ECAT Pre General Science Physics Chapter 3 Motion and Force Online Test

Sr	Questions	Answers Choice
1	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
2	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
3	For maximum linear distance of travel, a projectile must be fired at an angle of	A. 0° B. 45° C. 90° D. 60°
4	The velocity of a projectile is maximum	A. at the point of projection B. just before striking the ground C. at none of them D. at both of them
5	The vertical and horizontal range will be equal id angle of projection is	A. 76° B. 45° C. 60° D. 120°
6	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
7	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
8	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
9	The horizontal component of a projectile moving with initial velocity of 500 ms^{-1}at an angle 60° to x-axis is	A. 500 ms⁻¹ B. 1000 ms⁻¹ C. 250 ms⁻¹ D. Zero

10	The vertical component of velocity of a projectile during its motion is minimum	A. at the time of projection B. at the highest point C. just before hitting the plane of projection D. all of them
11	During the projectile motion, the horizontal component of velocity	A. changes with time B. remains constant C. becomes zero D. decreases with time
12	The projectile motion is composed of	A. horizontal motion only B. vertical motion only C. horizontal and vertical motion D. none of them
13	The path (or trajectory) described by a projectile is	A. a parabola B. a hyperbola C. a circle D. a straight line
14	The path described by a projectile is called its	A. orbit B. trajectory C. range D. distance
15	Which of the following is not a projectile	A. a bullet fired from a gun B. a space ship C. a football in air D. an artillery shell
16	An object thrown upward with an initial velocity at certain angle with the horizontal and moving freely under the action of gravity is called	A. a rocket B. an aeroplane C. a projectile D. a ballon
17	Distance covered by a freely falling body in 2 sec will be	A. 4.9 m B. 19.6 m C. 29.2 m D. 44.1 m
18	The artillery shells travel along parabolic paths under the influence of	A. magnetic field B. electric field C. electromagnetic field D. gravitational field
19	An object thrown in arbitrary direction in space with an initial velocity and moving freely under gravity will follow	A. a circular path B. a straight line C. a hyperbola D. a parabola
20	The motion of a projectile is	A. one dimension B. two dimension C. three dimension D. all of them
21	The motion in a plane is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
22	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
23	If m is the mass of the gases ejected per second with velocity v relative to the rocket of mass M, then the acceleration of rocket is	A. a = M/mv B. a = mM/v C. a = mv/M D. a = v/mm
24	A rocket carries its own fuel in the form of	A. liquid only B. liquid or solid C. liquid and solid D. liquid or solid and oxygen
25	A typical rocket consists of fuel	A. more than 60% of launch mass B. less than 60% of launch mass C. less than 80% of launch mass D. more than 80% of launch mass
26	A typical rocket ejects the burnt gases at speeds over	A. 400 ms⁻¹ B. 40000m s⁻¹ C. 40000 ms⁻¹ D. 60000 ms⁻¹
27	A typical rocket consumes about	A. 100 kg s⁻¹of fuel B. 1000 kg s⁻¹of fuel C. 10000 kg s⁻¹of fuel

		D. 100000 kg s⁻¹of fuel
28	Flight of rocket in the space is an example of	A. Newton's first law B. Newton's third law C. Newton's second law D. all of them
29	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
30	When a shell explodes in mid-air, its fragments fly off in	A. only one direction B. in two direction C. different directions D. a particular direction