

ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
2	A change in position of a body from its initial position to its final position is known as	A. relative motion B. displacement C. distance D. acceleration
3	Angular momentum	A. Scalar B. Axial vector C. Polar vector D. At 45 ° angle
4	Two projectiles are fired from the same point with the same speed at angles of projection 60° and 30° respectively. Which one of the following is true?	A. Their range will be same B. Their maximum height will be same C. Their landing velocity will be same D. Their time of flight will be same
5	A vehicle of mass 120 kg is moving with a uniform velocity of 108 km/h. The force required to stop the vehicle in 10s is	A. 120 x 10.8 N B. 180 N C. 720 N D. 360 N
6	Acceleration in a body is always produced in the directin of:	A. Velocity B. Weight C. Force D. Botha B and C
7	The motion of a projectile is	A. one dimension B. two dimension C. three dimension D. all of them
8	A railway engine (mass 10^4kg) is moving with a speed of 73 km/h. The force which should be applied to bring it to rest over a distance of 20 m is	A. 3,600 N B. 7,200 N C. 10,000 N D. 100,000 N
9	Flight of rocket in the space is an example of	A. Newton's first law B. Newton's third law C. Newton's second law D. all of them
10	The mass of a body measured by a physical balance in a lift at rest is found to be m, if the lift is going up with an acceleration a, its mass will be measured as	A. m (1 - a/g) B. m (1 + a/g) C. m D. Zero
11	Newton published laws of motion in his famous book "principia" in	A. 1867 B. 1667 C. 1676 D. 1687
12	The slopes of the tangent at any point on the curve gives the value of the	A. average velocity at that point B. instantaneous velocity at that point C. average acceleration at that point D. instantaneous acceleration at that point
13	A body of mass 1.0 kg is falling with an acceleration of 10 m/s 2 . Its apparent weight will be (g=10 m/s 2)	A. 1.0 kg wt B. 2.0 kg wt C. 0.5 kg wt D. Zero
14	The range of projectile is 50 m whenθ is inclined with horizontal at 15°. What is the range whenθ becomes 45°?	A. 400 m B. 300 m C. 200 m D. 100 m
	2	A. 150 m

15	A body moving with an acceleration of 5 m/sec ² started with velocity of 10 m/sec. What will be the distance traversed in 10 seconds?	B. 250 m C. 350 m D. 400 m
16	When a shall explodes a mid-air, the total momentum of its fragments is	A. less than the momentum of shell B. equal to the momentum of shell C. greater than the momentum of shell D. none of them
17	Which quantity has the same dimension as that of impulse?	A. KE B. Power C. Momentum D. Work
18	Laws of motion are not valid in a system which is	A. inertial B. non-interial C. at rest D. moving with uniform velocity
19	By which velocity a ball be projected vertically so that the distance covered by it in 5th seconds is twice the distance it covers in its 6th second ($g=10m/s^2$)	A. 58.8 m/s B. 49 m/s C. 65 m/s D. 19.6 m/s
20	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60 °