

- * When a charged particle moves through a region of space where both electric field and magnetic field are present :-

$$\vec{F} = q (\vec{E} + \vec{v} \times \vec{B})$$

Sec 3:-

⇒ Magnetic field lines are drawn so that the line through any point is tangent to the magnetic field vector at that point.

- * Field lines never intersect.

* Magnetic field lines have no start and no end, stating so would convey the existence of a monopole which is not true.

$$* \Phi_B = \int B_{\perp} dA = \int B \cos \phi dA = \int \vec{B} \cdot d\vec{A}$$

ϕ : The angle between $\vec{B}$ and the perpendicular to the area.

- * The total magnetic flux through a closed surface is always zero.

"This because there is no existence of a monopole"