

Physics ECAT Pre Engineering Chapter 5 Circular Motion

Sr	Questions	Answers Choice
1	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:	A. 8.1 X 10 ⁷ N B. 625 N C. 6250 N D. None of these
2	plays the same role during angular motion as played by the mass in linear motion	A. Torque B. Angular Momentum C. Moment of a force D. Moment of inertia
3	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126 D. 200
4	Final velocity of a hoop is the final velocity of a disc having same mass and radius on coming down an inclined plane.	A. Greater than B. smaller than C. Equal to D. None of these
5	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
6	The useful unit of the angular displacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
7	A point on the rim of a wheel moves 0.2 m where the wheel turns through an angle is 14.3 degrees. The radius of the wheel is:	A. 0.05 m B. 0.08 m C. 0.8 m D. 0.008 m
8	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
9	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
10	Direction of motion in circular of motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
11	The net force acting on a 100 kg man standing in an elevator accelerating downward with a $= 0.8 \text{ m sec}^{-2}$ comes out to:	A. 980 N B. 580 N C. 1380 N D. Zero
12	A body moving along the circumference of a circle of radius R completes one revolution. The radius of the covered path to the angle subtended at the center is:	A. Radius of the circle B. Twice the radius C. Thrice the radius D. None of these
13	A stone is tied to the end of a 20 cm along string is whirled in a horizontal circle. if centripetal acceleration is 9.8 m/sec ² , then its angular velocity in rad/sec is:	A. 22/7 B. 7 C. 14 D. 21
14	Satellites are held in orbits around Earth by its:	A. Gravitational field B. Magnetic field C. Own orbital motion D. Own spin motion
15	When a body moves with a constant speed in a circle:	A. No work is done on it B. No acceleration is produced in the body C. Velocity remains constant

		D. None of these
16	One radian is	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
17	Centripetal acceleration is also called acceleration:	A. Tangential B. Radial C. Angular D. None of them
18	A rotating wheel accelerates up to the value of 0.75 rev/sec ² after 2 seconds of its start. Its angular velocity becomes:	A. 9.42 rad/sec B. 2.6 rev/sec C. 1.5 rev/sec D. Both A and C
19	Conventional the angular Velocity is Directed at an angle of:	A. 90 ° to the axis of rotation B. 30

20

Direction of motion _____ in circular motion:

A. Changes off and on B. Changes continuously C. Does not change D. None of them