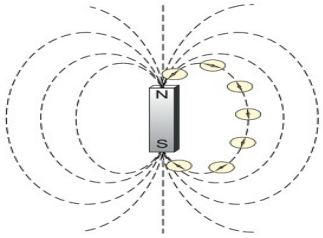
PHYSICS - X-PART-01 CLASS 13

Magnetic field

* The region around a magnet where the influence is felt is the magnetic field.
* The direction of the magnetic field is from North pole to South pole. (N ⟶ S)

Magnetic Line of force

* Magnetic field represented by Magnetic line of force



Magnetic Flux

* Total number of magnetic line of force around a magnet.

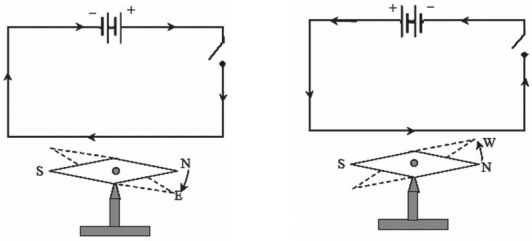
Magnetic Flux Density

* The number of magnetic lines of force passing normal to unit area is the magnetic flux density of that region.

Electric current

* The direction of flow of current from positive to negative.(The direction of flow of electrons from negative to positive)

A magnetic field around a current carrying conductor



1. Conductor above the magnetic needle

No.	Conductor above the magnetic needle	Direction of motion of North Pole (N) of the magnetic needle clockwise/anticlockwise
1	Direction of current from A to B	Anticlockwise
2	Direction of current from B to A	Clockwise

Table 2.1

2. Conductor below the magnetic needle

No.	Conductor below the magnetic needle	Direction of motion of North Pole (N) of the magnetic needle clockwise/anticlockwise
1	Direction of current from A to B	Clockwise
2	Direction of current from B to A	Anticlockwise

Table 2.2

1. What might be the reason for the deflection of the magnetic needle?

* A magnetic field is developed around a current carrying conductor.

* The magnetic needle is deflected as a result of the mutual action of this magnetic field and that around the magnetic needle.

2.What are the factors influencing the deflection of the magnetic needle?

* The direction of the current.
* The position of the conductor.