

PHYSICS

Assignment-1

1. Yes an object may travel with a non-zero velocity even when the net external force on it is zero. A rain drop falls down with constant velocity. The weight of the drop is balanced by the up thrust and the velocity of air. The net force on the drop is zero.
2. Differentiate between balanced and unbalanced force with as follows:

Balanced force

unbalanced force

- | | |
|--------------------------|--|
| * Magnitude is equal. | Magnitude is not equal. |
| * Direction is opposite. | Direction is same. |
| * Stays in rest. | Moves in the direction of greater force. |
| * Net force is 0 | Net force is not zero. |

2. ~~inert~~

3. Inertia is a property or tendency of every object to resist any change in its state of rest or of uniform motion in a straight line.

4. (i) Train's inertia is more.

(ii) Five rupee coin's inertia is more.