CBSE TEST PAPER-03
CLASS - X Science (Magnetic effects of electric current)

1. Electric motor converts (1)
   (a) Mechanical energy into electrical energy
   (b) Mechanical energy into heat energy
   (c) Electrical energy into heat energy
   (d) Electrical energy into mechanical energy

2. Potential difference between a live wire and a neutral wire is (1)
   (a) 200 volt (b) 150 volt (c) 210 volt (d) 220 volt

3. The most important safety device method used for protecting electrical appliances from short circuiting or overloading is (1)
   (a) Earthing (b) use of stabilizer (c) use of electric meter (d) fuse

4. Forces acting on a stationery charge of in the magnetic field B is (1)
   (a) BQv (b) BQ/v (c) Bv/Q (d) zero

5. The rectangular coil of copper wires is rotated in a magnetic field. The direction of induced current change once in each (1)
   (a) one revolution (b) one fourth revolution
   (c) half revolution (d) two revolutions

6. State the factors on which strength of magnetic field at a point due to a current carrying conductor depends? (2)

7. What is an electromagnet? Write two uses of an electromagnet? (2)

8. State and define S.I unit of magnetic field? (2)

9. A current carrying conductor is placed perpendicular to the uniform magnetic field. What happens to displacement of the conductor if (2)
   (i) strength of current increases
   (ii) If horse shoe magnet is replaced by a weak horse shoe magnet.

10. Define electromagnetic induction? Two circular coils A and B are placed close to each other. If the current in the coil A is changed, will some current be induced in the coil B? Explain. (3)

11. Why does a current carrying conductor kept in a magnetic field experience force? What is the direction of force acting on the conductor? (3)

12. (a) Distinguish between A.C and D.C? (3)
    (b) Which source produces alternating current?

13. (a) Define the term current rating of an electric fuse? (3)
    (b) Name the material used to make electric fuse?
    (c) Name two safety measure commonly used in electric circuit and appliances?