ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
2	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
3	Tick the conservation force:	A. Tension in a string B. Air resistance string C. Elastic spring force D. Frictional force
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	Dimensions of velocity are	A. [L] B. [T] C. [LT⁻¹] D. [LT⁻²]
6	Angular momentum	A. Scalar B. Axial vector C. Polar vector D. At 45° angle
7	A lift is descending at a constant speed V. A passenger in the lift drops a coin. The acceleration of the coin towards the floor will be	A. Zero B. g C. -g D. V + g
8	If a car rest acceleration uniformly to a speed of 144 km/h in 20 s it covers a distance of	A. 20 m B. 400 m C. 1440 m D. 2880 m
9	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
10	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/s² B. 1400 m/s² C. 700 m/s² D. 400 m/s²
11	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
12	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
13	The second law gives the relationship between	A. mass and velocity B. force and acceleration C. velocity and acceleration D. mass and weight
14	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
		A. greater is its acceleration

15	For a fixed force, larger is the mass of a body the	B. smaller is its acceleration C. smaller is its weight D. zero is its acceleration
16	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
17	The velocity given to a body to go out of the influence of earth's gravity is known as:	A. Terminal velocity B. Orbital velocity C. Escape velocity D. None of these
18	Suppose the water flows out from a pipe at 3kg $s^{-1}$and its velocity changes from 5m $s^{-1}$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
19	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
20	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity