

HW

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Q 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.

ans) 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.

For example 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.

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