

① ~~It~~ It states that an object will continue to remain in its state of rest or of uniform motion along a straight line path unless an external force acts on it.

② If a body of mass  $m$  moving at initial velocity  $u$  accelerates uniformly with an acceleration  $a$  for time  $t$ , so that its final velocity changes to  $v$ .

④ The natural tendency of an object to resist a change in their state of rest or of uniform motion along a straight line is called Inertia.

These types of Inertia are -:

- ① Inertia of rest.
- ② Inertia of motion.
- ③ Inertia of direction.