

Assignments

Force and Laws of motion (Class –IX)

Q1 Action and reaction forces act;

- (a) on different bodies always (b) on same body always
(c) on same body sometimes (d) On different bodies sometimes.

Q2 It is difficult to push a truck parked on road as compare to a small car because;

- a) Inertia of rest car is more as its size is small.
b) Inertia of rest of truck is more as its size is big.
c) Inertia of rest of truck is more as its mass is much more.
d) Inertia of motion of truck is more as its mass is more.

Q3 If mass of a body is in kg, moving with uniform speed in m/s then its momentum is measured in;

- a) Kg cm/s b) kg m/s² c) kg m/s d) kg cm/s²

Q4 which law of motion is also known as law of Inertia?

Q5 A stone is falling from a height, the force acting on it is balanced or unbalanced.

Q6 Rate of change of linear momentum is called..... (fill in the blank).

Q7 A force of 50 Newton exerted on a body of mass 2kg can produce an acceleration of..... (fill in blank)

Q8 Give an expression to relate force and momentum.

Q9 Which has more inertia a box of mass 20kg or a box of mass 200kg ?Give reason to your choice.

Q10 Why is it difficult for fire men to hold hose pipe while putting out fire?

b) Why is a gun far heavier than a bullet?

c) Why do we get backward jerk in a bus as it starts suddenly?

Q11 How does first law of motion lie in second law of motion?

Q12 Define 1 Newton of force. If force of 10 Newton acts on a body, what is its value in cgs system of units?

Q13 Why does gun recoil when a bullet is fired? Derive an expression for recoiling velocity of gun.

Q14 How much force is required to change velocity of a body of mass 10kg from 2m/s to 6m/s.

Is this force balanced or unbalanced.

Q15 A cat of body mass 2.5 kg running with a speed of 2m/s jumps on a stationary skateboard of mass 0.5 kg. Will the skateboard move with cat on it if yes find the velocity of board and cat system?