

CBSE TEST PAPER-02

SCIENCE & TECHNOLOGY (Class-10)

Chapter 13 : Magnetic Effects of Electric Current

1. A uniform magnetic is applied west to east and a straight current carrying vertical conductor is placed in it. In which direction would the conductor be deflected? (1 mark)
2. What is the effect of increasing the number of turns on magnetic field produced due to circular coil? (1 mark)
3. In the straight wire A, current is flowing in the vertically downward direction whereas in the wire B the current is flowing in the vertically upward direction. What is the direction of magnetic field: (a) in wire A? (b) in wire B? (1 mark)
4. In what way can the magnitude of the induced current be increased? (2 marks)
5. Give two differences between electric motor and generator. (2 marks)
6. A domestic lighting circuit has a fuse of 5A. If the mains supply is at 240V, calculate the maximum number of 40 W tube-lights that can be safely used in this circuit. (2 marks)
7. Why don't two magnetic lines of force intersect each other? (2 marks)
8. Think you are sitting in a chamber with your back to one wall. An electron beam, moving horizontally from back wall towards the front wall, is deflected by a strong magnetic field to your right side. What is the direction of magnetic field? (2 marks)
9. As compared to a small electric motor, what improvements are made in commercial motors? Write three points. (3 marks)
10. Consider a circular loop of wire lying in the plane of the table. Let the current pass through the loop clockwise. Apply the right hand rule to find out the direction of the magnetic field inside and outside the loop. (3 marks)
11. Explain the principle and working of an electric motor with the help of diagram. What is the function of the split ring commutator? (5 marks)