

## ECAT Pre General Science Physics Chapter 3 Motion and Force Online Test

Sr	Questions	Answers Choice
1	If the velocity time graph is a straight line parallel to time-axis, then it means that:	A. The body is moving with uniform velocity B. The body is moving with uniform acceleration C. The body is at rest D. None of above
2	A ball falls on the surface from 10 m height and rebounds to 2.5 m. if the duration of contact with the floor is 0.01 seconds then the average acceleration during contact is	A. 2100 m/s <sup>2</sup> B. 1400 m/s <sup>2</sup> C. 700 m/s <sup>2</sup> D. 400 m/s <sup>2</sup>
3	Bodies failing freely under gravity provide good example of motion under	A. non-uniform acceleration     B. uniform acceleration     C. variable acceleration     D. increasing acceleration
4	The velocity of a projectile is maximum	A. at the point of projection B. just before striking the ground C. at none of them D. at both of them
5	A lift is moving up with acceleration equal to 1/5 of that due to gravity. The apparent weight of a 60 kg man standing in lift is	A. 60 kg wt B. 72 kg wt C. 48 kg wt D. Zero
6	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec <sup>-1</sup> B. 2.44 m sec <sup>-1</sup> C. 3.42 m sec <sup>-1</sup> D. 4.43 m sec <sup>-1</sup>
7	When a force is applied on a body, several effects are possible Which of the following effect could not occur?	A. the body rotates B. the body speeds up C. the mass of the body decreases D. the body changes its direction
8	A boat of mass 40 kg is at rest, A dog of mass 4 kg moves in the boat with a velocity of 10 m/s. What is the velocity of boat?	A. 4 m/s B. 2 m/s C. 8 m/s D. 1 m/s
9	A typical rocket consumes about	A. 100 kg s <sup>-1</sup> of fuel B. 1000 kg s <sup>-1</sup> of fuel C. 10000 kg s <sup>-1</sup> of fuel D. 100000 kg s <sup>-1</sup> of fuel
10	An airplane is flying horizontally with a velocity of 600 km/h and at a height of 1960 m. When it is vertically above a point A on the ground, a bomb is released from it. The bomb strikes the ground, at point B. The distance AB is	A. 1200 m B. 0.33 km C. 3.33 km D. 33 km
11	A projectile on its path gets divided into two pieces at its highest point. Which is true?	A. Momentum increases B. Momentum decreases C. Kinetic energy increases D. Kinetic energy decreases
12	During the upward motion of the projectile, the vertical component of velocity.	A. Decreases B. Increases C. Remains constant D. None of these
13	The vertical and horizontal range will be equal id angle of projection is	A. 76 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font size: small;">°</span> B. 45 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font size: small;">°</span> C. 60 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font size: small;">°</span> D. 120 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font size: small;">°</span>

14	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
15	In an elevator moving vertically up with an acceleration 'g' the force exerted on the floor by a passenger of mass M is	A. Mg B. 1/2 Mg C. Zero D. 2 Mg
16	The discuss used by athlete has a mass of 1 kg, its weight in newton is	A. 9.8 N B. 80 N C. 98 N D. 100 N
17	A 5 kg mass is falling freely, the force acting on, it will be	A. 19.6 N B. 9.8 N C. 5 N D. Zero
18	The slopes of the tangent at any point on the curve gives the value of the	A. average velocity at that point B. instantaneous velocity at that poi C. average acceleration at that poin D. instantaneous acceleration at that point
19	A body moving with an acceleration of 5 m/sec <sup>2</sup> started with velocity of 10 m/sec. What will be the distance traversed in 10 seconds?	A. 150 m B. 250 m C. 350 m D. 400 m
20	Earth is considered to be	A. a non-inertial frame B. an inertial frame C. an accelerated frame D. none of the above