ECAT Physics Chapter 5 Circular Motion

Sr	Questions	Answers Choice
1	Conventionally the angular velocity is directed to an angle of:	A. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation C. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation D. None of the above
2	A car is turning around a corner at 10 m/sec as it travels along an arc of a circle. If value of centripetal acceleration is 10 m/sec^{2}in this case, find radius of the circular path:	A. 1 m B. 5 m C. 10 m D. 15 m
3	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec² B. 1 rad/sec² C. 0.16 rev/sec² D. Both A and C E. Both B and C
4	Angular momentum is a:	A. vector quantity B. Imaginary quantity C. Complex Quantity D. Scalar Quantity
5	The rear wheels of an automobile are rev/sec which is reduced to 38 rad/sec in 5 seconds when brakes are applied. Its angular acceleration is:	A. 5 rad/sec² B. -10 rav/sec² C. -10 rad/sec² D. -5 rav/sec²
6	Centripetal force performs:	A. Maximum work B. Negative work C. Positive work D. None of these
7	The useful unit of angular replacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
8	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
9	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
10	A disc rolls down a hill and its speed at bottom is found to be 11.4 m/sec. Height of the hill is then nearly:	A. 10 m B. 12 m C. 13 m D. 15 m

11	Direction of motion_____ in circular of motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
12	The center of mass of a sphere lies at:	A. The axis of the sphere B. Circumference of sphere C. Center of the sphere D. None of them
13	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
14	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
15	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of	A. KHz B. MHz C. GHz D. BHz
16	A car is turning around a corner at 10 m/sec as it travels along an arc of circle. If value of centripetal acceleration is 10 m/sec^2 in this case, find radius of the circular path:	A. 1 m B. 5 m C. 10 m D. 15 m
17	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 10⁷N B. 625 N C. 6250 N D. None of these
18	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126 D. 200
19	Which of the following pairs does not have identical dimensions?	A. Torque and energy B. Energy and work C. Momentum and impulse D. Mass and moment of inertia
20	A rotating body tends to be slower, when its angular acceleration is:	A. Positive B. Negative C. Zero D. Infinity