PPSC Physics Topic 1 Mechanics

Sr	Questions	Answers Choice
1	Linear acceleration of a point moving in a circle of radius 30 cm with angular acceleration of 0.5 rad s-2 is	A. 1.5 cm s-2 B. 2.5 cm s-2 C. 10 cm s-1 D. 15 cm s-2
2	The corss product of two vectors is zero when they	A. Are parallel to each other B. Are perpendicular to each other C. Are at an angle of 120 ^o D. Both are equal
3	A body of mass 1 kg hanging with a spring of spring constant 60 N m-1 is rotation in a horizontal circle The values of angular frequency will be.	A. 80 .94 Hz B. 89. 4 Hz C. 98. 4 Hz D. 108 . 6 Hz
4	When the velocity of body is doubled which one is doubled too.	A. K.E. B. P.E C. Momentum D. Acceleration
5	In any collision between two bodies there need nor the conservation of	A. Linear momentum B. Angular momentum C. Total energy D. Kinetic energy
6	If the presence of air friction, the path of a projectile appears as.	A. Straight line B. Parabola C. Hyperbola D. zig zag
7	If a force of 10 N makes an angle of 30 ^{o} with x-axis its component is given by	A. 1.866 N B. 8.66 N C. 0.89 N D. 0.866 N
8	Which one of the following is not true.	A. velocity can be negative B. velocity is a vector C. Speed is a sccalar D. Speed can be negative
9	Which of the following quantities is zero about the centre of mass of body.	A. Mass B. acceleration C. Moment D. Angular acceleration
10	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
11	By decreasing angle between two vectors their cross product.	A. Increases B. Decreases C. Remains the same D. Vanishes
12	Oscillatory motion is always under	A. An applied force B. Restoring force and inertia C. A periodic force D. A gravitational force
13	Time period of a simple pendulum depends upon.	A. Thickness of the thread B. Mass of the pendulum C. Length of the pendulum D. Amplitude of vibration
14	Which of the following is an example of negative work.	A. a thrown up cricket ball B. Grass mower C. A car on road D. Bucket in the well
15	A 10 kg rocket fragment falling towards the earth has a net downward acceleration of 5 ms - 2 The net downward force acting on the fragment is	A. 5 N B. 10 N C. 50 N D. 105 N

		D. 105 N
16	Kinetic and potential energies are	A. Not inter convertible B. Inter convertible C. Two forms of torque D. Not related with each other
17	While passing through the atmosphere total energy is reduced due to.	A. scattering B. Absorption C. Reflection D. All of these
18	A constant mass undergoes uniform acceleration the correct statement about the resultant force acting on the mass is.	A. It increases uniformly w.r.t time B. It is constant but not zero C. It is proportional to the displacement from a fixed point D. It is proportional to the verlocity
19	The term radius of gyration relates to.	A. Moment of force B. Moment of inertia C. Law of gravitation D. simple harmonic motion
20	If a ball was thrown out of a rocket in free space, then it would.	A. Accelerate away from the rocket B. Remain motionless after leaving the rocket C. Travel rectilinearly with constant speed D. Move always parallel to the rocket