

# BHARATH COACHING CENTRE

10<sup>th</sup> CBSE

Magnetic Effects of Electric Current

Total: 50

Physics

Time: 1.30 hrs

## SECTION – A

2 X 5 = 10

1. What are the various ways in which the strength of magnetic field produced by a current carrying circular coil can be increased?
2. What is the principle of an electric generator?
3. Explain the importance of using fuse in a household electric circuit.
4. What is an electromagnet? Describe the construction and working of an electromagnet?
5. State different ways to induce current in a coil?

## SECTION – B

3 X 5 = 15

6. What is an electromagnet? Describe the construction and working of an electromagnet.
7. An oven of 5000W power rating is operated in domestic electric circuit (220V) that has a current rating of 5A. What result do you expect? Explain.
8. Draw a sketch to show the magnetic field lines due to a circular loop carrying current. Describe it briefly.
9. How does an alternating current differ from a direct current?
10. Draw a sketch to show the magnetic field pattern. Produced by a current carrying straight conductor. Describe briefly.

## SECTION – C

5 X 5 = 25

11. State and Explain right – hand thumb rule for the direction of magnetic field produced by a straight current carrying conductor with help of diagram.
12. What is an electric motor? With the help of a labeled diagram, describe the construction and working of an electric motor.
13. Describe the construction and working of an electric generator with the help of a labeled diagram.
14. Draw a labeled sketch to show the domestic electric wiring from an electric pole to a room. In this diagram show live wire, neutral wire, earth wire, main fuse, electric meter, main switch consumer's fuse and wiring for a bulb and a three – pin socket. Also describe it briefly.
15. What is a solenoid? Draw a sketch to show the magnetic field line produced by a current carrying solenoid. Describe it briefly.