PHYSICS - X-PART-03 CLASS 15

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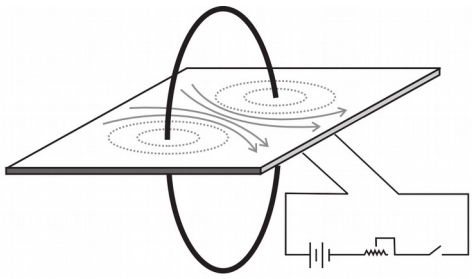
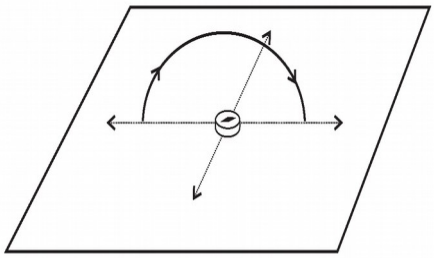
A magnetic field around a circular coil



- The direction of magnetic field lines reversed when reversing the current through the coil.
- When the electric current passes in the clockwise direction, the magnetic field lines are - into the coil .
- When the electric current passes in the anti clockwise direction, the magnetic field lines are - out from the coil.

How the number of turns of the coiled conductor and the intensity of current affect the magnetic field.



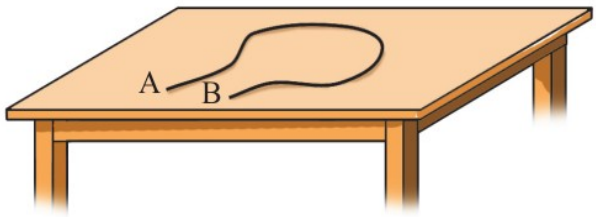
- The strength of the magnetic field increases when the number of turns of the coil or current is increased.

1. Strength of magnetic field around current carrying coil depends on.

* Number of turns.
* Intensity of current.

Assignment

3. The figure shows an insulated copper wire AB made into a coil. Suppose current flows from A to B through this.

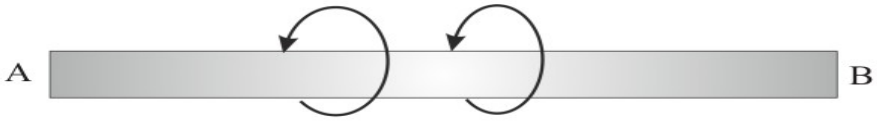


a) What will be the direction of electron flow through it?

b) Can you find out the direction of the magnetic field around the conductor AB? State the rule that substantiates this.

c) Explain how you can find out the direction of the magnetic field inside the coil.

4. The magnetic field around the current carrying conductor AB is depicted.



Based on the Maxwell's Right Hand Cork Screw Rule find out the direction of current and record it.