ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	An object is dropped from a height of 100 m. Its velocity at the moment it touches the ground is:	A. 100 m/sec B. 140 m/sec C. 1960 m/sec D. 196 m/sec
2	The quantity F x t is called as	A. momentum B. velocity C. acceleration D. impulse
3	Acceleration produced in a body by a 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
4	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
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	The direction of velocity is along the direction of	A. distance B. displacement C. acceleration D. all of them
7	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a body can change when its acceleration is constant
8	A 5 kg mass is falling freely, the force acting on, it will be	A. 19.6 N B. 9.8 N C. 5 N D. Zero
9	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
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	A mass of 5kg moves with an acceleration of 10m s^{-2}force applied is	A. 10N B. 50N C. 2N D. 20N
12	The time rate of change of displacement is called:	A. Time B. Acceleration C. Speed D. Velocity
13	The displacement coincides with the path of the motion when a body moves is a	A. curved line B. straight line C. may be curved or straight D. none of them
		A. In the backward direction on the front wheel and in the forward direction on the rear wheel

14	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	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
15	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
16	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
17	A body walks to his school at a distance of 6 km with a speed of 2.5 km/h and walks back with a constant speed of 5 km/h. His average speed for round trip expressed in km/h is	A. 24/13 B. 10/3 C. 3 D. 4,8
18	The motion of a body in a straight line is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
19	The time of flight of a projectile motion equal to	A. half of the time to reach maximum height B. twice the time to reach maximum height C. one fourth of time to reach maximum height D. time to reach maximum height
20	When we consider the average velocity of a body, then the body is moving in	A. straight line B. curved path C. may be in a straight or curved path D. none of them