ECAT Physics Chapter 5 Circular Motion

Sr	Questions	Answers Choice
1	An axis of rotation	A. Is a straight line B. Is normal to the plane of rotation C. Passes through pivot point O D. All of them
2	Angular momentum is a:	A. vector quantity B. Imaginary quantity C. Complex Quantity D. Scalar Quantity
3	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continuously C. Does not change D. None of them
4	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
5	One radian is equal to:	A. 30.3° B. 45.3° C. 50.3° D. 57.3°
6	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
7	The net force acting on a 100 kg man standing in an elevator accelerating downward with a = 0.8 m sec^{-2} comes out to:	A. 980 N B. 580 N C. 1380 N D. Zero
8	The useful unit of the angular displacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
9	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
10	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
11	Moment of inertia depends upon:	A. Mass B. Selection of axis of rotation C. Both of them D. None of these
12	If a gymnast sitting on a rotating stool with his arms outstretched, brings his arms towards the chest, then its angular velocity will	A. Increase B. Decrease C. Remain constant D. None of these
13	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
		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

14	Conventionally the angular velocity is directed to an angle of:	B. 30° to the axis of rotation C. 0° to the axis of rotation D. None of the above
15	The angular speed of a particle moving along a circular path is 5 Pie rad sec^{-1}, Its period of motion is:	A. 2.5 sec B. 0.06 sec C. 15.7 sec D. 0.4 sec
16	One radian is equal to:	A. 30.3° B. 45.3° C. 50.3° D. 57.3°
17	_____ 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
18	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
19	A stone 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 is rad/sec is:	A. 22/7 B. 7 C. 14 D. 21
20	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