

## ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	The decrease in velocity per unit time is called:	A. Variable Acceleration B. Average Acceleration C. Retardation D. None of these
2	An aircraft is moving with a velocity of $300 \text{ ms}^{-1}$ . 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 lose its velocity gradually
3	The motion in a plane is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
4	A man fires a bullet of mass 200 g at a speed of 5 m/s. The gun is of one kg mass. By what velocity the gun rebounds backwards?	A. 0.1 m/s B. 10 m/s C. 1 m/s D. 0.01 m/s
5	Slope of velocity-time graph represents:	A. Acceleration B. Speed C. Torque D. Work
6	Flight of rocket in the space is an example of	A. Newton's first law B. Newton's third law C. Newton's second law D. all of them
7	A certain force gives an acceleration of $2 \text{ m/sec}^2$ to a body mass 5 kg. The same force would give a 20 kg object an acceleration of:	A. $0.5 \text{ m/sec}^2$ B. $5 \text{ m/sec}^2$ C. $1.5 \text{ m/sec}^2$ D. $9.8 \text{ m/sec}^2$
8	A force of 50 dynes is acted on a body of mass 5 g which is at rest, for an interval of 3 seconds, then impulse is	A. $0.15 \times 10^{-3} \text{ Ns}$ B. $0.98 \times 10^{-3} \text{ Ns}$ C. $1.5 \times 10^{-3} \text{ Ns}$ D. $2.5 \times 10^{-3} \text{ Ns}$
9	The distance covered by a body in unit time is called.	A. Displacement B. speed C. Velocity D. Both B and C
10	When a body is moving with uniform positive acceleration, the velocity- time graph is a straight line. Its slope is	A. zero B. negative C. positive D. non-existing
11	Swimming is based on the principle of	A. Newton's 1st law B. Newton's 2nd law C. Newton's 3rd law D. All
12	When we consider the average velocity of a body, then the body is moving in	A. straight line B. curved path C. may be in a straight or curved path D. none of them
13	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
14	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
15	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. Nuclear energy

		D. None of these
16	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
17	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
18	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
19	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
20	The direction of the linear momentum is the direction of	A. speed B. velocity C. weight D. none of them