

An object experiences a net zero external unbalanced force. Is it possible for the object to be travelling with a non-zero velocity?

If yes, state the conditions that must be placed on the magnitude and direction of the velocity. If no, provide a reason.

Differentiate balanced and unbalanced force.

When a net zero external unbalanced force is applied on the body, it is possible for the object to be travelling with a non-zero velocity. In fact, once an object comes into motion and there is a condition in which its motion is ~~unstopped~~ unopposed by any external force; the object will continue to remain in motion.

It is necessary that the object moves at a constant velocity and in a ~~particular~~ particular direction.

Balanced Force :- If a set of force acting on a body produce no acceleration in it, then force are said to be balanced.

When a car moving in a uniform speed and not accelerating.

Unbalanced Force :- If a set of force acting on the object produces some non zero acceleration, force are said to be unbalanced.

When a car is moving in a uniform motion and accelerating.

2) Define inertia.

ans) Inertia is the the resistance of any physical object to any change in its velocity.

3) Write whose inertia is more?

i- A bicycle and a train

ii- A five rupee coin and ~~a~~ one rupee coin

ans) i- A train inertia is more than a bicycle

ii- A five rupee coin and has more inertia than an one rupee coin.