NOVA SCOTIA ADVANCED PHYSICS 11 · UNIT D · 10 QUESTIONS

Impulse, Momentum and One-Dimensional Collisions — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Two objects move in the same direction with momenta 12 and 6 kilogram metres per second. Their total momentum, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A force of 36 newtons acts for 5 seconds. The impulse, in newton seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **An object of mass 20 kilograms moves at 3 metres per second. Its momentum, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Impulse and momentum change have the same**

- A units in newton seconds and kilogram metres per second equivalently
- B value always zero, no matter how hard the objects hit or how fast they were moving
- C direction always upward
- D mass

Understand It with Pulse | Flag a mistake

5 **Impulse is also the area under a force against**

- A distance graph
- B time graph
- C mass graph
- D velocity graph

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6 **In a two body collision, total momentum is conserved if external impulses are**

- A negligible
- B large
- C vertical only
- D horizontal only

Understand It with Pulse | Flag a mistake

7 **Momentum is conserved in a collision even when kinetic energy is not, because momentum has no**

- A energy loss term in its conservation law
- B direction, which momentum does not have because it is a scalar quantity like energy
- C mass
- D unit

Understand It with Pulse | Flag a mistake

8 **Recoil of a gun follows from momentum conservation: the gun gains momentum**

- A same as the bullet
- B zero
- C double the bullet
- D opposite to the bullet

Understand It with Pulse | Flag a mistake

9 **Two objects move in the same direction with momenta 20 and 8 kilogram metres per second. Their total momentum, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **Two objects move in the same direction with momenta 20 and 10 kilogram metres per second. Their total momentum, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 18
2. 180
3. 60
4. A
5. B
6. A
7. A
8. D
9. 28
10. 30

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