

Its limitations are that it violates both the postulates of the theory of special relativity. First postulate states that laws of physics should be same in all inertial frames of reference but the equations of electricity and magnetism become very different when the Galilean transformation is used in two inertial frames of reference. Second it calls for the speed of light should be same in all inertial frames of reference but in second inertial frame of reference the speed of light would be:

The limitations of Galilean transformation is that it is applicable only for particles with speed very much smaller than the speed of light that is $v \ll c$ and it can't be applied for particles with speed almost equal to the speed of light like- it can't be applied if the speed of the particle is $0.99c$ and so on. $c = c - v$

$$c' = c - v$$

That is why Lorentz transformation is used instead of Galilean transformation.