

Physics ECAT Pre Engineering Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	When a shell explodes in mid-air, the total momentum of its fragments is	A. less than the momentum of shell B. equal to the momentum of shell C. greater than the momentum of shell D. none of them
2	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
3	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
4	If m means mass of gases ejected per second from a rocket and v shows the change in velocity, then mv is named as:	A. Force B. Energy C. work D. impulse
5	If speed of electron is 5×10^5 m/s. How long does it take one electron to transverse 1 m?	A. 1×10^6 B. 2×10^6 C. 2×10^5 D. 1×10^5
6	The magnitude of the force producing an acceleration of 10 m/sec^2 in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
7	The mass of the object is a quantities measure of its	A. speed B. velocity C. acceleration D. inertia
8	When a shell explodes in mid-air, its fragments fly off in	A. only one direction B. in two direction C. different directions D. a particular direction
9	Acceleration produced in a body by the force varies	A. inversely as the applied force B. directly as the applied force C. directly as the mass of the body D. none of them
10	The area under line velocity-time graph is numerically equal to the	A. speed of the body B. acceleration of the body C. distance covered by the body D. none of them
11	Tick the conservation force:	A. Tension in a string B. Air resistance string C. Elastic spring force D. Frictional force
12	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
13	A typical rocket consists of fuel	A. more than 60% of launch mass B. less than 60% of launch mass C. less than 80% of launch mass D. more than 80% of launch mass
14	Change in momentum is one second called.	A. Impulse B. Force C. Energy D. Work
15	If the objects of different masses move with the same velocity, then it is more difficult to stop the	A. lighter of the two B. massive of the two C. any one of them

		D. both of them
16	If an iron ball and a wooden ball of the same radius was released from a height 'h' in vacuum, then time taken by both of them to reach ground will be	A. Unequal B. Exactly equal C. Roughly equal D. Zero
17	Suppose the water flows out from a pipe at 3 kg s^{-1} and its velocity changes from 5 m s^{-1} to zero on striking the wall, then the force exerted by water on wall will be	A. 5 N B. 10 N C. 15 N D. 20 N
18	Body which falls freely under gravity provides good example of motion under:	A. Uniform acceleration B. Non-uniform acceleration C. Uniform velocity D. None of these
19	Angular momentum	A. Scalar B. Axial vector C. Polar vector D. At 45° angle
20	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. $2.5 \times 10^{-3}\text{ Ns}$