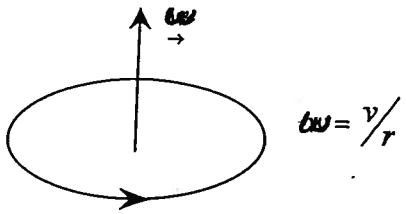
The Right Hand Rules

1. Angular velocity vector [from 121]

Curl Fingers along direction of motion, $\vec{\omega}$ ∥ Thumb



2. Torque: $\vec{\tau} = \vec{r} \times \vec{F}$ [From 121]

$\vec{r}$ ∥ Thumb, $\vec{F}$ ∥ Fingers, $\vec{\tau}$ ⊥ Palm

3. Force on q due to $\vec{B}$: $\vec{F}_B = q\left[\vec{v} \times \vec{B}\right]$

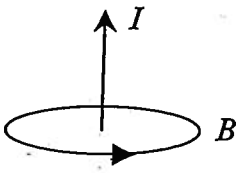
$q\vec{v}$ ∥ Thumb, $\vec{B}$ ∥ Fingers, $\vec{F}_B$ ⊥ Palm

4. Force on I due to $\vec{B}$: $\vec{F}_I = I\left[\Delta\vec{l} \times \vec{B}\right]$

$\Delta\vec{l}$ ∥ Thumb, $\vec{B}$ ∥ Fingers, $\vec{F}_I$ ⊥ Palm

5. Generation of $\vec{B}$ by I in a :

a) straight conductor



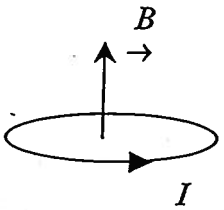
Thumb along I, $\vec{B}$ follows curl of fingers

b) Ring/ Solenoid

$\vec{B}$ on axis

Curl Fingers along I

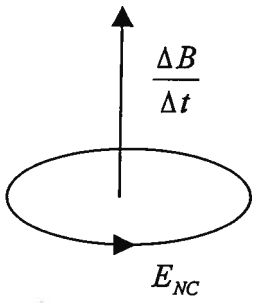
$\vec{B}$ ∥ Thumb



6. Lenz's law – Non-Coulomb $\underset{\rightarrow}{E}$ – *field*

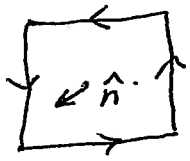
$-\frac{\Delta \underset{\rightarrow}{B}}{\Delta t}$ along thumb

$\underset{\rightarrow}{E_{NC}}$ follows curl of Fingers



7 Magnetic Dipole moment

$\underset{\rightarrow}{\mu} = IA\,\hat{n}$



CURL FINGERS ALONG I,

$\underset{\rightarrow}{\mu}$ ∥ THUMB.