

ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	The motion of a projectile is	A. one dimension B. two dimension C. three dimension D. all of them
2	A body of mass 5 kg is acted upon by a total change n momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
3	A particle of mass 0.5 g moving along x-axis is located of x_1 = 15 m at t_1 = 5s and x_2 = 33 m at t_2 = 13s its average velocity is	A. 6 m s ⁻¹ B. 2.45 m s ⁻¹ C. 2.25 m s ⁻¹ D. 4.45 m s ⁻¹
4	If the acceleration of a body is negative, then slope of the velocity-time graph will be:	A. Zero B. Positive C. Negative D. Infinity
5	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
6	The decrease in velocity per unit time is called	A. deceleration B. acceleration C. uniform acceleration D. variable acceleration
7	A body falls freely from rest. It covers as much distance in the last second of its motion as covered in the first three seconds. The body has fallen for a time of	A. 3 s B. 5 s C. 7 s D. 9 s
8	A body is thrown from a height h with speed u, it hits the ground with speed V	A. The value of V is maximum if the body is thrown vertically downward B. The value of V is maximum if the body is thrown vertically upwards C. The value of V is minimum if the body is thrown horizontally D. The value of V does not depend on the direction of which it is thrown
9	An object thrown in arbitrary direction in space with an initial velocity and moving freely under gravity will follow	A. a circular path B. a straight line C. a hyperbola D. a parabola
10	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
11	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec ⁻¹ B. 2.44 m sec ⁻¹ C. 3.42 m sec ⁻¹ D. 4.43 m sec ⁻¹
12	A cold soft drink is kept on the balance. When the cap is opened, then the weight	A. Increases B. Decreases C. First increases, then decreases D. Remains same
13	When a force is applied on a body, several effects are possible Which of the following effect could not occur?	A. the body rotates B. the body speeds up C. the mass of the body decreases D. the body changes its direction
		A. If the body is not moving the acceleration is necessarily zero B. If the body is slowing, the

14	For a moving body, at any instant of time	retardation is negative C. If the body is slowing, the distance is negative D. If displacement, velocity and acceleration at that instant are known, we can find the displacement at any given time in future
15	If two bodies of equal masses moving in the same direction collide elastically, then their velocities.	A. Are added B. Are subtracted C. Do not change D. Are exchanged
16	The velocity given to a body to go out of the influence of earth's gravity is known as:	A. Terminal velocity B. Orbital velocity C. Escape velocity D. None of these
17	Swimming is based on the principle of	A. Newton's 1st law B. Newton's 2nd law C. Newton's 3rd law D. All
18	When a person jumps off the ground, the reaction force of the ground is	A. greater than the weight of the person B. smaller than the weight of the person C. equal to the weight of the person D. zero
19	The mass of the object is a quantities measure of its	A. speed B. velocity C. acceleration D. inertia
20	A body of mass 5 kg is acted upon by a constant force of 20 n for 7 seconds. The total change in momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS