

PPSC Physics Topic 1 Mechanics

Sr	Questions	Answers Choice
1	The SI unit of angular velocity is.	A. cm s-1 B. rad s-2 C. cm s-2 D. rad s-1
2	One light year is equal to.	A. 9.46×10^{15} cm B. 9.46×10^{15} m C. 9.46×10^{15} km D. 7.88×10^{14} m
3	In a projectile motion, the horizontal range depends upon.	A. Initial velocity B. Velocity at the highest position C. angel of projection D. Vertical component of velocity
4	A body of mass 2 kg is suspended in a elevator by means of a spring The balance reads its weight when the elevator moves up with an acceleration of 5 m s-2 as.	A. 9.8 N B. 29. 6 N C. 26.5 N D. 30.5 N
5	The work done in moving a body from one place to another in a gravitational field is independent of the	A. applied force B. Force of gravity C. Path followed by the body D. Force of earth
6	An object travels at constant speed around a circle of radius 1.0 m in 1.0 s the magnitude of its acceleration is.	A. zero B. 1.0 m s-2 C. 2 m s-2 D. $4 \pi^2 \text{ m s}^{-2}$
7	In an accelerated or non - inertial frame of reference the weight of the body depends upon.	A. Acceleration of the frame of reference B. Velocity of the body C. Momentum of the body D. Velocity of the frame of reference
8	Which one of the following pairs does not have the same dimensions.	A. Force and weigfht B. Pressure and stress C. Capacitance and resistance D. Energy and work
9	By decreasing angle between two vectors their cross product.	A. Increases B. Decreases C. Remains the same D. Vanishes
10	The curve between the acceleration and velocity of a body in SHM is a	A. Circle B. Ellipse C. Square D. Parabola
11	If a vehicle is to gain momentum it must	A. Lose weight B. Move slowly C. Lose inertia D. Accelerate
12	Which of the following is not necessary for work to be done.	A. A constant force B. An applied force C. A displacement D. Force component along the displacement
13	A force of 20 N is applied on an elastic spring if the extension produced in the springs to cm, the value of spring constant.	A. 2 Nm-1 B. 20 N m-1 C. 200 N m-1 D. 2,000 N m-1
14	If there are no frictional effects, the mechanical energy of a system executing simple harmonic motion.	A. Changes with time B. Is variable C. Is constant D. Is not conserved
15	A mass accelerates uniformly when the resulting force acting on it.	A. is zero B. Is constant but not zero C. Increases uniformly w.r.t time

		D. Is proportional to the displacement of the mass from a fixed point
16	Which quantity has different base units from the other three.	A. Density x volume x velocity B. Rate of change of momentum C. The Young's modulus x area D. Weight
17	Which of the following is a conservative force.	A. Electric force B. Frictional force C. Normal force D. propulsion force of a rocket
18	The centre of mass of a system is a point where an applied force causes the system to move.	A. With rotation B. Without rotation C. Fastly D. Slowly
19	The gravitational field strength at a point p on the earth's surface is numerically equal to.	A. The acceleration of free fall at p B. The change in P.E. per unit distance at P C. The change in P.E. per unit distance at P D. The work done in bringing unit mass from infinity to P
20	A body is said to be in translational equilibrium, only if the vector sum of all the forces acting on it becomes.	A. Double B. Zero C. Maximum D. Quadruples