

Positions to the right of O are taken as positive and to the left of O , as negative.]

- 2. Two dimensional motion :** When a body moves in a plane, its motion is called two dimensional motion. This is because to describe its position two co-ordinates are needed.
- 3. Three dimensional motion :** When a body moves in space, its motion is called three dimensional motion. This is because to describe its position all the three co-ordinates are needed.

NOTE : The choice of a set of axes in a frame of reference depends upon the situation. For example, for describing motion in one dimension, we need only one axis. To describe motion in two/three dimensions, we need a set of two/ three axes.

Rest & Motion are relative terms :

When we say that an object is at rest or in motion, then this statement is incomplete and meaningless. Basically, rest & motion are relative terms. An object which is at rest can also be in motion simultaneously. This can be illustrated as follows.

The passengers sitting in a moving bus are at rest with respect to each other but they are also in motion at the same time with respect to an observer at rest or the objects like trees, buildings on the road side. So the motion and rest are relative terms.

NOTE: *Description of an event depends on the frame of reference (observer) chosen for the description. For example, when you say that a car is moving on a road, you are describing the car with respect to a frame of reference attached to*