

ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	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
2	Earth is considered to be	A. a non-inertial frame B. an inertial frame C. an accelerated frame D. none of the above
3	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
4	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^2 B. 1400 m/s^2 C. 700 m/s^2 D. 400 m/s^2
5	If a train traveling at 72 kmph is to be brought to rest in a distance of 200 meters then its retardation should be	A. 20 ms^{-2} B. 10 ms^{-2} C. 2 ms^{-2} D. 1 ms^{-2}
6	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
7	In equation $F=ma$, then mass 'm' is	A. rest mass B. variable mass C. inertial mass D. gravitational mass
8	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°
9	Which one of the following is dimensionless:	A. Acceleration B. Velocity C. Density D. Angle
10	A monkey sits on the pan of spring scale kept in an elevator. The reading of the spring scale will be maximum when	A. Elevator is stationary B. Elevator cable breaks and it falls freely towards earth C. Elevator accelerates downwards D. Elevator accelerates upward
11	At the top of the trajectory of a projectile the acceleration is	A. The maximum B. The minimum C. Zero D. g
12	The SI units of momentum is	A. kg m s^{-2} B. kg ms C. kg m s^{-2} D. kg m s^{-1}

		D. N-s
13	Slope of velocity-time graph represents:	A. Acceleration B. Speed C. Torque D. Work
14	The time rate of change of displacement is called:	A. Time B. Acceleration C. Speed D. Velocity
15	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
16	Acceleration in a body is always produced in the directin of:	A. Velocity B. Weight C. Force D. Botha B and C
17	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
18	Acceleration of a body at any particular instant during its motion is known as	A. average acceleration B. uniform acceleration C. instantaneous acceleration D. all of them
19	A body moving with uniform velocity has	A. positive acceleration B. negative acceleration C. infinite acceleration D. zero acceleration
20	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