

ECAT Physics Chapter 3 Motion and Force

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Sr	Questions	Answers Choice
1	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
2	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
3	A ball is dropped vertically down and it takes time t to reach the ground. At time t/2	A. The ball had covered exactly half the distance B. The velocity of the ball was V/3 where V is the velocity when it reached the ground C. The ball had covered less than half the distance D. The ball had covered more than half the distance
4	One KWh is equal to:	A. 3.6 x 10 ² J B. 3.6 KJ C. 3.6 x 10 ¹ KJ D. 3.6 MJ
5	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90° with the force of the smaller magnitude, then their magnitudes are	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
6	The product of force and time is called change in:	A. Momentum B. Impulse C. Force D. Both a and b
7	A lift is moving up with acceleration equal to 1/5 of that due to gravity. The apparent weight of a 60 kg man standing in lift is	A. 60 kg wt B. 72 kg wt C. 48 kg wt D. Zero
8	Velocity of a body changes if	A. direction of the body changes B. speed of the body changes C. neither speed nor direction changes D. either speed or direction changes
9	If a ball comes back to its starting point after bouncing off the wall several times, then its	A. total displacement is zero B. average velocity is zero C. none of them D. both of them
10	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a body can change when its acceleration is constant
11	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
12	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them
13	One newton is a force that produces an acceleration of 0.5 m/sec ² in a body of mass:	A. 2 Kg B. 3 Kg C. 4 Kg

		υ. 8 Kg
14	The path (or trajectory) described by a projectile is	A. a parabola B. a hyperbola C. a circle D. a straight line
15	During the upward motion of the projectile, the vertical component of velocity.	A. Decreases B. Increases C. Remains constant D. None of these
16	The shortest distance between two points directed from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
17	Bodies failing freely under gravity provide good example of motion under	A. non-uniform acceleration B. uniform acceleration C. variable acceleration D. increasing acceleration
18	A train cover 90 km in half an hour. the time taken by it to travel 15 km will be:	A. 20 minutes B. 48 minutes C. 10 minutes D. 5 minutes
19	The dimension of linear inertia is:	A. MLT ² B. ML