

ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	A ball of mass m moving with uniform speed collides elastically with another stationary ball. The incident ball will lose maximum kinetic energy when mass of the stationary ball is	A. m B. $2m$ C. $4m$ D. Infinity
2	The shortest distance between two points directed from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
3	The dimension of linear inertia is:	A. MLT^{-2} B. ML^{-1} C. $ML^{-1}T^{-2}$ D. MLT^{-1}
4	The velocity of a projectile is maximum	A. at the point of projection B. just before striking the ground C. at none of them D. at both of them
5	In the above figures, tell which set is graphs shows that a body is moving uniform velocity:	A. (i) and (ii) B. (ii) and (iii) C. (i) and (iii) D. (ii) and (iv)
6	A non-inertial frame of reference is that frame of reference in which	A. $\frac{d^2x}{dt^2} = 0$ B. $\frac{d^2x}{dt^2} > 0$ or $\frac{d^2x}{dt^2} < 0$ C. $\frac{dx}{dt} = 0$ D. none of them
7	A body whose momentum is constant must have constant	A. Acceleration B. Velocity C. Force D. None of these
8	An object is dropped from a height of 100 m. Its velocity at the moment it touches the ground is:	A. 100 m/sec B. 140 m/sec C. 1960 m/sec D. 196 m/sec
9	The decrease in velocity per unit time is called:	A. Variable Acceleration B. Average Acceleration C. Retardation D. None of these

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10	The quantity $F \times t$ is called as	A. momentum B. velocity C. acceleration D. impulse
11	The discuss used by athlete has a mass of 1 kg, its weight in newton is	A. 9.8 N B. 80 N C. 98 N D. 100 N
12	When we consider the average velocity of a body, then the body is moving in	A. straight line B. curved path C. may be in a straight or curved path D. none of them
13	The decrease in velocity per unit time is called	A. deceleration B. acceleration C. uniform acceleration D. variable acceleration
14	The linear momentum of the body is defined as	A. $p=ma$ B. $p=1/2ma$ C. $p=mv$ D. $p=1/2mv$
15	If speed of electron is 5×10^5 m/s. How long does it take one electron to transverse 1 m?	A. 1×10^{⁶} B. 2×10^{⁶} C. 2×10^{⁵} D. 1×10^{⁵}
16	A projectile on its path gets divided into two pieces at its highest point. Which is true?	A. Momentum increases B. Momentum decreases C. Kinetic energy increases D. Kinetic energy decreases
17	A mass of 5kg moves with an acceleration of 10 m s^{-2} force applied is	A. 10 N B. 50 N C. 2 N D. 20 N
18	Laws of motion are not valid in a system which is	A. inertial B. non-inertial C. at rest D. moving with uniform velocity
19	A 5 kg mass is falling freely, the force acting on, it will be	A. 19.6 N B. 9.8 N C. 5 N D. Zero
20	If the slope of the velocity-time graph increases at constant rate with time, then the body is said to have	A. uniform deceleration B. uniform negative acceleration C. average acceleration D. uniform positive acceleration