

Physics ECAT Pre Engineering Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
2	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity
3	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
4	If the water falls from a dam into a turbine wheel 19.6 m below, then the velocity of water at the turbine, is (Take $g=9.8 \text{ m/s}^2$)	A. 9.8 m/s B. 19.6 m/s C. 39.2 m/s D. 98.0 m/s
5	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
6	When a shell explodes in mid-air, its fragments fly off in	A. only one direction B. in two direction C. different directions D. a particular direction
7	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
8	Inertial frame of references are those frame of references which are moving with	A. increasing velocity B. decreasing velocity C. constant velocity D. all of them
9	Swimming becomes possible because of _____ law of motion:	A. First B. Second C. Third D. None of these
10	The instantaneous velocity is define as the limiting value of $\Delta d/\Delta t$ on the time interval Δt approaches to	A. zero B. maximum C. minimum D. infinity
11	Body which falls freely under gravity provides good example of motion under:	A. Uniform acceleration B. Non-uniform acceleration C. Uniform velocity D. None of these
12	The magnitude of the force producing an acceleration of 10 m/sec^2 in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
13	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
14	The time rate of change of displacement is called:	A. Time B. Acceleration C. Speed D. Velocity
15	A particle of mass 0.5 g moving along x-axis is located of $x_1 = 15 \text{ m}$ at $t_1 = 5 \text{ s}$ and $x_2 = 33 \text{ m}$ at $t_2 = 13 \text{ s}$ 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}

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	Distance covered by a freely falling body in the first second of its motion will be:	A. 4.9 m B. 9.8 m C. 19.6 m D. 29.4 m
18	A certain force gives an acceleration of 2 m/sec^2 to a body mass 5 kg. The same force would give a 20 kg object an acceleration of:	A. 0.5 m/sec^2 B. 5 m/sec^2 C. 1.5 m/sec^2 D. 9.8 m/sec^2
19	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
20	The motion of a body in a straight line is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension