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 □g D. 8 mg
2	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
3	Which statement about geostationary orbit is false?	A. A geostationary orbit must be directly above the equator B. All satellite in a geostationary orbit must have the same masses C. The period of geostationary orbit must be 24 hours D. There is only one possible radius for a geostationary
4	The ratio of angular speeds of minute hand and hour hand of a watch is:	A. 1: 12 B. 6: 1 C. 12: 1 D. 1: 6
5	Angular displacement in rotational motion is expressed in	A. m B. m² C. Nms-1 D. Nm s
6	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
7	When a particle moves in a uniform circular motion. It has:	A. Radial velocity and radial acceleration B. Tangential velocity and radial acceleration C. Tangential velocity and tangential acceleration D. Radial velocity and tangential acceleration
8	In uniform circular motion, the factor that remains constant is:	A. Linear velocity B. Acceleration C. Speed D. All of these
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/s² B. 3 x 10³ kg m/s² C. 5 x 10³kg m/s² D. 4.5 x 10³kg m/s²
10	When a particle moves in a circle the angle between it linear velocity and the angular velocity is always	A. 0° B. 180° C. 90° D. none of them
11	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
12	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

13	Torque is necessary for producing.	A. angular speed B. linear acceleration C. angular acceleration D. none of these
14	In case of planets the necessary acceleration is provided by	A. Gravitational force B. coulomb force C. frictional force D. centripetal force
15	Geo stationary satellite remains	A. Stationary B. Both "A" & "B" C. Appear D. None of them
16	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
17	Ten second after an electric fan is turned on, the fan rotates at 300rev/min. its average angular acceleration is	A. 30 rad/s² B. 3.14 rad/s² C. 30 rev/s² D. 500 rev/s²</sup>
18	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
19	A body revolved around the sun 27 times faster then the earth what is the ratioof their radii	A. 1/27 B. 1/4 C. 1/9 D. 1/3
20	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