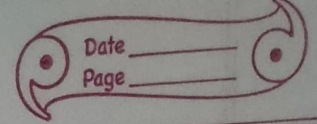


# Force And Laws Of Motion



1) 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 conditions that must be placed on magnitude and direction. If no give reason.

2) Differentiate between balanced and unbalanced force.

## Answer

Yes it is possible for an object to be travelling with a non-zero velocity when an object experiences a net zero external unbalanced force. The conditions that must be placed on magnitude and direction is that the body should move in a single direction with a constant speed. Then only the body will travel with a non-zero velocity when a net zero external unbalanced force is applied to it.

2) BALANCED UNBALANCED

In balanced forces the net force is 0.

In unbalanced forces, the net force is non-zero.

Balanced forces do not produce an acceleration in the object

Unbalanced forces produces an acceleration in the object.

In balanced forces, the magnitude of two or more forces is equal.

In unbalanced forces, the magnitude of two or more forces is unequal. (One may be greater than others).

Ex → Book resting on table.

Ex → Body falling towards Earth.