

Physics ECAT Pre Engineering Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	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
2	If rope of lift breaks suddenly. The tension exerted by the surface of lift is (a =Acceleration of lift)	A. mg B. $m(g+a)$ C. $m(g - a)$ D. 0
3	A ball is dropped downwards After 1 second another ball is dropped downwards from the same point. What is the distance between them after 3 seconds	A. 25 m B. 20 m C. 50 m D. 9.8 m
4	At the top of the trajectory of a projectile the acceleration is	A. The maximum B. The minimum C. Zero D. g
5	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
6	A vehicle of mass 120 kg is moving with a uniform velocity of 108 km/h. The force required to stop the vehicle in 10s is	A. 120×10.8 N B. 180 N C. 720 N D. 360 N
7	The shortest distance between two points directed from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
8	If m means mass of gases objected per second from a rocket and v shows the change in velocity, than mv is named as:	A. Force B. Energy C. work D. impulse
9	The expression $F \times t$ is called impulse if the time ' t ' is	A. zero B. very large C. very small D. infinite
10	Maximum height of a bullet when fixed at 30 with horizontal is 11 m. Then height when it is fired at 60° is	A. 22 m B. 6 m C. 33 m D. 7.8 m
11	The distance covered by a body in unit time is called.	A. Displacement B. speed C. Velocity D. Both B and C
12	When the surfaces are coated with a lubricant, then they	A. Stick to each other B. Slide upon each other C. Roll upon each other D. None of these
13	Range of a projectile is R, when the angle of projection is 30° . Then, the value of the other angle of projection for the same range, is	A. 45° B. 60° C. 50° D. 40°

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14	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
15	The collision in which KE is conserved but momentum is not conserved is called:	A. Elastic collision B. Inelastic collision C. any these D. None of these
16	Slope of velocity time graph represents:	A. Acceleration B. Speed C. Torque D. Work
17	Tick the conservative force:	A. tension in a string B. Air resistance C. Elastic spring force D. Frictional force
18	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
19	Dimensions of velocity are	A. [L] B. [T] C. [LT ⁻¹] D. [LT ⁻²]
20	Biomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these