ECAT Pre General Science Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	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
2	The effect of applying a force on a moving body is to change	A. its direction of motion only B. its speed of motion only C. both the direction and speed of motion D. its inertia only
3	In velocity of a particle at an instant is 10 m/s and after 5s the velocity of the particle is 20 m/s. The velocity 3s before in m/s is	A. 8 B. 4 C. 6 D. 7
4	When a shall explodes a 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
5	The mass of a body measured by a physical balance in a lift at rest is found to be m, if the lift is going up with an acceleration a, its mass will be measured as	A. m (1 - a/g) B. m (1 + a/g) C. m D. Zero
6	Unit of impulse in	A. Newton B. Kg m C. Kg m/s D. Joule
7	The range of projectile is 50 m whenθ is inclined with horizontal at 15°. What is the range whenθ becomes 45°?	A. 400 m B. 300 m C. 200 m D. 100 m
8	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
9	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
10	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
11	If the velocity of the body decreases non-uniformly then the slope of the velocity-time graph will have	A. different values B. same values C. zero valves D. constant valves
12	A ball is dropped from a height of 4.2 meters. To what height it will rise if there is no loss of KE after rebounding?	A. 4.2 m B. 8.4 C. 12.6 D. None of these
13	A particle of mass 0.5 g moving along x-axis is located of x_1= 15 m at t_1= 5s and x_2= 33 m at t_2= 13s its average velocity is	A. 6 m s⁻¹ B. 2.45 m s⁻¹ C. 2.25 m s⁻¹ D. 4.45 m s⁻¹
14	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90° with the force of the smaller magnitude, then their magnitudes are	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
15	The velocity of a body at any instant of its motion is known as	A. average velocity B. instantaneous velocity C. uniform velocity

		D. none of them
16	One newton is a force that produces an acceleration of 0.5 m/sec^{2}in a body of mass:	A. 2 kg B. 3 kg C. 4 kg D. 8 kg
17	Bodies 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
18	When a bicycle is in motion but not pedaled, the force of friction exerted by the ground on the two wheels is such that it acts	A. In the backward direction on the front wheel and in the forward direction on the rear wheel B. In the forwards directions on the front wheel and in the backward direction on the rear wheel C. In the forward direction on both the wheels D. In the backward direction on both the wheels
19	The product of force and time is called change in:	A. Momentum B. Impulse C. Force D. Both a and b
20	The projectile motion is composed of	A. horizontal motion only B. vertical motion only C. horizontal and vertical motion D. none of them