ECAT Pre General Science Online Test

Sr	Questions	Answers Choice
1	During the free fall motion of an object, when its weight becomes equal to the drag force, then it will move with	A. maximum speed B. zero speed C. maximum speed D. none of them
2	When weight of an object falling freely becomes equal to the drag force, then the body will move with	A. increasing speed B. decreasing speed C. constant speed D. none of them
3	When a water droplet falls through air, the net force on it is	A. Net force = drag force - weight B. Net force = weight - drag force C. Net force = drag force + weight D. Net force = weight + drag force
4	When a water droplet falling freely through air, the drag force on water droplet increases with th	A. decrease in speed B. increase in speed C. pressure D. none of them
5	At low speeds, the drag force is	A. proportional to speed B. inversely proportional to speed C. not simply proportional to speed D. none of them
6	The maximum drag force on a falling sphere is 9.8 N, it weight is	A. 1 N B. 9.8 N C. 4.9 N D. Cannot be calculated
7	According to slok's law, drag force depends on	A. Radius of the spherical body B. Terminal velocity of body C. Coefficient of viscosity D. All of above
8	When the speed of a body in a fluid increases then the drag force	A. decreases B. becomes zero C. increases D. non of them
9	An object moving through a fluid experiences a retarding force called a	A. frictional force B. terminal force C. opposing force D. drag force
10	Liquids and gasses have	A. zero viscosity B. non-zero viscosity C. very large viscosity D. very small viscosity
11	Substances that flow easily have	A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them
12	Substances that do not flow easily have	A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them
13	How much force is required to slide one layer of the liquid over the other layer is measured by	A. friction B. density C. viscosity D. resistivity
14	The effect of friction between different layers of a flowing fluid is described in terms of	A. motion of fluid B. nature of fluid C. colour of fluid D. viscosity of fluid
15	The law of conservation of energy gives us	A. equation of continuity B. Bernoulli's theorem C. both of them D. none of them

16	The law of conservation of mass gives us the	A. equation of continuity B. Bernoulli's theorem C. both of them D. none of them
17	The analysis of fluid motion becomes simplified by using	A. law of conservation B. law of conservation of energy C. both of them D. none of them
18	Which quantity has the same units as impulse	A. force B. work C. linear momentum D. acceleration
19	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
20	The entity which measures the quantity of motion in a body is called	A. force B. energy C. momentum D. power
21	According to the law of conservation of linear momentum, the total linear momentum of an isolated system	A. increases B. decreases with time C. remains constant D. none of them
22	The expression F x t is called impulse if the time 't' is	A. zero B. very large C. very small D. infinite
23	In the expression F x t, the force F is	A. total force B. instantaneous force C. average force D. all of them
24	The quantity F x t is called as	A. momentum B. velocity C. acceleration D. impulse
25	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
26	The SI units of momentum is	A. kg m s⁻² B. kg ms C. kg m s² D. N-s
27	The direction of the linear momentum is the direction of	A. speed B. velocity C. weight D. none of them
28	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity
29	The linear momentum of the body is defined as	A. p=ma B. p=1/2ma C. p=mv D. p=1/2mv
30	If the objects of different masses move with the same velocity, then it is more difficult to stop the	A. lighter of the two B. massive of the two C. any one of them D. both of them
31	Earth is considered to be	A. a non-inertial frame B. an inertial frame C. an accelerated frame D. none of the above
32	When a person jumps off the ground, the reaction force of the ground is	A. greater than the weight of the person B. smaller than the weight of the person C. equal to the weight of the person D. zero
		A. rest mass

