ECAT Pre General Science 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	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
3	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
4	Direction of motion_____ in circular of motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
5	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126 D. 200
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	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
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	The rear wheels of an automobile are rotating with an angular velocity of 14 rev/sec which is reduced to 38 rad/sec in 5 second when brakes are applied. Its angular acceleration is:	A. 5 rad/sec² B. -10 rev/sec² C. -10 rad/sec² D. -5 rev/sec²
10	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

11	Moment of linear momentum is called.	A. Moment arm B. Moment of inertia C. Inertia D. Angular momentum
12	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
13	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
14	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
15	Moment of inertia depends upon:	A. Mass B. Selection of axis of rotation C. Both of them D. None of these
16	One radian is equal to:	A. 30.3<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;">° B. 45.3<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;">° C. 50.3<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;">° D. 57.3<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;">°
17	Direction of motion _____ in circular motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
18	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
19	The net force acting on a 100 kg man standing in an elevator accelerating downward with a = 9.8 m sec^{-2}comes out to be	A. 980 N B. 580 N C. 1380 N D. Zero
20	Einstein's theory about gravity if 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