

MDCAT Physics Chapter 4 Circular Motion MCQ's Test

Sr	Questions	Answers Choice
1	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. $6\ \square\ g$ D. $8\ mg$
2	The angular momentum changes from 2 units to 6 units in 4s. the torque is	A. 1 unit B. $3/2$ unit C. $1/2$ unit D. 4unit
3	The work done to keep the satellite in the given orbit is.	A. Zero B. infinity C. unit D. can't be decided
4	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
5	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
6	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>
7	Ten second after an electric fan is turned on, the fan rotates at $300\text{rev}/\text{min}$. its average angular acceleration is	A. $30\ \text{rad}/\text{s}^2$ B. $3.14\ \text{rad}/\text{s}^2$ C. $30\ \text{rev}/\text{s}^2$ D. $500\ \text{rev}/\text{s}^2$
8	A satellite moving round the earth constitute	A. An inertial frame of reference B. Non inertial frame C. Neither inertial nor non inertial D. Both inertial and non-inertial
9	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 C. more than its tangential acceleration D. less than its tangential acceleration
10	The time period of a geostationary satellite above the surface of the earth is.	A. 24 hours B. 12 hours C. 365 days D. none of these
11	For a particle in uniform circular motion the relation $a = r \square$ of accelerations hold. The acceleration 'a'	A. is centripetal acceleration B. Is tangential acceleration C. is radical acceleration D. both A and B
12	On slightly disturbing a body which is an unstable equilibrium, its center of gravity	A. rises B. falls C. remains constant D. first rises then falls
13	The kinetic energy of a body rotating with an angular speed \square depends on.	A. angular speed B. distribution of mass C. neither (A) nor (B) D. both (A) and (B)
14	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. 10^2

		D. 10^3
15	A body revolved around the sun 27 times faster than the earth what is the ratio of their radii	A. $1/27$ B. $1/4$ C. $1/9$ D. $1/3$
16	Geo stationary satellite remains	A. Stationary B. Both "A" & "B" C. Appear D. None of them
17	What happens to the centripetal acceleration of a particle, when its speed is doubled and angular velocity is halved?	A. halved B. doubled C. remain unchanged D. becomes four times
18	A particle revolves round a circular path with a constant speed. The acceleration of the particle is	A. Along the circumference of the circle B. Along the tangent C. Along the radius D. Zero
19	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
20	A point on the rim of a wheel 4m in diameter has a velocity of 1600 cm s^{-1} . The angular velocity of the wheel is	A. 2 rad s^{-1} B. 4 rad s^{-1} C. 6 rad s^{-1} D. 8 rad s^{-1}