PRINCE EDWARD ISLAND PHYSICS 11 · UNIT C

Momentum and Energy — Practice Test

Prince Edward Island Physics 11 • 25 questions

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 bowling ball has mass 4 kilograms and speed 6 metres per second. What is its kinetic energy in joules**



ANSWER

Understand It with Pulse | Flag a mistake

2 **An object has mass 5 kilograms and velocity 4 metres per second. What is its momentum in kilogram metres per second**

ANSWER

Understand It with Pulse | Flag a mistake

3 **Using g = 10 metres per second squared , an object has mass 5 kilograms and height 4 metres . What is its gravitational potential energy in joules**

ANSWER

Understand It with Pulse | Flag a mistake

4 **A force of 20 newtons pushes a crate 5 metres in the direction of the force. How much work is done in joules**



ANSWER

Understand It with Pulse | Flag a mistake

5 **A soft landing reduces injury by increasing the time of impact, which reduces the**

A momentum change

B average force

C mass

D velocity change

Understand It with Pulse | Flag a mistake

6 **A stretched spring stores**

A elastic potential energy

B kinetic energy

C gravitational energy

D thermal energy

Understand It with Pulse | Flag a mistake

7 **An object at the top of a hill has mainly**

A kinetic energy

B thermal energy

C gravitational potential energy

D chemical energy

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8 **As an object falls, its gravitational potential energy is converted mainly to**

A chemical energy

B nuclear energy

C elastic energy

D kinetic energy

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9 **Chemical energy is stored in**

A motion

B bonds between atoms

C height

D springs

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10 **Doubling the mass of an object doubles its**

A velocity

B acceleration

C height

D momentum at the same velocity

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11 **Doubling the speed of a race car multiplies its kinetic energy by**



A 2

B 8

C 4

D 1

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12 **Gravitational potential energy depends on mass, height, and**

- A speed
- B time
- C temperature
- D gravitational field strength

Understand It with Pulse | Flag a mistake

13 **Impulse is also force multiplied by**

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

Understand It with Pulse | Flag a mistake

14 **Impulse is equal to the change in**

A energy

B force

C velocity only

D momentum

Understand It with Pulse | Flag a mistake

15 **In an elastic collision between two billiard balls, both momentum and kinetic energy are**



A conserved

B lost

C doubled

D zero

Understand It with Pulse | Flag a mistake

16 **In an inelastic collision, momentum is conserved but kinetic energy is**

A fully conserved

B not fully conserved

C doubled

D zero

Understand It with Pulse | Flag a mistake

17 **Kinetic energy depends on mass and the**

A speed only

B height

C square of speed

D time

Understand It with Pulse | Flag a mistake

18 **Momentum is conserved in a closed system when no external**

- A force is zero always
- B net force acts
- C energy is lost
- D mass changes

Understand It with Pulse | Flag a mistake

19 **Momentum is defined as mass times**

- A velocity
- B acceleration
- C force
- D energy

Understand It with Pulse | Flag a mistake

20 **The power meter on a cyclist's bicycle measures the rate at which energy is transferred. In other words, power is the rate of doing**



A force

B work

C momentum

D energy only

Understand It with Pulse | Flag a mistake

21 **An object has mass 2 kilograms and speed 10 metres per second. What is its kinetic energy in joules**

ANSWER

Understand It with Pulse | Flag a mistake

22 **An object has mass 10 kilograms and velocity 3 metres per second. What is its momentum in kilogram metres per second**

ANSWER

Understand It with Pulse | Flag a mistake

23 **Using g = 10 metres per second squared , an object has mass 10 kilograms and height 3 metres . What is its gravitational potential energy in joules**

ANSWER

Understand It with Pulse | Flag a mistake

24 **An object has mass 5 kilograms and speed 4 metres per second. What is its kinetic energy in joules**

ANSWER

Understand It with Pulse | Flag a mistake

25 **A sled has mass 4 kilograms and velocity 6 metres per second. What is its momentum in kilogram metres per second**



ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	72	**10.**	D	**19.**	A
2.	20	**11.**	C	**20.**	B
3.	200	**12.**	D	**21.**	100
4.	100	**13.**	A	**22.**	30
5.	B	**14.**	D	**23.**	300
6.	A	**15.**	A	**24.**	40
7.	C	**16.**	B	**25.**	24
8.	D	**17.**	C		
9.	B	**18.**	B		

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