

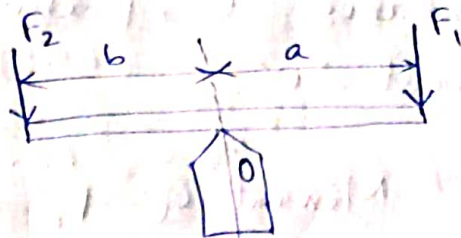
Unit - II

Equilibrium of Rigid bodies.

Moment of a force.



(a)



(b)

Moment of a force about a point is defined as the product of the force and the perpendicular distance of the line of action of the force from the point.

Figure (A), $F \rightarrow$ downward force applied at A

$r \rightarrow$ perpendicular distance of the line.

Moment about point O $\rightarrow M_o$

$$M_o = F \times r$$

Types:

- ① Clockwise Moment (\curvearrowright)
- ② Anticlockwise Moment (\curvearrowleft)

In figure (B)

downward force acting on the right hand side of the fulcrum 'O' at a distance 'a' produces a clockwise moment about 'O'