

## ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
2	Blomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
3	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
4	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
5	If d is the displacement of the body in time t, then its average velocity will be	A. $v = \frac{d}{t}$ B. $v = \frac{t}{d}$ C. $v = \frac{d}{t}$ D. $v = \frac{t}{d}$
6	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	A. 3 s B. 5 s C. 7 s D. 9 s
7	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
8	A train of 150 m length is going towards north direction at a speed of 10 ms <sup>-1</sup> . A parrot flies at a speed of 5 ms <sup>-1</sup> towards south direction parallel to the railway track. The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s
9	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
10	The dimension of linear inertia is:	A. ML <sup>2</sup> B. ML C. ML D. T <sup>-2</sup>

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D. MLT<sup>-1</sup>

11	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
12	A dirty carpet is to be cleaned by heating. This is an accordance with_____ law of motion:	A. First B. Second C. Third D. None of these
13	A typical rocket ejects the burnt gases at speeds over	A. 400 ms<sup>-1</sup> B. 40000m s<sup>-1</sup> C. 40000 ms<sup>-1</sup> D. 60000 ms<sup>-1</sup>
14	Swimming becomes possible because of _____ law of motion.	A. First B. Second C. Third D. None of these
15	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
16	In the expression $F \times t$ , the force F is	A. total force B. instantaneous force C. average force D. all of them
17	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60km/h. His average speed will be	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
18	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. Remains same D. Becomes double
19	Newton published laws of motion in his famous book "principia" in	A. 1867 B. 1667 C. 1676 D. 1687
20	The motion of a projectile is	A. one dimension B. two dimension C. three dimension D. all of them