Physics - 10th Class Physics English Medium Chapter 15 Preparation

Q1. State Lenz's law?

Ans 1: The direction of an induced current in a circuit is always such that it opposes the cause that produces it is called lenz's law.

Q2. On which principle generator works in hydroelectric dam?

Ans 1: A generator inside hydroelectric dam uses electromagnetic induction to convert mechanical energy of spinning turbines into electrical energy.

Q3. 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.

Q4. What is electromagnetism? What are its uses?

Ans 1: Electromagnetism is the study of magnetic effect of current .
Use: i. Motors and electric meters are based on the effects of magnetism produced by electric current in wires.
2. Generator produce electric current due to the movement of wires near very large magnets.

Q5. 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.

Q6. 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.

Q7. 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.

Q8. What is the solenoid?

Ans 1: A long coil of wire consisting of many loops is called solenoid.

Q9. What do magnetic field lines show?

Ans 1: Magnetic field lines help us to visualize the magnitude and direction of the magnet.

Q10. Define magnetic flux.

Ans 1:
The number of magnetic lines of force passing through any surface is known as magnetic flux .