ATOMIC ENERGY EDUCATION SOCIETY

DISTANCE TEACHING PROGRAMME

CLASS X SCIENCE

WORK SHEET-2

CHAPTER: MAGNETIC EFFECT OF CURRENT (MODULE 1)

1. A current through a horizontal power line flows in north to south direction. What is the direction of magnetic field (i) at a point directly below it?

2. A current through a horizontal power line flows in north to south direction. What is the direction of magnetic field at a point directly above it?

3. The north pole of bar magnet is in the:

(a) Geographical South of earth .

(b) Geographical East of earth.

(c) Geographical West of earth.

(d) Geographical North of earth.

4. A soft iron bar is inserted inside a current-carrying solenoid. The magnetic field inside the solenoid:

(a) Will decrease.

(b) Will increase.

(c) Will become zero.

(d) Will remain the same.

5. A positive charge is moving towards a person. The direction of magnetic field lines will be in

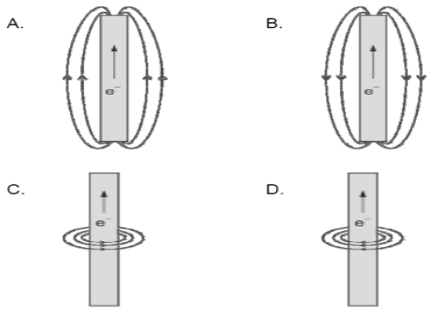
(a) Clockwise direction

(b) Anticlockwise direction

(c) Vertically upward direction

(d) Vertically downward direction

6. Which of the following diagrams correctly shows the magnetic field produced by a current-carrying wire?



a) A (b) B (c) C (d) D

7. The magnetic field lines inside a bar magnet:

(a) Originate from the South pole and end at its North Pole

(b) Originate from the North pole and end at its East Pole

(c) Originate from the North Pole and end at its South Pole

(d) Originate from the South pole and end at its West Pole

8. It is established that an electric current through a metallic conductor produces a magnetic field around it. Is there a similar magnetic field produced around a thin beam of moving (i) alpha particles, (ii) neutrons? Justify your answer.

9. A magnetic compass shows a deflection when placed near a current carrying wire. How will the deflection of the compass get affected if the current in the wire is increased? Support your answer with a reason.

10. Under what conditions permanent electromagnet is obtained if a current carrying solenoid is used? Support your answer with the help of a labelled circuit diagram.