Impulse and Conservation of momentum, Conservation of momentum using third law, Applications and examples of conservation of momentum

CLASS-IX

SUBJECT : PHYSICS
CHAPTER NUMBER: 9
CHAPTER NAME : FORCE AND LAWS OF MOTION

Home Assignment

1. A 20 kg bullet can fire 10 bullets per second. Mass of each bullet 0.2 kg. The muzzle speed of the bullet is150m/s. What is the recoil velocity of the gun ? How much force is required to hold the gun?

2. State and prove law of conservation of linear momentum.

3. A bomb explodes into several parts. Why these parts fly off in different directions.

Home Assignment

1. An object of mass 1.5 kg travelling in a straight line with a velocity of 5 m/s collides with a wooden block of mass 5 kg resting on the floor. This object sticks with wooden block after collision and both move together in a straight line.

The total momentum after collision is –

(1) 3.5 kg m/s

(2) 1.5 kg m/s

(3) 7.5 kg m/s

(4) 2 kg m/s

The velocity of the combination of these objects after collision is
(1) 8.5 m/s
(2) 9.5 m/s
(3) 1.15 m/s
(4) 1.5 m/s

THANKING YOU

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