

ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	The vertical component of velocity of a projectile during its motion is minimum	A. at the time of projection B. at the highest point C. just before hitting the plane of projection D. all of them
2	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
3	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
4	Swimming is based on the principle of	A. Newton's 1st law B. Newton's 2nd law C. Newton's 3rd law D. All
5	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
6	The horizontal component of a projectile moving with initial velocity of 500 ms^{-1} at an angle 60° to x-axis is	A. 500 ms^{-1} B. 1000 ms^{-1} C. 250 ms^{-1} D. Zero
7	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
8	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
9	The three equation of motions are useful only for	A. linear motion with increasing acceleration B. line motion with uniform acceleration C. linear motion with zero acceleration D. linear motion with varying acceleration
10	The effect of applying a force on a moving body is to change	A. its direction of motion only B. its speed of motion only C. both the direction and speed of motion D. its inertia only
11	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
12	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
13	The path (or trajectory) described by a projectile is	A. a parabola B. a hyperbola C. a circle D. a straight line

14	A monkey sits on the pan of spring scale kept in an elevator. The reading of the spring scale will be maximum when	<p>A. Elevator is stationary</p> <p>B. Elevator cable breaks and it falls freely towards earth</p> <p>C. Elevator accelerates downwards</p> <p>D. Elevator accelerates upward</p>
15	The velocity of a projectile is maximum	<p>A. at the point of projection</p> <p>B. just before striking the ground</p> <p>C. at none of them</p> <p>D. at both of them</p>
16	Acceleration of a body at any particular instant during its motion is known as	<p>A. average acceleration</p> <p>B. uniform acceleration</p> <p>C. instantaneous acceleration</p> <p>D. all of them</p>
17	Change in momentum is one second called.	<p>A. Impulse</p> <p>B. Force</p> <p>C. Energy</p> <p>D. Work</p>
18	A ball is dropped vertically down and it takes time t to reach the ground. At time $t/2$	<p>A. The ball had covered exactly half the distance</p> <p>B. The velocity of the ball was $V/3$ where V is the velocity when it reached the ground</p> <p>C. The ball had covered less than half the distance</p> <p>D. The ball had covered more than half the distance</p>
19	Maximum height of a bullet when fired at 30° with horizontal is 11 m. Then height when it is fired at 60° is	<p>A. 22 m</p> <p>B. 6 m</p> <p>C. 33 m</p> <p>D. 7.8 m</p>
20	During the upward motion of the projectile, the vertical component of velocity.	<p>A. Decreases</p> <p>B. Increases</p> <p>C. Remains constant</p> <p>D. None of these</p>