

## ECAT Physics Chapter 5 Circular Motion

Sr	Questions	Answers Choice
1	Centripetal acceleration is also called _____ acceleration:	<p>A. Tangential  <b>B. Radial</b>            C. Angular            D. None of them</p>
2	The center of mass of a sphere lies at:	<p>A. The axis of the sphere            B. Circumference of sphere  <b>C. Center of the sphere</b>            D. None of them</p>
3	The useful unit of angular replacement in SI unit is:	<p>A. Degree            B. Revolution  <b>C. Radian</b>            D. Metre</p>
4	A 1000 Kg car travelling with a speed of 90 km/hr turns around a curve of radius 0.1 km. The necessary centripetal force comes out to be:	<p>A. <math>8.1 \times 10^7 \text{ N}</math>            B. 625 N  <b>C. 6250 N</b>            D. None of these</p>
5	The angular speed of a particle moving along a circular path is $5\pi \text{ rad sec}^{-1}$ , Its period of motion is:	<p>A. 2.5 sec            B. 0.06 sec            C. 15.7 sec  <b>D. 0.4 sec</b></p>
6	One radian is equal to:	<p>A. <math>30.3^\circ</math>            B. <math>45.3^\circ</math>            C. <math>50.3^\circ</math>  <b>D. <math>57.3^\circ</math></b></p>
7	When a body moves with a constant speed in a circle:	<p><b>A. No work is done on it</b>            B. No acceleration is produced in the body            C. Velocity remains constant            D. None of these</p>
8	A car is moves around a circular track of radius 0.3 m at the rate of 120 rev/min. The speed v of the car is:	<p>A. 38 m/sec  <b>B. 3.8 m/sec</b>            C. 0.6 m/sec            D. None of these</p>
9	In rotational motion, analogue of force F us called:	<p>A. Couple  <b>B. Torque</b>            C. Mass</p>

		C. mass D. Moment of inertia
10	Einstein's theory about gravity is better than Newton's because it gave explanation of:	A. Inverse square law B. Bending of light C. Both A and B D. None of above
11	A body can have constant velocity when it follows:	A. A circular path B. A rectilinear path C. Trajectory of a projectile D. None of these
12	When an object moves with a uniform angular velocity, then its instantaneous angular velocity is equal to:	A. Zero B. Its average velocity C. Its angular displacement D. None of these
13	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of these
14	The instantaneous acceleration of a body moving with constant speed in a circle:	A. Remains constant B. Is called centripetal acceleration C. Tangential acceleration D. None of these
15	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
16	A point on the rim of a wheel moves 0.2 m when the wheel turns through an angle of 14.3 degrees. The radius of the wheel is	A. 0.05 m B. 0.08 cm C. 0.8 m D. 0.008 m
17	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. $49 \text{ rad/sec}^2$ B. $1 \text{ rad/sec}^2$ C. $0.16 \text{ rev/sec}^2$ D. Both A and C E. Both B and C
18	One radian is equal to:	A. $30.3^\circ$ B. $45.3^\circ$ C. $50.3^\circ$ D. $57.3^\circ$
19	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
20	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of:	A. KHz B. MHz C. GHz D. BHz