

-formative Assessment -2 . SET-1 ANSWER,

1.

- 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
 $= \text{Kg} \times \text{ms}^{-1}$
 $= \text{Kg} \cdot \text{ms}^{-1}$

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

$$\begin{aligned}\text{Momentum} &= P = mv \\ &= 3.5 \times 2.2 \\ &= 7.70 \cdot \text{Kgm}^{-1}\end{aligned}$$

- 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.

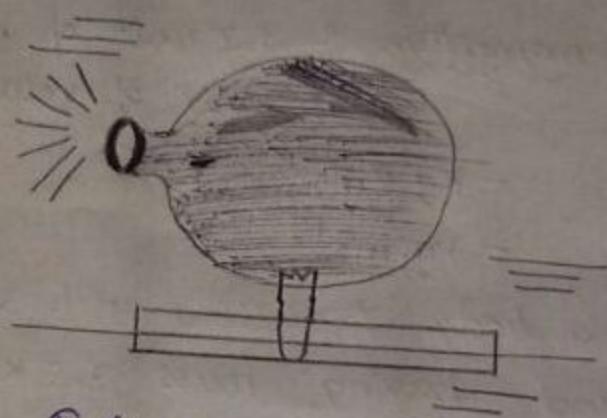
Newton's 3rd law , relates to action and reaction.

Law :- for every action there is an equal and opposite reaction

II

- 3) when a moving bus stops suddenly the person feels jerk.
Due to "Inertia of rest".

4)



Balloon rocket.

III

- 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".

A

7 A 10. B

8

C 11. C

9

D 12. A

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