Class 11 Physics Chapter 7 System of Particles and Rotational Motion MCQs

1. The rotational inertia of a rigid body is referred to as its

(a) Moment of energy
(b) Moment of force
(c) Moment of inertia
(d) Moment of acceleration

2. If a body is rotating about an axis passing through its centre of mass, angular momentum of the body is directed along its

(a) Circumference
(b) Radius
(c) Axis of rotation
(d) None of the option

3. Linear velocities of all the particles of the body in rotational motion is

(a) 1
(b) 0
(c) Same
(d) Different

4. The centre of mass of a body

(a) lies inside the body
(b) lies outside the body always
(c) lies on the surface of the body always
(d) None of the option

5. Centre of mass of an isolated system has a

(a) Increasing velocity
(b) Constant velocity
(c) Decreasing velocity
(d) None of the option

6. Dimensional formula for moment of inertia is

(a) ML^{-2}
(b) ML^{4}
(c) $M^{2}L$
(d) ML^{2}

7. Radius of gyration is denoted by

(a) R
(b) G
(c) K
(d) I

8. **A body in rotational motion possesses rotational kinetic energy energy given by**

(a) $KE=½(I^2\omega)$
(b) $KE=½(I\omega^2)$
(c) $KE=2I^2\omega$
(d) $KE=I\omega$

9. The combination of rotational motion and the translational motion of a rigid body is known as

(a) Frictional motion
(b) Axis motion
(c) Angular motion
(d) Rolling motion

10. State true or false: The position of centre of mass does not depend upon the shape, size, and distribution of the mass of the body.

(a) True
(b) False

********** Answer Key **********

1(c)	2(c)	3(d)	4(c)	5(b)
6(d)	7(c)	8(b)	9(d)	10(b)