CBSE class 9 important questions on force

One mark questions

1) Why do people sitting in bus tend to fall sideways when the bus takes a sharp u turn?
2) Define force and its SI unit?
3) When balanced forces act on a stationary body, then the body is deformed True or False
4) Distinguish between balanced and unbalanced force? The resultant of balanced forces is non-zero True or false?
5) State three laws of motion?
6) What is inertia? Is inertia vector quantity. Justify?
7) Can a body have acceleration without change in magnitude of velocity ? Explain with an example.
8) What is impulse? Prove that Impulse is equal to change in momentum?
9) Define momentum and Prove that F = ma
10) Why a person sitting in bus fall forward when moving bus suddenly stops?
11) Why dust fall on beating carpet with stick?
12) How much force is needed to accelerate a object of mass 20g through 1 m/s^2
13) Why is it difficult for a fireman to hose, which ejects large amount of water at a high velocity?
14) The state of motion of an object is described by both its speed and the direction of motion. True or False ?
15) State and verify the law of conservation of momentum?

Two Marks Question

1) A body of mass 1.5kg undergoes a change of velocity of 4 m/s in 4s What is the force acting on it?

2) A force of 10N acting on an 10kg mass for 4s provides its some velocity.Calculate the velocity

3) Two bodies of mass 1kg and 2 kg moving in the direction opposite to each other with a speed 5m/s collide. Calculate the total momentum of the system before collision.

4) A force of 80N acting on a certain mass for 3s gives it a velocity of 6m/s. find the mass of the body if the body was initially at rest.

5) The velocity of a body of mass 5kg reduces from 10 m/s to 5 m/s. What is the change in momentum of the body?

6) Define third la1w of Newton in detail . Is action and Reaction force acts on the same body?

7) A body of mass 5 kg undergoes a change in speed from 30cm/s to 40m/s . Calculate its increase in momentum?

8) Fill in the blank
   a)When two forces act along the same direction on an object, then the net force acting on the object is ....
   b)When two forces act along the opposite direction on an object, then the net force acting on the object is ....

9) Which of these is vector quantity
   a) Force
   b) Momentum
   c) acceleration
   d)mass
   e) Velocity
   f)speed

10) A force of 10N acting on a certain mass for 3s gives it a velocity of 6m/s. find the mass of the body if the body was initially at rest?

11) A force of 50 N produces an acceleration of 6m/s^2 on a mass M. What acceleration would the same force provide if both the masses are tied together