ARKANSAS PHYSICS · UNIT 2 · 10 QUESTIONS

# Work, Energy, and Momentum — 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** **A force of 30 newtons acts for 4 seconds The impulse delivered is**

- A 120 newton seconds
- B 34 newton seconds
- C 90 newton seconds
- D 150 newton seconds

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2 **A cart of mass 2 kilograms at 6 meters per second sticks to an identical cart at rest The speed of the combined carts is**

- A 2 meters per second
- B 3 meters per second
- C 4 meters per second
- D 6 meters per second

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3 **A motor does 1000 joules of work in 20 seconds The power of the motor is**

- A 20 watts
- B 80 watts
- C 50 watts
- D 100 watts

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4 **Use 10 meters per second squared for gravity A ball is dropped from a height of 45 meters Its speed just before hitting the ground is**

- A 15 meters per second
- B 45 meters per second
- C 60 meters per second
- D 30 meters per second

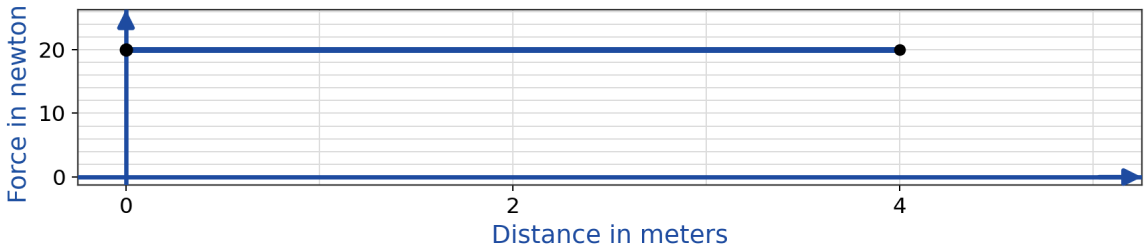
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5 **A spring with spring constant 200 newtons per meter is stretched 0.1 meters Its elastic potential energy is one half times 200 times 0.01 joules Its elastic potential energy is**

- A 1 joule
- B 0.5 joules
- C 2 joules
- D 5 joules

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**6** **The graph shows force against distance for a cart The work done in moving 4 meters is**




- **A** 20 joules
- **B** 40 joules
- **C** 80 joules
- **D** 160 joules

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**7** **When a ball rises, its kinetic energy changes into**

- **A** Chemical energy
- **B** Nuclear energy
- **C** Gravitational potential energy
- **D** Sound energy only

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8 **A collision in which kinetic energy is not conserved is called**

A Elastic

B Perfect

C Stationary

D Inelastic

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9 **Power is defined as the rate of doing**

A Work

B Force

C Momentum

D Velocity

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10

**A mass of 6 kilograms moves at 4 meters per second What is its momentum in kilogram meters per second**

ANSWER

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# ANSWER KEY

1. A
2. B
3. C
4. D
5. A
6. B
7. C
8. D
9. A
10. 24

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