

Answer - 8 :-

Define :-

(a) Radius of Gyration :- (R.O.G).

R.O.G. or Gyradius of a body about an axis of rotation is defined as the radial distance to a point which would have a moment of inertia the same as the body's actual distribution of mass, if the total mass of body were concentrated.

(b) Perpendicular Axes Theorem :- (P.A.T.)

P.A.T. states that the moment of inertia of a planar lamina about an axis perpendicular to the plane of the lamina is equal to the sum of the moment of inertia of the lamina about the two axes at right angles to each other, in its own plane intersecting each other at the point where the  $\perp$  axis pass through it.

(c) Parallel Axes Theorem :-

The Parallel Axis Theorem states that moment of inertia of an object around a particular axis is equal to the moment of inertia around a parallel axis that goes through the center of mass, plus the mass of the object, multiplied by the distance to that parallel axis, squared.