ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	The three equation of motions are useful only for	A. linear motion with increasing acceleration B. line motion with uniform acceleration C. linear motion with zero acceleration D. linear motion with varying acceleration
2	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
3	Newton published laws of motion in his famous book "principia" in	A. 1867 B. 1667 C. 1676 D. 1687
4	A certain force gives an acceleration of 2 m/sec2 to a body if mass 5 kg. The same force would give a 29 kg object an acceleration of:	A. 0.5 m/sec2 B. 5 m/sec2 C. 1.5 m/sec2 D. 9.8 m/sec2
5	In equation F=ma, then mass 'm' is	A. rest mass B. variable mass C. inertial mass D. gravitational mass
6	A body of mass 1.0 kg is falling with an acceleration of 10 m/s^2. Its apparent weight will be ($g=10\ m/s^2$)	A. 1.0 kg wt B. 2.0 kg wt C. 0.5 kg wt D. Zero
7	If the instantaneous velocity of a body does not change. the body is said to be moving with	A. average velocity B. uniform velocity C. instantaneous velocity D. variable velocity
8	The projectile motion is composed of	A. horizontal motion only B. vertical motion only C. horizontal and vertical motion D. none of them
9	The expression F x t is called impulse if the time 't' is	A. zero B. very large C. very small D. infinite
10	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec⁻¹ B. 2.44 m sec⁻¹ C. 3.42 m sec⁻¹ D. 4.43 m sec⁻¹
11	If the velocity time graph is a straight line parallel to the time-axis, then it means:	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 these
12	Laws of motion are not valid in a system which is	A. inertial B. non-interial C. at rest D. moving with uniform velocity
13	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
14	The SI units of momentum is	A. kg m s⁻² B. kg ms

		C. kg m s² D. N-s
15	When brakes are applied to a fast moving car, the passengers will be thrown:	A. Forward B. Backward C. Downward D. None of these
16	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
17	Newton's first law is also called:	A. Law of torque B. Law of force C. Law of inertia D. None of these
18	An object thrown upward with an initial velocity at certain angle with the horizontal and moving freely under the action of gravity is called	A. a rocket B. an aeroplane C. a projectile D. a ballon
19	The direction of the acceleration is the same as that of	A. speed B. velocity C. both of them D. none of them
20	For a moving body, at any instant of time	A. If the body is not moving the acceleration is necessarily zero B. If the body is slowing, the retardation is negative C. If the body is slowing, the distance is negative D. If displacement, velocity and acceleration at that instant are known, we can find the displacement at any given time in future