

ATOMIC ENERGY EDUCATION SOCIETY

DISTANCE TEACHING PROGRAMME

CLASS X SCIENCE

WORK SHEET-1

CHAPTER: MAGNETIC EFFECT OF CURRENT (MODULE 1)

- Sample problem 1: Which of the following correctly describes the magnetic field near a long straight wire?

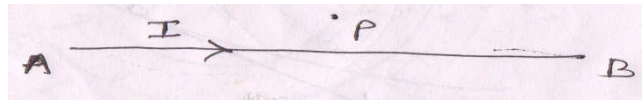
- (a) The field consists of straight lines perpendicular to the wire.
- (b) The field consists of straight lines parallel to the wire.
- (c) The field consists of radial lines originating from the wire.
- (d) The field consists of concentric circles centered on the wire.

Sol. Correct option is d

- Sample problem 2: A current through a horizontal power line flows in east to west direction. What is the direction of magnetic field at a point directly below it and at a point directly above it?

Sol. The current is in the east-west direction. Applying the right-hand thumb rule, we get that the direction of magnetic field at a point below the wire is from north to south. The direction of magnetic field at a point directly above the wire is from south to north.

1. Any three properties of magnetic field lines.
2. Give statement of Right hand thumb rule.
3. Write any two factors on which magnetic field intensity at the center of current carrying circular loop depends?
4. The direction of the magnetic field at a point P above the wire carrying current as shown in the figure is:



- (a) Down the page
 - (b) up the page
 - (c) Into the page
 - (d) out of the page
5. Concentric circles with arrows centered at the wire AB are shown in figure. Choose the correct option:

