CBSE TEST PAPER-03

SCIENCE & TECHNOLOGY (Class-10)

Chapter 13 : Magnetic Effects of Electric Current

1. If the current in a wire is flowing in the vertically downward direction and a magnetic field is applied from west to east, what is the direction of force on the wire? (1mark)
2. When do we apply Flemings (i)Left hand (ii)Right hand rule. (1 mark)
3. How much force is exerted by a magnetic field on a stationary charge? (1 mark)
4. A positive charge is moving vertically upwards, when it enters a region of magnetic field directed toward north, what is the direction of force on the charge? (1 mark)
5. Two circular A and B are placed closed to each other. If the current in the coil. A is changed, will some current be induced in the coil B? Give reason. (2 marks)
6. State Fleming's left hand rule. What is the direction of force experienced? (2 marks)
7. Draw a diagram to show a magnetic field around a straight conductor wire. (2 marks)
8. Explain the term electromagnetic induction with the help of a diagram. (2 mark)
9. State the principle of an electric generator. (2 marks)
10. A circuit has a fuse of 5A. What is the maximum number of 100W(220V) bulbs that can be safely used in the circuit? (2 marks)
11. A coil of insulated copper wire is connected to a galvanometer. What will happen if a bar magnet is (i) pushed into the coil (ii) withdrawn from inside the coil (iii) held stationary inside the coil? (3 marks)
12. How does a solenoid behave like a magnet? Can you determine the north and south poles of a current-carrying with the help of a bar magnet? Explain. (3 marks)
13. (a) What is meant by a magnetic field?
    (b) How is the direction of magnetic field at a point determined?
    (c) Describe an activity to demonstrate the direction of the magnetic field generated around a current carrying conductor.
    (d) What is the direction of magnetic field at the centre of a current-carrying circular loop? (5 marks)