The amount of energy supplied by current in unit time is known as electric power.
Units: Its unit is watt.
P = energy/ time.
Unit is joule

Q5. State Ohm's law.

Ans 1: the amount of current 1 passing though a conductor is directly proportional to teh potential difference V applied across its ends provided the temperature and the physical state of the conductor, dues not change. V=IR
Limitations: Ohm's law is applicable only in case of metallic conductors when their temperature and physical state do not change.

Q6. Define electric current.give its formula.

Ans 1: The rate of flow of electric charge through any corss sectional area is called current.
Formula: I = Q/t
unit: Its S.I. unit is Ampere

Q7. Describe four safety measures that should be taken in connection with the household circuit.

Ans 1: i. Use of fuse ii. use of earth wire iii. use of circuit breakers
iv. Use of good insulated cables.

Q8. What is voltmeter?

Ans 1: It is a instrument which is used to measure the voltage or potential difference across the appliance. It is also used the measure the e.m.f in battery. Its resistance is very high. It is always connected in parallel in the circuit.

Q9. Define conventional current.

Ans 1: Current flowing from positive to negative terminal of a battery due to the flow of positive charges is called conventional current.

Q10. What is fuse?

Ans 1: Fuse is a safety device that is connected in series with live wire in the circuit to protect the equipments when excess of current flows.
