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1) Linear momentum :- The linear momentum of a body is the product of its mass (m) and its velocity (v) that is

formula :- $P = mv$.

S.I unit of momentum :- S.I unit of mass \times S.I unit of velocity.

$$= \text{Kg} \times \text{m s}^{-1}$$

$$= \text{Kg} \cdot \text{m s}^{-1}$$

Momentum of a body travelling with velocity 2.2 m/s and having mass 3.5 Kg

$$\text{Momentum} = P = mv$$

$$= 3.5 \times 2.2$$

$$= 7.70 \cdot \text{Kg m s}^{-1}$$

2) Newton's 1st law defines 'force' and inertia

Law :- Every body continues in its state of rest or of uniform motion in a straight line, unless it is compelled by an external force to change that state.

Newton's 2nd law, defines momentum.

Law :- The rate of change of momentum of a body is directly proportional to the external force acting on it.

Newton's 3rd law relates to action and reaction.

Law :- For Every action there is an Equal and opposite reaction

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- 3) When a moving bus stops suddenly the person feel's jerk.
Due to "Inertia of rest".

4)



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- 5) The question is :-
"who used the word first "Inertia" ?
- 6) conservation of momentum :-
In the absence of a net external force on the system, the momentum (either linear momentum or angular momentum) of the system remains unchanged.
This is called "conservation of momentum".

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- 7 A 10. B
8 C 11. C
9 D 12. A

Prepared by
Hrushikesh Paripatashahi
OPMS - Kanchikuli
Srikatulum
8008276928.