

ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	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
2	Swimming becomes possible because of _____ law of motion.	A. First B. Second C. Third D. None of these
3	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
4	The path described by a projectile is called its	A. orbit B. trajectory C. range D. distance
5	The short distance between two points direction from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
6	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
7	The velocity of a body at any instant of its motion is known as	A. average velocity B. instantaneous velocity C. uniform velocity D. none of them
8	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity
9	When body moves with increasing acceleration, its velocity time graph is a	A. straight line B. horizontal straight line C. vertical straight line D. curve
10	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
11	A railway engine (mass 10^4kg) is moving with a speed of 73 km/h. The force which should be applied to bring it to rest over a distance of 20 m is	A. 3,600 N B. 7,200 N C. 10,000 N D. 100,000 N
12	A dirty carpet is to be cleaned by heating. This is in according with _____ law of motion.	A. First B. Second C. Third D. None of these
13	The SI units of momentum is	A. kg m s^{-2} B. kg ms C. kg m s^{-2} D. N-s
14	If two bodies of equal masses moving in the same direction collide elastically, then their velocities.	A. Are added B. Are subtracted C. Do not change D. Are exchanged
15	An aircraft is moving with a velocity of 300 ms^{-1} . If all the forces acting on it are balanced, then	A. It still moves with the same velocity B. It will be just floating at the same point in space C. It will be fall down instantaneously D. It will be stop

		D. It will lose its velocity gradually
16	If the velocity time graph is a straight line parallel to time-axis, then it means that:	<p>A. The body is moving with uniform velocity</p> <p>B. The body is moving with uniform acceleration</p> <p>C. The body is at rest</p> <p>D. None of above</p>
17	A body falls freely from rest. It covers as much distance in the last second of its motion as covered in the first three seconds. The body has fallen for a time of	<p>A. 3 s</p> <p>B. 5 s</p> <p>C. 7 s</p> <p>D. 9 s</p>
18	Acceleration produced in a body by the force varies	<p>A. inversely as the applied force</p> <p>B. directly as the applied force</p> <p>C. directly as the mass of the body</p> <p>D. none of them</p>
19	A non-inertial frame of reference is that frame of reference in which	<p>A. $\frac{a}{b} = 0$</p> <p>B. $\frac{a}{b} > 0$ or $\frac{a}{b} < 0$</p> <p>C. $\frac{v}{b} = 0$</p> <p>D. none of them</p>
20	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>