

MDCAT Physics Chapter 4 Circular Motion MCQ's Test

Sr	Questions	Answers Choice
1	For a particle in circular motion the centripetal acceleration	A. may be more or less than its tangential acceleration B. equal to its tangential acceleration a C. more than its tangential acceleration D. less than its tangential acceleration
2	The force which provides the necessary centripetal force to keep the mud in circular path is called	A. cohesive force B. adhesive force C. frictional force D. <div>gravitational force</div>
3	In uniform circular motion, the factor that remains constant is	A. Linear velocity B. Centripetal force C. Acceleration D. speed
4	SI unit of kinetic energy of rotation is	A. joule second B. joule C. joule second D. joule meter
5	A stone attached to one end of a string is revolved around a stick so that the string winds on the stick and gets shortened) What is conserved)	A. angular momentum B. kinetic energy C. linear momentum D. none of the above
6	The direction of angular velocity is along	A. Tangent to the circle B. Axis of rotation C. Inward the radius D. Out ward of the radius
7	If a car moves with a uniform speed of 2 ms-1 in a circle of radius 0.4m. Its angular speed is	A. <div>4 rad. s⁻¹</div> B. <div>1.6 rad. s⁻¹ </div> C. 5 rad. s ⁻¹ D. <div>2.8 ms⁻¹</div>
8	The force which can do no work on the body on which it acts:	A. Frictional force B. Elastic force C. Gravitational force D. Centripetal force
9	A body moving in a circular path with a constant speed has a	A. Constant velocity B. Constant kinetic energy C. Constant acceleration D. <div>Constant displacement</div>
10	The geostationary satellite is:	A. Stationary B. Rotating very fastly C. Rotating with the period of earth D. Rotating very slowly
11	Ten second after an electric fan is turned on, the fan rotates at 300rev/min. its average angular acceleration is	A. 30 rad/s ² B. 3.14 rad/s ² C. 30 rev/s ² D. <div>500 rev/s² </div>
12	The radius of orbit of a geostationary satellite depends upon:	A. Mass of satellite and its time period B. Mass of satellite and mass of earth C. Mass of earth, mass of satellite and time period of satellite D. Mass of earth and time period of earth
13	For a particle moving in uniform circular motion	A. Velocity is transverse and acceleration is radical B. Velocity is radial and acceleration is transverse C. Both velocity and acceleration are radial

	D. Both velocity and acceleration are transverse
A particle is moving with constant speed by keeping itself at constant distance from a fixed point in a given plane. Its motion is	A. Circular motion B. Uniform circular motion C. Uniform circular motion with fixed axis of rotation D. Uniform circular motion with axis of rotation not defined
For a body moving with constant speed in a horizontal circle, which of the following remains constant?	A. Velocity B. Centripetal force C. Acceleration D. Kinetic energy
A body of mass m tied to a string is moved in a vertical circle of radius r. the difference in tensions at the lowest point and the highest point is.	A. 2 mg B. 4 mg C. 6 □ g D. 8 mg
The ratio of the SI unit to the C)G.S unit of torque is.	A. 10 ⁷ B. 10 ⁹ C. 10 ⁰ D. 10 ³
For a particle in uniform circular motion the relation a = r $\hfill\Box$ of accelerations hold. The acceleration 'a'	A. is centripetal acceleration B. Is tangential acceleration C. is radical acceleration D. both A and B
A point on the rim of wheel 400 cm in diameter has a velocity of 1600 cms-1 . The angular velocity of the wheel is:	A. 6 rad/s B. 4 rad/s C. 2 rad/s D. 8 rad/s
A body is moving in a circle with a constant speed. it has	A. a constant velocity B. a constant acceleration C. a velocity of constant magnitude D. an acceleration of constant magnitude
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