

## PPSC Physics Topic 1 Mechanics

Sr	Questions	Answers Choice
1	By decreasing angle between two vectors their cross product.	A. Increases B. Decreases C. Remains the same D. Vanishes
2	If length of second pendulum becomes four times than its time period will become	A. Two times B. Four times C. Six times D. Eight times
3	The mass that appears in Newton's second law is known as.	A. Rest mass B. Gravitational mass C. Inertial mass D. Weight
4	A body is said to be in translations equilibrium, only if the vector sum of all the forces acting on it becomes.	A. Double B. Zero C. Maximum D. Quadruples
5	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
6	A 100 kg box is pulled 10 m across a frictionless horizontal surface by a 50 N force The change in the P.E. of the box a	A. 0 J B. 2 J C. 20 J D. 50 J
7	Which of the following is a conserfative force.	A. Electric force B. Frictional force C. Normal force D. propulsion force of a rocket
8	The action and reaction forces	A. Must act upon the same body B. Must act upon different bodies C. Must be equal in magnitude but need not have the same line of action. D. Different speed at the different height during ascent and during descent.
9	Which of the following quantities has three significant figures.	A. 3.0066 m B. $5.05 \times 10^{-27}$ kg C. 301.0 s D. 1.009 m
10	For the angular momentum of a system to remains constant, the external torque should be	A. small B. Large C. Neither small nor large D. zero
11	A man of mass 100 kg is standing in an elevator. The net force acting on the man reads its weight when the elevator is going up with acceleration $4 \text{ m s}^{-2}$ would be.	A. 100 N B. 590 N C. 490 N D. 980 N
12	when a bowl of water is take into the bottom of a well the work done is.	A. Positive B. Negative C. Zero D. Maximum
13	Vectors are often spilt into two or more orthogonal components what is true of these components.	A. they are perpendicular B. They are parallel C. They are antiparallel D. They have same magnitude
14	The circular motion of a particles with constant speed is.	A. Periodic and SHM B. Periodic but not SHM

		C. SHM and not periodic D. Neither periodic nor SHM
15	The source of geothermal energy is	A. The fusion in the sun B. the radioactive decay in the earths interior C. the rotation of earth around the sun D. The rotation of earth around its own axis
16	The diver spins faster when moment of inertia becomes	A. Smaller B. Greater C. Double D. zero
17	The international acceptable scientific notation of a number 123.4 is	A. $12.34 \times 10^1$ B. $1.234 \times 10^2$ C. $1.234 \times 10^3$ D. $0.123 \times 10^3$
18	If the presence of air friction, the path of a projectile appears as.	A. Straight line B. Parabola C. Hyperbola D. zig zag
19	Two simple pendulums of the same length but having different masses	A. Have different frequencies B. Will have period proportional to their masses C. Will have periods independent of their length D. Have the same period
20	A diver leaving the diving board makes a somer sault in the air.	A. This is due to gravitational force B. The moment of inertia is decreased during the turn C. His moment of inertia is increased D. He pushes at the air for making the true