Physics - 10th Class Physics English Medium Chapter 15 Preparation

Q1. Can a transformer operate on direct current?

Ans 1: Transformer is used to increase or decrease the A.C. voltage , therefore a transformer cannot be operated on D.C. current.

Q2. Define electromagnetic induction?

Ans 1: The process of generating an induced current in a circuit by changing the number of magnetic lines of force passing through it is called electromagnetic induction.

Q3. What is Faraday's law of electromagnetic induction.

Ans 1: The value of induced e.m.f in a circuit is directly proportional to the rate of change of number of magnetic lines of force passing through it.

Q4. What electromagnet?

Ans 1: the type of temporary magnet, which is created when current flows through a coil, is called electromagnet.

Q5. Explain application of electromagnet with the help of relay?

Ans 1: Relay; A relay is an electrical switch that opens and closes under the control of electrical circuit.
FUNCTION: The relay is used to control a large current with the help of small current.

Q6. Difference between generator and a motor?

Ans 1: Generator
1. In generator, we move the coil and current is produced.
2. It converts mechanical energy into electrical energy.:

Ans 2: Moter:
1. In moter we provide current as a result of which coil moves.
2. It converts electrical energy into mechanical energy.

Q7. What is the principle of walk-through metal detectors.

Ans 1: Walk through metal detectors are installed at air ports and other places for security purpose. These detectors detect metal weapons etc. Using the principle of electromagnetic induction.

Q8. Define Right hand rules.

Ans 1: "grasp a wire with your right hand such that your thumb pointed in the direction of conventional current. Then curling fingers of the hand will point out the direction of magnetic field"

Q9. Which device is used for converting electrical energy into mechanical energy?

Ans 1: Electric motor is a device which is used to convert electrical energy into mechanical energy.

Q10. What is the field coil?

Ans 1: To produce magnetic field, we use permanent magnet or electromagnet which is called field coil.