Class – IX **Physics** **Force and Laws of Motion**

Worksheet

MULTIPLE CHOICE QUESTIONS

1. The S.I. unit of force is
I. Kgm/s
II. Kgm/s^2
III. Newton
IV. Newton-meter

2. What do we get by the product of mass and velocity?
I. Force
II. Inertia
III. Momentum
IV. Newton

3. The rate of change of momentum of an object is proportional to
I. Mass of the body
II. Velocity of the body
III. Net force applied on the body
IV. None of these

4. If two balls of same masses are dropped on sand, the depths of penetration is same if
I. Heavier ball is dropped faster than lighter ball
II. Lighter ball is dropped faster than heavier ball
III. The product 'mv' is same for both bodies
IV. None of these

5. A coin placed on a card(rested at the edges of the glass) remains at rest because of
I. Inertia of rest
II. Two forces act on the coin which balance each other
III. No unbalanced force acts on it
IV. All of these

Write the following questions Answers:

1) Explain why some of the leaves may get detached from a tree if we vigorously shake its branch.
2) Why do you fall in the forward direction when a moving bus brakes to a stop and fall backwards when it accelerates from rest?
3) If action is always equal to the reaction, explain how a horse can pull a, cart?
4) Explain, why is it difficult for a fireman to hold a hose, which ejects a large amount of water at a high velocity.

5) Two objects of masses 100 g and, 200 g are moving along the same line and direction with velocities of 2 m/s and 1 m/s respectively. They collide and after the collision the first object moves at a velocity of 1.67 m/s. Determine the velocity of the second object.