

## ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	Dimensions of velocity are	A. [L] B. [T] C. [LT <sup>-1</sup> ] D. [LT <sup>-2</sup> ]
2	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
3	A rocket carries its own fuel in the form of	A. liquid only     B. liquid or solid     C. liquid and solid     D. liquid or solid and oxygen
4	Slope of velocity time graph represents:	A. Acceleration B. Speed C. Torque D. Work
5	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
6	A car moves for half of its time at 80 km/h and rest half of time at 40 km/h, The total distance covered is 60 km. What is the average speed of the car?	A. 60 km/hr B. 80 km/hr C. 120 km/hr D. 180 km/hr
7	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
8	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
9	The range of projectile is 50 m when $\theta$ is inclined with horizontal at 15°. What is the range when $\theta$ becomes 45°?	A. 400 m B. 300 m C. 200 m D. 100 m
10	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
11	Change in momentum is one second called.	A. Impulse B. Force C. Energy D. Work
12	A body starting from rest covers a distance of 0.45 Km and acquires a velocity of 300 Kmh <sup>-1</sup> . its acceleration will be	A. 7.71 m s <sup>-2</sup> B. 0.5m s <sup>-2</sup> C. 0.15m s <sup>-2</sup> D. 0.092m s <sup>-2</sup>
13	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity
14	The second law gives the relationship between	A. mass and velocity     B. force and acceleration     C. velocity and acceleration     D. mass and weight
15	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel

		D. None of these
16	The horizontal range of projectile, at a certain place, depends upon	A. the mass of the projectile B. velocity of projection C. angle of projection D. angle as well as velocity of projection
17	If the slope of the velocity-time graph increases at constant rate with time, then the body is said to have	A. uniform deceleration     B. uniform negative acceleration     C. average acceleration     D. uniform positive acceleration
18	A 120 m long train is moving in a direction with speed 20 m/s. A train B moving with 30 m/s in the opposite direction and 130 m long crosses the first train in a time	A. 6 s B. 36 s C. 38 s D. None of these
19	Distance traveled by a body falling from rest in the first, second and third second is in the ration of	A. 1:2:3 B. 1:3:5 C. 1:4:9 D. None of the above
20	Inertial frame of references are those frame of references which are moving with	A. increasing velocity B. decreasing velocity C. constant velocity D. all of them