

## ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	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
2	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)
3	If the velocity of the body decreases non-uniformly then the slope of the velocity-time graph will have	A. different values B. same values C. zero values D. constant values
4	A ball is dropped downwards After 1 second another ball is dropped downwards from the same point. What is the distance between them after 3 seconds	A. 25 m B. 20 m C. 50 m D. 9.8 m
5	Laws of motion are not valid in a system which is	A. inertial B. non-inertial C. at rest D. moving with uniform velocity
6	A lift is descending at a constant speed V. A passenger in the lift drops a coin. The acceleration of the coin towards the floor will be	A. Zero B. g C. -g D. V + g
7	The dimension of linear inertia is:	A. $MLT^{-2}$ B. $ML^{-1}T^{-2}$ C. $ML^{-1}T^{-1}$ D. $MLT^{-1}$
8	One newton is a force that produces an acceleration of $0.5 \text{ m/sec}^2$ in a body of mass:	A. 2 kg B. 3 kg C. 4 kg D. 8 kg
9	A body is moving with constant velocity of 10 m/sec in the north-east direction. Then its acceleration will be:	A. $10 \text{ m/sec}^2$ B. $20 \text{ m/sec}^2$ C. $30 \text{ m/sec}^2$ D. 0

acceleration will be.

C. 30 m/sec<sup>2</sup>  
D. Zero

10	The expression $F \times t$ is called impulse if the time 't' is	A. zero B. very large C. very small D. infinite
11	The vertical and horizontal range will be equal if angle of projection is	A. $76^\circ$ B. $45^\circ$ C. $60^\circ$ D. $120^\circ$
12	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
13	Work done along a closed path in a gravitational force is:	A. maximum B. Minimum C. Zero D. Unity
14	A man sitting in a bus travelling in a direction from west to east with a speed of 40 km/h observes that the rain drops are falling vertically down. To the another man standing on ground the rain will appear	A. To fall vertically down B. To fall at an angle going from west to east C. To fall at an angle going from east to west D. The information given is insufficient to decide the direction of rain
15	The path described by a projectile is called its	A. orbit B. trajectory C. range D. distance
16	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. 2 m C. 4 m D. Infinity
17	When a horse pulls a cart, the force that makes the horse run forward is the force exerted by	A. The horse on the ground B. The horse on the cart C. The ground on the horse D. The ground on the cart
18	Biomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
19	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
20	Swimming becomes possible because of _____ law of motion.	A. First B. Second C. Third D. None of these