VIDYA BHAVAN, BALIKA VIDYAPEETH

SHAKTI UTTHAN ASHRAM, LAKHISARAI, PIN:-811311

SUBJECT:- PHYSICS CLASS:- IXTH DATE:- 01/06/XXI

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 2. (FORCE AND LAWS OF MOTION)(BASED ON NCERT PATTERN)

- **Muscular Force**: The force exerted by the human body muscles is called muscular force.
- **Gravitational Force**: The attractional force applied by earth on an object in downward direction is called gravitational force.
- **Frictional Force**: The force which opposes the Force and Laws of Motion of an object while being in contact with the other object, is known as frictional force.
- **Air Resistance**: Force which is exerted on the objects while flying in air is named as air resistance. It acts in a direction opposite to the velocity of the object.

Newton's Laws of Force and Laws of Motion:

There are three laws of Force and Laws of Motion those formed by Newton. They are explained below:

(i) **Newton's First Law of Force and Laws of Motion or Law of Inertia**

It states that any object will remain in the state of rest or in uniform Force and Laws of Motion along a straight line until it is compelled to change the state by applying external force.

- **Inertia** :-Inertia is a property or tendency of every object to resist any change in its state of rest or of uniform Force and Laws of Motion.
- It is measured by the mass of an object. The heavier the object, the greater will be its inertia.