

Physics ECAT Pre Engineering Chapter 3 Motion and Force

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Sr	Questions	Answers Choice
1	According to the law of conservation of linear momentum, the total linear momentum of an isolated system	A. increases B. decreases with time C. remains constant D. none of them
2	Dimensions of velocity are	A. [L] B. [T] C. [LT ⁻¹] D. [LT ⁻²]
3	A mass of 5kg moves with an acceleration of 10m s ⁻² force applied is	A. 10 N B. 50 N C. 2 N D. 20 N
4	When the mass of the colliding body is much larger than the mass of the body at rest, its velocity after collision.	A. Becomes half B. Becomes zero C. Ramains same D. Becomes double
5	Work done along a closed path in a gravitational force is:	A. maximum B. Minimum C. Zero D. Unity
6	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec ⁻¹ B. 2.44 m sec ⁻¹ C. 3.42 m sec ⁻¹ D. 4.43 m sec ⁻¹
7	When a body is moving on a surface, the force of friction is called	A. Static friction B. Dynamic friction C. Limiting friction D. Rolling friction
8	A body of mass 5 kg is acted upon by a total change n momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
9	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
10	Two projectiles are fired from the same point with the same speed at angles of projection 60° and 30° respectively. Which one of the following is true?	A. Their range will be same B. Their maximum height will be same C. Their landing velocity will be same D. Their time of flight will be same
11	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
12	What will be the ratio of the distance moved by a freely falling body from rest in 4th and 5th seconds of journey?	A. 4:5 B. 7:9 C. 16:25 D. 1:1
13	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
14	The SI units of momentum is	A. kg m s ⁻² B. kg ms C. kg m s ² D. N-s
15	When the total displacement is divided by total time taken, we get:	A. Velocity B. Average speed C. Average velocity D. None of these

16	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 perso D. zero
17	Which of the following statements for an object in equilibrium is not true?	A. The object must be at rest B. The object can be at rest C. The object is moving at constan speed D. The acceleration of the object is zero
18	Angular momentum	A. Scalar B. Axial vector C. Polar vector D. At 45 ° angle
19	An object thrown in arbitrary direction in space with an initial velocity and moving freely under gravity will follow	A. a circular path B. a straight line C. a hyperbola D. a parabola
20	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