

## Answer - 7

Equilibrium is defined as a state of balance or a stable situation where opposing forces cancel each other out & where no changes are occurring.

An Eq. of equilibrium is in economics when supply & demand are equal. An Eq. of equilibrium is when you are calm & steady.

### # Conditions for Equilibrium of Concurrent Coplanar force system

In this system, the forces do not pass through a common point but lie in a same plane.

This system consists of 3 Equilibrium states-

- 1)  $\sum F_x = 0$ , Net force in all directions must be zero.
- 2)  $\sum F_y = 0$ , Static Eq<sup>n</sup> said net Torque will be zero.
- 3)  $\sum M = 0$  \* Net force & Torque in any parti<sup>r</sup> dire<sup>n</sup> is zero.