MDCAT Physics Chapter 2 Motion & Force Online Test

Sr	Questions	Answers Choice
1	A particle executing one dimensional motion, finally comes to rest, what will be the angle between acceleration and displacement during motion:	A. 0 B. *π* C. $\pi/2$ D. $\pi/4$
2	The centre of gravity of a triangular plate is at	A. On end of the plate B. The midpoint of any side of the plate C. The midpoint of any side of the plate D. The midpoint of any side of the plate
3	A man has weight 980 N in a stationary lift. What will be his weight if the lift starts moving up with anacceleration of 4.9 ms^{-2}	A. 980 N B. 1470 N C. 1980 N D. 1460 N
4	If velocity time graph is a straight line parallel to time axis then body is	A. Moving with zero acceleration B. Moving with constant velocity C. Covering equal displacement in equal intervals of time D. All of these
5	Two 8 N forces act on each end of the beam of length 0.60m. Two forces are parallel and acting opposite to each other, the angle between the force and beam is 60o , what is the torque of the couple exerted on the beam:	A. 2.4 Nm B. 4.2 Nm C. 4.8 Nm D. 9.6 Nm
6	Vertical component of velocity of the projectile at any instant 't' from the ground is given by:	A. □□□□□ B. □□□□□ − □*t* C. □□□□□ − □*t* D. □□□□□ + □*t*
7	Two bodies are projected at angles □ and (90°−□) with the horizontal at the same speed.The ratio of their maximum heights is	A. 1 : 1 B. 1 : tan □ C. 1 : tan □ D. tan^2 : 1
8	Two bodies are projected at angle □ □□□ (□□ − □) to the horizontal with the same speed. The ratio of their times of flight is:	A. sin □ : 1 B. cos □ : 1 C. sin □ : cos□ D. cos □ : sin□
9	At the highest point on the trajectory of a projectile, its	A. Potential energy is minimum B. Kinetic energy is maximum C. Total energy is maximum D. Kinetic energy is minimum
10	A boy is travelling from Lahore to Karachi with uniform velocity . Its	A. Speed changes B. Acceleration changes C. Direction of motion changes D. Displacement from origin changes
11	The distance covered by a body in time 't' starting from rest is:	A. 1/2 □^{2} B. *vt* C. □□^{2} D. □□$_2$
12	A stone is thrown upwards it returns to ground describing a parabolic path which of the following remains constant:	A. Speed of the ball B. Kinetic energy of the ball C. Vertical component of velocity D.) Horizontal component of velocity
13	A body of mass m having an initial velocity v, makes head on elastic collision with a stationary body of mass m. After the collision, the body of mass m comes to rest and only the body having mass M moves. This will happen only when:	A. m>>M B. m<<M C.) m=M D. m=1M
14	As in linear motion force determines linear acceleration where as in circular motion torque determines its	A. Angular acceleration B. Linear acceleration C. Vibratory acceleration D. Tangential acceleration

#	Question	Options
15	The rate of change of momentum of a body falling freely under gravity is equal to its	A. Impulse B. Kinetic energy C. Pover D. Weight
16	A monkey is accelerating down a string whose breaking strength is two third of his weight. The minimumacceleration of the monkey should be	A. 1/3g B. g C. 2/3 g D. 0 m/s2
17	. Time rate of change of momentum is equal to	A. Force B. Impulse C. Velocity D. Both A and C
18	Speedometer of an automobile measures	A. Average velocity B. Instantaneous velocity C. Acceleration D. Instantaneous speed
19	A rigid uniform bar of length 2.4 m is pivoted horizontally at its mid-point, weights are hung from two points of the bar as shown in diagram. To maintain horizontal equilibrium, a couple is applied to the bar: What is the torque and the direction of couple?	A. 40 N m clockwise B. 40 N m anti-clockwise C. 80 N m clockwise D. 80 N m anti-clockwise
20	select Which one of the following is not performing projectile motion	A. A gas filled balloon B.) Bullet fired from gun C. A football kicked D. A baseball shot