33	In equation F=ma, then mass 'm' is	A. rest mass B. variable mass C. inertial mass D. gravitational mass
34	The second law gives the relationship between	A. mass and velocity B. force and acceleration C. velocity and acceleration D. mass and weight
35	Laws of motion are not valid in a system which is	A. inertial B. non-interial C. at rest D. moving with uniform velocity
36	What must be changing when a body is accelerating uniformly?	A. the force acting on a body B. the velocity of the body C. the mass of the body D. the speed of the body
37	When a force is applied on a body, several effects are possible Which of the following effect could not occur?	A. the body rotates B. the body speeds up C. the mass of the body decreases D. the body changes its direction
38	For a fixed force, larger is the mass of a body the	A. greater is its acceleration B. smaller is its acceleration C. smaller is its weight D. zero is its acceleration
39	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
40	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
41	Inertial frame of references are those frame of references which are moving with	A. increasing velocity B. decreasing velocity C. constant velocity D. all of them
42	The mass of the object is a quantities measure of its	A. speed B. velocity C. acceleration D. inertia
43	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
44	The discuss used by athlete has a mass of 1 kg, its weight in newton is	A. 9.8 N B. 80 N C. 98 N D. 100 N
45	A mass of 5kg moves with an acceleration of 10m s^{-2}force applied is	A. 10N B. 50N C. 2N D. 20N
46	Acceleration produced in a body by the 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
47	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
48	A non-inertial frame of reference is that frame of reference in which	A. a = 0 B. a > 0 or a < 0 C. v = 0 D. none of them
49	An inertial frame of reference is that frame of reference in which	A. a = 0 B. a > 0 C. a < 0 D. all of them
50	Newton's laws are adequate for speeds that are	A. low compared with the speed of light B. equal to the speed of light C. greater than the speed of light

		C. greater than the speed of light D. all of them
51	Newton published laws of motion in his famous book "principia" in	A. 1867 B. 1667 C. 1676 D. 1687
52	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
53	If the slope of the velocity-time graph increases at constant rate with time, then the body is said to have	A. uniform deceleration B. uniform negative acceleration C. average acceleration D. uniform positive acceleration
54	When a body is moving with uniform positive acceleration, the velocity- time graph is a straight line. Its slope is	A. zero B. negative C. positive D. non-existing
55	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
56	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
57	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
58	The slopes of the tangent at any point on the curve gives the value of the	A. average velocity at that point B. instantaneous velocity at that point C. average acceleration at that point D. instantaneous acceleration at that point
59	When body moves with increasing acceleration, its velocity time graph is a	A. straight line B. horizontal straight line C. vertical straight line D. curve
60	Graphs which are used to illustrate the variation of velocity of an object with time are called	A. distance time graphs B. speed time graphs C. velocity time graphs D. acceleration time graphs
61	Bodies failing freely under gravity provide good example of motion under	A. non-uniform acceleration B. uniform acceleration C. variable acceleration D. increasing acceleration
62	The decrease in velocity per unit time is called	A. deceleration B. acceleration C. uniform acceleration D. variable acceleration
63	A body moving with uniform velocity has	A. positive acceleration B. negative acceleration C. infinite acceleration D. zero acceleration
64	If the values of instantaneous and average velocities are equal, the body is said to be moving with	A. uniform acceleration B. uniform speed C. variable velocity D. uniform velocity
65	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
66	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
		A. average acceleration

67	Acceleration of a body at any particular instant during its motion is known as	B. uniform acceleration C. instantaneous acceleration D. all of them
68	The direction of the acceleration is the same as that of	A. speed B. velocity C. both of them D. none of them
69	Velocity of a body changes if	A. direction of the body changes B. speed of the body changes C. neither speed nor direction changes D. either speed or direction changes
70	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
71	The instantaneous velocity is define as the limiting value of Δd/Δt on the time intervalΔt approaches to	A. zero B. maximum C. minimum D. infinity
72	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
73	If a ball comes back to its starting point after bouncing off the wall several times, then its	A. total displacement is zero B. average velocity is zero C. none of them D. both of them
74	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
75	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}
76	Dimensions of velocity are	A. [L] B. [T] C. [LT⁻¹] D. [LT⁻²]
77	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them
78	The direction of velocity is along the direction of	A. distance B. displacement C. acceleration D. all of them
79	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
80	The magnitude of the displacement is a line from initial position to final position which is	A. straight B. curved C. either be curved or straight D. none of them
81	A change in position of a body from its initial position to its final position is known as	A. relative motion B. displacement C. distance D. acceleration