MDCAT Physics Chapter 4 Circular Motion MCQ's Test

Sr	Questions	Answers Choice
1	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
2	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
3	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
4	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
5	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
6	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
7	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
8	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
9	SI unit of kinetic energy of rotation is	A. joule second B. joule C. joule second D. joule meter
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	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
12	If a rotating body is moving counter clockwise, direction of angular velocity will be	A. along linear velocity B. towards the center C. along the axis of rotation D. away from center
13	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)
14	The angular analogue of linear displacement is called	A. angular velocity B. angular displacement C. angular momentum D. moment of force
15	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
16	In uniform circular motion, the factor that remains constant is:	A. Linear velocity B. Acceleration C. Speed D. All of these
17	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
18	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
19	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
20	The mud flies off the tyre of a fast moving car in the direction	A. parallel to the moving tyre B. anti parallel to the moving tyre C. tangent to the moving tyre D. none of these