INDIAN SCHOOL NIZWA - WORKSHEET

PHYSICS

CH: FORCE AND LAWS OF MOTION

Name: _____ Date:_____ Class: IX Sec: ___

1.	The inertia of an object tends to cause an object: A. To increase its speed B. To decrease its speed C. To resist a change in its state of motion D. To decelerate due to friction
2.	Inertia of a moving object depend on. A. Momentum of the object B. Mass of the object C. Speed of the object D. Shape of the object
3.	When a running car stops suddenly, the passengers are jerked forward due to A. Inertia of motion B. Inertia of rest C. Inertia of direction D. Both A and B
4.	The physical quantity whose unit is kgm/s is A. Force B. Momentum C. Inertia D. velocity
5.	The momentum of a man of mass 75kg, when he walks with a uniform velocity of 2m/s will be A. 75 kgm/s B. 0 kgm/s C. 150 kgm/s D. 2 kgm/s

1.	The mass of an object A is 6 kg and that of another object B is 34kg. Which of the two objects, A or B, has more inertia?
2.	Name the unbalanced force which slows down a moving bicycle when we stop pedalling it.
3.	When a ball is dropped from a height, its speed increases gradually. Name the force which causes this change in speed.
4.	Name the property of bodies to resist change in their state of rest or uniform motion.
5.	When a tree is shaken, its fruits and leaves fall down. Why?
6.	A man throws a ball weighing 500g vertically upwards with a speed of 10m/s. (i) What will be its initial momentum? (ii) What would bet its momentum at its highest point of flight?
7.	Calculate the force required to impart to a car a velocity of 30m/s in 10s starting from rest. The mass of the car is 1500kg.
8.	A truck starts from rest and rolls down a hill with constant acceleration. It travels a distance of 400m in 20s. Find the force acting on it if its mass is 7000kg.
9.	A force of 5N gives a mass m_1 and acceleration of $8m/s^2$, and a mass m_2 an acceleration of $24m/s^2$. What acceleration would it give if both the masses were tied together?
10.	For how long should a force of 10N to stop a mass of 2.5 kg which is moving at 20m/s?
11.	A 10g bullet travelling at 200m/s strikes and remains embedded in a 2 Kg target which is originally at rest but free to move. At what speed does the target move off?
12.	A 1000kg vehicle moving with a speed of 20m/s is brought to rest in a distance of 50m.(i) find the acceleration (ii) calculate the unbalanced force acting on the vehicle.
	The following two questions consist of two statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below: A. Both A and R are true, and R is the correct explanation of A. B. Both A and R are true, and R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.
13.	Assertion: It requires a larger force to change the state of motion of a heavy body Reason: Mass is the measure of inertia
14.	Assertion: Action and reaction never cancel each other Reason: Action is on one body, reaction is on another body
15.	Assertion: A cricketer lowers his hands while making a catch Reason: Momentum is the product of mass and velocity.
16.	Assertion: If net force acting on a body is zero, the body will have non zero acceleration. Reason: A force is required to change the state of motion of a body.