MDCAT Physics Chapter 2 Motion & Force Online Test

Sr	Questions	Answers Choice
1	The angular momentum of a body changes from 30 J-S to 50 J-S in 0.5 sec. The torque acting on it is	A. 40 N-m B. 100 N-m C. 50 N-m D. 150 N-m
2	Vertical component of velocity of the projectile at any instant ‘t’ from the ground is given by:	A. □□□□□□ B. □□□□□□ – □t C. □□□□□□ – □t D. □□□□□□ + □t
3	The angle of projection, at which the range of projectile would become half of its maximum value.	A. 45Degree B. 30Degree C. 15Degree D. 60 Degree
4	In the absence of air resistance, a stone is thrown from P and follows a parabolic path in which the highest point reached is T. The vertical component of acceleration of stone is:	A. Zero at T B. Greatest at T C.) Greatest at P D. the same at P as at T
5	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
6	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
7	What is the resultant force in the diagram shown?	A. Zero B. 6N to left C. 6N to right D. 11N to right
8	The distance covered by a body in time ‘t’ starting from rest is:	A. 1/2 □² B. vt C. □□² D. □□₂
9	Newton’s third law concerns the forces of interaction between two bodies. Which of the following statement relating to the third law is not correct:	A. The two forces must be the same type B. The two forces must act on different bodies C. The two forces are always opposite in direction D. The two forces are equal and opposite so the bodies are in equilibrium
10	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
11	Two projectiles ‘A’ and ‘B’ are thrown with same speed but at angle of 40 degree and 50 degree with the horizontal. The horizontal range of ‘A’ will be:	A. Equal to that of ‘B’ B. Greater than that of ‘B’ C. Less than that of ‘B’ D. 4/5times that of ‘B’
12	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
13	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
14	A stone is thrown upwards it returns to ground describing a parabolic path which of the	A. Speed of the ball B. Kinetic energy of the ball

	following remains constant:	C. Vertical component of velocity D.) Horizontal component of velocity
15	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□
16	Speedometer of an automobile measures	A. Average velocity B. Instantaneous velocity C. Acceleration D. Instantaneous speed
17	Swimming is possible on account of	A. 1st law of motion B. 2nd law of motion C. 3rd law of motion D. Newton's law of Gravitation
18	. Time rate of change of momentum is equal to	A. Force B. Impulse C. Velocity D. Both A and C
19	If a body changes its momentum from 100 N s to 200 N s in 10 s then the unbalanceexternal force responsible to change the momentum is	A. 5 N B. 2.5 N C. 2n D. 10n
20	A machine gun fires 'n' bullets per second and the mass of each bullet is m. If v is the speed of each bullet then the force exerted on the machine gun is:	A. mng B. mnv C. mnvg D. mnv/g