MDCAT Physics Chapter 2 Motion & Force Online Test

Sr	Questions	Answers Choice
1	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
2	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
3	A ball takes 't' second to fall from a height □□ and '2t' second to fall from a height □□ then h1/h2 is:	A. 2 B. 4 C. 0.5 D. 0.25
4	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
5	A body is in translational equilibrium if	A. □P = 0 B. □L = 0 C. □F = 0 D. □□ = 0
6	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
7	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
8	Two astronauts in a satellite must have	A. Same masses B. Same real weights C. Same apparent weights D. None of these
9	The distance covered by a body in time 't' starting from rest is:	A. 1/2 □² B. vt C. □□² D. □□₂
10	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
11	Vertical component of velocity of the projectile at any instant 't' from the ground is given by:	A. □□□□□□ B. □□□□□□ − □t C. □□□□□□ − □t D. □□□□□□ + □t
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	In a one-dimensional elastic collision, the relative velocity of approach before collision is equal to:	A. Sum of the velocities of the bodies B. e times the relative velocity of separation after collision C. 1/□ times the relative velocity of separation after collision D. relative velocity of separation after collision

14	A rider uses Motorcycle safety helmet that extends the time of collision during accident hence decreasing the	A. Change of collisio B. Force acting C. Velocity D. Impulse
15	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
16	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. □/2 D. □/4
17	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'
18	What is the resultant force in the diagram shown?	A. Zero B. 6N to left C. 6N to right D. 11N to right
19	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
20	Two railway trucks of masses m and 3m move towards each other in opposite directions with speeds 2v and v respectively. These trucks collide and stick together. What is the speed of the trucks after the collision?	A. v/4 B. v/2 C. v D. 5v/4