

Physics ECAT Pre Engineering Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	Unit of impulse in	A. Newton B. Kg m C. Kg m/s D. Joule
2	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
3	For a given angle of projection, if the time of flight of a projectile is doubled, the horizontal range will increase to	A. Four times B. Thrice C. Once D. Twice
4	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
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	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
7	The decrease in velocity per unit time is called:	A. Variable Acceleration B. Average Acceleration C. Retardation D. None of these
8	In an elevator moving vertically up with an acceleration 'g' the force exerted on the floor by a passenger of mass M is	A. Mg B. $1/2 Mg$ C. Zero D. $2 Mg$
9	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
10	A certain force gives an acceleration of 2 m/sec^2 to a body if mass 5 kg. The same force would give a 29 kg object an acceleration of:	A. 0.5 m/sec^2 B. 5 m/sec^2 C. 1.5 m/sec^2 D. 9.8 m/sec^2
11	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
12	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
13	A ball is dropped from a certain height and another ball is projected horizontally from the same point. Which of the following statements is correct?	A. Both hit the ground at the same velocity B. Both hit the ground at the same speed C. The change of velocity during the path for both balls is the same D. The change of speed during the path for both balls is the same
14	An aircraft is moving with a velocity of 300 ms^{-1} . If all the forces acting on it are balanced, then	A. It still moves with the same velocity B. It will be just floating at the same point in space C. It will fall down instantaneously

D. It will lose its velocity gradually

15 During the upward motion of the projectile, the vertical component of velocity.
A. Decreases
B. Increases
C. Remains constant
D. None of these

16 The time rate of change of displacement is called:
A. Time
B. Acceleration
C. Speed
D. Velocity

17 One KWh is equal to:
A. 3.6×10^{22} J
B. 3.6 KJ
C. 3.6×10^7 KJ
D. 3,6 MJ

18 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

19 Distance traveled by a body falling from rest in the first, second and third second is in the ratio of
A. 1 : 2 : 3
B. 1 : 3 : 5
C. 1 : 4 : 9
D. None of the above

20 When two protons are brought closer potential energy of both of them:
A. Increases
B. Decreases
C. Remains same
D. None of these