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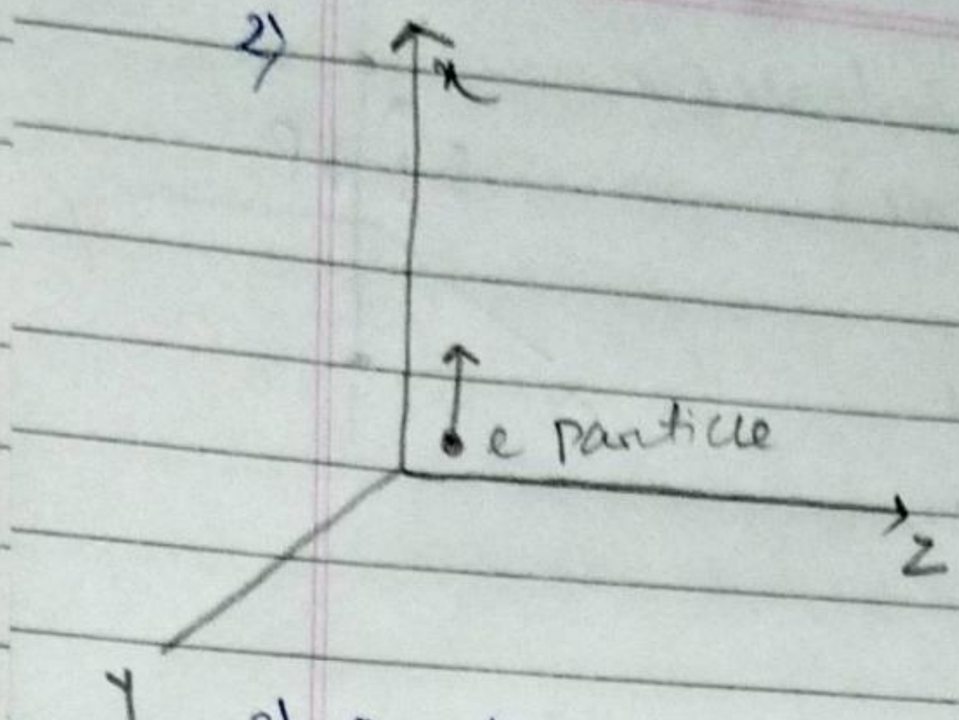

From the graph it can be concluded that By fleming's left hand rule magnetic field must be along negative z-axis.

3) One tesla is the magnetic field in which a charge of 1 C moving with velocity of 1 m/s normal to the magnetic field experiences a force of 1N

$$B = \frac{F}{qv\sin\theta}$$

If F = 1N, q = 1C, v = 1m/s, $\theta = 90^\circ$

then SI unit of B = $\frac{1N}{1C \cdot 1m/s \cdot \sin 90^\circ}$

$= 1NA^{-1}m^{-1} = 1$ tesla

4) A Proton and an electron travelling along parallel path enter a region of uniform magnetic field, acting perpendicular to their path. Hence when both enters into uniform magnetic region the $e^\ominus$ will move along circular path with higher frequency. On the opposite direction to current

5) We know that when a charged Particle enters a uniform magnetic the force exerted on it

$F = q(V \times B) = qvb\sin\phi$

Case - I

when the particle enters perpendicular $\theta = 90^\circ$

In this case since $\sin\theta = 1$ the maximum value and the direction of force is perpendicular to direction of motion of particle hence the particle start moving in a circular path

$r = mv/ba$

Case - II the particle enters an angle of 30°
In this case the force acting on it has two component one parallel to motion the other component will act ⊥ to motion
Hence the resultant of these two component the particle will move along helical path