

PPSC Physics Topic 1 Mechanics

Sr	Questions	Answers Choice
1	In projectile motion, the body has	A. One component of velocity B. Two components of velocity C. Three components of velocity D. No component of velocity
2	Which are the two basic properties of a vector.	A. Curvature and direction B. Magnitude and direction C. Magnitude and sign D. Curvature and sign
3	The minimum velocity needed to put a satellite into the orbit	A. Terminal velocity B. Escape velocity C. Critical velocity D. Linear velocity
4	The magnitude of the resultant of two forces may be increased by	A. Increasing the angle between them B. Decreasing the angle between them C. Drawing the parallelogram to represent them D. Drawing the force perpendicularly
5	Two vectors of magnitudes 5 N and 7 N respectively are acting on a body if the angle between them is a right angle, their resultant vector will be.	A. 2 N B. 4 N C. 6 N D. 8 N
6	A neutron is in head on elastic collision with a stationary nitrogen nucleus The mass of nitrogen nucleus is 14 times that of a neutron The neutrons velocity after the collision is.	A. Less in magnitude than its intimal velocity B. Less in magnitude than the final velocity of the nitrogen atom C. Equal in magnitude to its initial velocity but in the opposite direction D. Greater in magnitude than its initial velocity
7	Two bullets a and b have masses 1 kg and 12 kg respectively.	A. K.E. of B will be twice that of A B. K.E. of A will be twice that of B C. Both have same K.E. D. K.E. of A will be half that of B
8	Which of the following is dimensionless.	A. Strain B. Stress C. Pressure D. Volume
9	The unit formed by combining the fundamental untis of length , mass and time.	A. Absolute units B. Practical units C. Bse unit D. Derived units
10	What must be changing when a body is accelerating uniformly.	A. Force acting on the body B. Mass of the body C. Speed of the body D. Velocity of the body
11	Which of the following pair does not have identical dimensions.	A. Energy and torque B. Momentum and impulse C. Mass and moment of inertia D. Energy and work
12	If slope of velocity time graph gradually decreases, then a body is said to have	A. Negative acceleration B. Positive acceleration C. Uniform velocity D. Variable velocity
13	Restoring force in the SHM is	A. Centripetal B. Frictional C. Conservative D. Non conservative
14	If mass attached to a spring increases then its time period.	A. Increases B. Decreases C. Remains constant D. —

		D. Decreases slightly
15	The scalar product of two vectors is negative when	A. Vectors are parallel B. Vectors are antiparallel C. Vectors are perpendicular D. Vectors are parallel with same magnitude
16	An object moves 5.0 m north and then 3.0 m south . Find both the distance travelled and the magnitude of the displacement vector.	A. 2.0 m, 8.0 m B. 8.0 m, 2.0 m C. 8.0 m, 8.0 m D. 2.0 m, 2.0 m
17	A bus and a car moving with the same K.E. are acted upon by the same retarding force then the	A. car will stop first B. Bus will stop first C. Both will stop simultaneously D. Both will never stop
18	Which of the following is a property of a uniform gravitational field.	A. It acts equally in all directions. B. Its field strength is the same at all points within it C. the gravitational potential has the same value of all points within it D. It produces zero force on a stationary test mass placed in it.
19	If the K.E. of a body becomes 4 times of its initial value, the new momentum will be	A. half B. Same C. Double D. 4 times
20	a 5 kg mass is falling freely the force acting on it will be.	A. 0 N B. 9.8 N C. 5 N D. 19.6 N