Physics ECAT Pre Engineering Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	If the velocity time graph is a straight line parallel to time-axis, then it means that:	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 above
2	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
3	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
4	Unit of impulse in	A. Newton B. Kg m C. Kg m/s D. Joule
5	If d is the displacement of the body in time t, then its average velocity will be	A. V_{av}= d x t B. V_{av = t/d} C. V_{av = d/t} D. V_{av = d/t}
6	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
7	A dirty carpet is to be cleaned by heating. This is in according with_____law of motion.	A. First B. Second C. Third D. None of these
8	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
9	A 120 m long train is moving in a direction with speed 20 m/s. A train B moving with 30 m/s in the opposite direction and 130 m long crosses the first train in a time	A. 6 s B. 36 s C. 38 s D. None of these
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	A train is moving with a velocity of 25 m/s and a car is moving behind it by a velocity of 8 m/s in same direction. The relative velocity of train with respect to car is	A. 17 m/s B. 33 m/s C. 17.5 m/s D. none
12	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
13	Distance covered by a freely failing body n the first second of its motion will be:	A. 4.9 m B. 9.8 m C. 19.6 m D. 29.4 m
14	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
15	The magnitude of the force producing an acceleration of 10 m/sec^{2}in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
16	A projectile on its path gets divided into two pieces at its highest point. Which is true?	A. Momentum increases B. Momentum decreases C. Kinetic energy increases D. Kinetic energy decreases
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	A body starting from rest covers a distance of 0.45 Km and acquires a velocity of 300 Kmh^{-1}. its acceleration will be	A. 7.71 m s⁻² B. 0.5m s⁻² C. 0.15m s⁻² D. 0.092m s⁻²
19	The magnitude of the force producing an acceleration of 10 m/sec^{2}in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
20	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse