

ATOMIC ENERGY EDUCATION SOCIETY

DISTANCE TEACHING PROGRAMME

CLASS X SCIENCE

WORK SHEET-1

CHAPTER: MAGNETIC EFFECT OF CURRENT (MODULE 3)

1. A device for producing electric current is called a

- (a) Galvanometer (b) Motor
(c) Generator (d) Ammeter

Answer: Generator

2. Potential difference between a live wire and a neutral wire is:

- (a) 200 volt (b) 150 volt (c) 210 volt (d) 220 volt

3. The rectangular coil of copper wires is rotated in a magnetic field. The direction of induced current change once in each:

- (a) One revolution (b) one fourth revolution
(c) Half revolution (d) two revolutions

4. Choose the incorrect statement

- (a) Fleming's right-hand rule is a simple rule to know the direction of induced current
(b) The right-hand thumb rule is used to find the direction of magnetic fields due to current carrying conductors
(c) The difference between the direct and alternating currents is that the direct current always flows in one direction, whereas the alternating current reverses its direction periodically
(d) In India, the AC changes direction after every $1/50$ second

5. Can 5A fuse be used in wire carrying 15 A current? Why?

6. If the frequency of A.C. is 50 Hz. Then how many times it is changing its direction in 1 second?

7. Electric appliance like electric-press, toaster, fans etc are connected to electric mains through three-pin plug. Why?

8. What is the difference between a direct current and an alternating current? Write one advantage of AC over DC.

9. Draw an appropriate schematic diagram showing common domestic circuits and discuss the importance of fuse. Why is it that a burnt out fuse should be replaced by another fuse of identical rating?

10. State whether the following statements are true or false.

- (a) An electric motor converts mechanical energy into electrical energy.
- (b) An electric generator works on the principle of electromagnetic induction.
- (c) The field at the centre of a long circular coil carrying current will be parallel straight lines.
- (d) A wire with a green insulation is usually the live wire of an electric supply.