

ECAT Physics Chapter 5 Circular Motion

Sr	Questions	Answers Choice
1	The net force acting on a 100 kg man standing in an elevator accelerating downward with $a = 9.8 \text{ m sec}^{-2}$ comes out to be	A. 980 N B. 580 N C. 1380 N D. Zero
2	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
3	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
4	One radian is equal to:	A. 30.3° B. 45.3° C. 50.3° D. 57.3°
5	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
6	A body moving along the circumference of a circle of radius R completes one revolution. The radius of a covered path to the angle subtended at the centre is:	A. Radius of the circle B. Twice the radius C. Thrice the radius D. None of these
7	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec^2 B. 1 rad/sec^2 C. 0.16 rev/sec^2 D. Both A and C E. Both B and C
8	When a body is moves along a circular path with constant speed, it has an acceleration, which is always directed:	A. Along the tangent B. Toward the centre C. Away from the centre D. None of them
9	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126

	uniformly.	C. 120 D. 200
10	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of them
11	A stone is tied to the end of a 20 cm long 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
12	A toy car moves around a circular track of radius 0.3 m at the rate of 120 rev/min. The speed V of the car is:	A. 38 m/sec B. 3.8 m/sec C. 0.6 m/sec D. None of these
13	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
14	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
15	In rotational motion, analogue of force F is called:	A. Couple B. Torque C. Mass D. Moment of inertia
16	Radian is defined as the angle subtended at the center of a circle by an arc of:	A. Length equal to its diameter B. Length equal to its radius C. Any length D. None of these
17	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to degree D. none of these
18	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
19	The number of "Earth Stations" which transmit signals to satellites and receive signals from them are	A. 3 B. 24 C. 126 D. 200
20	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