MDCAT Physics Chapter 4 Circular Motion MCQ's Test

Sr	Questions	Answers Choice
1	If the radius of the circular path of particle going around the circle is doubled without changing its frequency of rotation, then centripetal force on it is.	A. doubled B. halved C. unchanged D. quadrupled
2	If a car moves with a uniform speed of 2 ms-1 in a circle of radius 0.4m. Its angular speed is	A. 4 rad. s⁻¹ B. 1.6 rad. s⁻¹ C. 5 rad. s⁻¹ D. 2.8 ms⁻¹
3	Torque is necessary for producing.	A. angular speed B. linear acceleration C. angular acceleration D. none of these
4	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
5	Two satellites are going around the earth at a height of 250 km and 450 km respectively. If angular speed for both is same, then centripetal acceleration will be.	A. more for first B. more for second C. same for both D. nothing can be decided
6	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
7	The time period of revolution of geostationary satellite is	A. 1440 minutes B. 24 minutes C. 84 minutes D. none of these
8	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. gravitational force
9	A car of 1000kg traveling at 20m/sec rounds a curve of radius 100m. Find the necessary centripetal force	A. 4 x 10³ kg m/s^{2 } B. 3 x 10³ kg m/s² C. 5 x 10³kg m/s² D. 4.5 x 10³kg m/s²
10	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
11	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
12	A body moving in a circular path with a constant speed has a	A. Constant velocity B. Constant kinetic energy C. Constant acceleration D. Constant displacement
13	A couple produces	A. linear motion B. rotational motion C. both (A) and (B) D. None
14	A body of mass m tied to a string is moved in a vertical circle of radius r. the difference in	A. 2 mg B. 4 mg

	tensions at the lowest point and the highest point is.	C. 6 □g D. 8 mg
15	A body crosses the topmost point of a vertical circle with critical speed. Itscentripetal acceleration, when the string is horizontal will be	A. 4g B. 3g C. g D. 6g
16	The ratio of the SI unit to the C)G.S unit of torque is.	A. 10⁷ B. 10⁹ C. 10⁰ D. 10³
17	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
18	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
19	For a particle in uniform circular motion the relation a = r □ of accelerations hold. The acceleration 'a'	A. is centripetal acceleration B. Is tangential acceleration C. is radical acceleration D. both A and B
20	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