MDCAT Physics Chapter 4 Circular Motion MCQ's Test

Sr	Questions	Answers Choice
1	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
2	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
3	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
4	In uniform circular motion, the factor that remains constant is:	A. Linear velocity B. Acceleration C. Speed D. All of these
5	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
6	The time period of revolution of geostationary satellite is	A. 1440 minutes B. 24 minutes C. 84 minutes D. none of these
7	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
8	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
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 angular analogue of linear displacement is called	A. angular velocity B. angular displacement C. angular momentum D. moment of force
11	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
12	Ten second after an electric fan is turned on, the fan rotates at 300rev/min. its average angular acceleration is	A. 30 rad/s^2 B. 3.14 rad/s^2 C. 30 rev/s^2 D. 500 rev/s^2
13	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
14	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
	A body revolved around the sun 27 times faster than the earth what is the ratio their radii	D. 1/3
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	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. 10^3
17	Two artificial satellites of unequal masses are revolving in a circular orbit around the earth with a constant speed. Their time periods:	A. Will be different B. Will depend on their masses C. Will be same D. Will depend upon the place of their projection
18	Torque is necessary for producing.	A. angular speed B. linear acceleration C. angular acceleration D. none of these
19	The angular momentum changes form 2 units to 6 units in 4s. the torque is	A. 1 unit B. 3/2unit C. 1/2unit D. 4unit
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}