MDCAT Physics Chapter 4 Circular Motion MCQ's Test

Sr	Questions	Answers Choice
1	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
2	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
3	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
4	In uniform circular motion, the factor that remains constant is	A. Linear velocity B. Centripetal force C. Acceleration D. speed
5	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
6	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
7	Angular displacement in rotational motion is expressed in	A. m B. m² C. Nms-1 D. Nm s
8	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
9	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
10	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
11	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
12	Torque is necessary for producing.	A. angular speed B. linear acceleration C. angular acceleration D. none of these
13	A stone of mass 0.5kg tied with a string of length 1m is moving in a horizontal circle with a speed of 4ms-1 . The tension acting on the string in newton is:	A. 2 B. 0.2 C. 8 D. 0.8
14	The kinetic energy of a body rotating with an angular speed □ depends on.	A. angular speed B. distribution of mass C. neither (A) nor (B)

		D. both (A) and (B)
15	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
16	The work done to keep the satellite in the given orbit is.	A. Zero B. infinity C. unit D. can't be decided
17	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
18	In case of planets the necessary acceleration is provided by	A. Gravitational force B. coulomb force C. frictional force D. centripetal force
19	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
20	In uniform circular motion, the factor that remains constant is:	A. Linear velocity B. Acceleration C. Speed D. All of these