Class- X
Subject-Physics
Assignment

Q1. Define and give units for each of the following:
a) Electric current b) Potential difference c) Resistance d) Resistivity e) Work done f) Electric power.

Q2. State Ohms Law. How can it be verified experimentally? Does it hold good under all conditions? Is it a Universal law? Comment.

Q3. Two lamps one rated 60W at 220V and the other 40W at 220V are connected in parallel to the electric supply at 220V.
a) Draw a circuit diagram to show the connections.
b) Calculate the current drawn from the electric supply.
c) Calculate the total energy consumed by two lamps together when they operate for one hour.

Q4. What will happen when
a) Voltmeter is connected in series?
b) Ammeter is connected in parallel?
c) A parallel combination of two equal resistors is connected in series with a third resistor of resistance of 4 ohm if the combined resistance of three resistors is 5 ohm, find the resistance of the resistor in parallel combination .If a current of 2A is flowing through 4 ohm resistor, find the voltage across each of the parallel resistors.

Q5. With the help of a labelled circuit diagram illustrate the pattern of the field lines around
a) A current carrying straight long conducting wire.
b) A current carrying circular loop
c) A solenoid.

Q6. Describe the activity that shows that a current carrying conductor experiences a force perpendicular to its length and the external magnetic field. How does the flemings rule help us to find the direction of force. Explain.

Q7. Explain the phenomenon of electromagnetic induction. Describe an experiment for the same.

Q8. Draws a schematic labelled diagram of a domestic wire circuit which includes
a) Main fuse b) Power meter c) One light point d) A fan e) Power Plug.

Q9. Name the factors which affect the force on a current carrying conductor placed in magnetic field. Also mention how these factors depend upon them.

Q.10 Compare and contrast
a) Fossil fuels and sun as source of energy.
b) Biomass and hydroelectricity as source of energy.
c) Nuclear fission and nuclear fusion.

Q.11 What are the limitation of extracting energy from
a) Wind b) Waves c) Tides.

Q.12. What are the environmental consequences of the increasing demand for energy? What steps would you suggest to reduce energy consumption?