QUEBEC PHYSICS, SECONDARY V · UNIT C

Transformation of Energy — Practice Test

Quebec Physics, Secondary V • 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 force of 20 newtons pushes a wooden crate 5 metres in the direction of the force. The work done, in joules, is**



ANSWER

Understand It with Pulse | Flag a mistake

2 **A mass of 2 kilograms moves at 6 metres per second. Its kinetic energy, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A spring has force constant 40 newtons per metre and is stretched 0.5 metres. Its elastic potential energy, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A spring has force constant 40 newtons per metre and is stretched 0.5 metres. The spring force, in newtons, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **An electric motor takes in 1000 joules of energy and delivers 400 joules of useful energy. Its efficiency, in percent, is**



ANSWER

Understand It with Pulse | Flag a mistake

6 **A falling object moves faster as it loses gravitational potential**

- A energy
- B mass
- C force
- D speed

Understand It with Pulse | Flag a mistake

7 **A machine with higher efficiency wastes a smaller fraction of its input**

- A energy
- B mass
- C colour
- D temperature

Understand It with Pulse | Flag a mistake

8 **A pendulum at its highest point has maximum potential and minimum kinetic**



A mass

B force

C height

D energy

Understand It with Pulse | Flag a mistake

9 **A pendulum at its lowest point has maximum kinetic and minimum potential**

A energy

B mass

C force

D height

Understand It with Pulse | Flag a mistake

10 **Elastic potential energy is stored in a stretched or compressed**

A battery

B lens

C mirror

D spring

Understand It with Pulse | Flag a mistake

11 **Energy can be transformed from one form to another but the total energy stays**

A zero

B rising

C falling

D constant

Understand It with Pulse | Flag a mistake

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

A speed

B force

C height

D time

Understand It with Pulse | Flag a mistake

13 **Heat is energy transferred because of a temperature**

A similarity

B difference

C equality

D constancy

Understand It with Pulse | Flag a mistake

14 **Hooke law holds only while the elastic limit is not**

A reached

B exceeded

C measured

D heated

Understand It with Pulse | Flag a mistake

15 **Hooke law states that spring force is proportional to**



A extension

B mass

C time

D temperature

Understand It with Pulse | Flag a mistake

16 **Kinetic energy depends on mass and the square of**

- A force
- B speed
- C height
- D time

Understand It with Pulse | Flag a mistake

17 **A force of 15 newtons pushes an object 4 metres in the direction of the force. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A mass of 4 kilograms moves at 5 metres per second. Its kinetic energy, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **A spring has force constant 200 newtons per metre and is stretched 0.2 metres. Its elastic potential energy, in joules, is**

ANSWER

Understand It with Pulse | Flag a mistake

20 **A spring has force constant 100 newtons per metre and is stretched 0.2 metres. The spring force, in newtons, is**



ANSWER

Understand It with Pulse | Flag a mistake

21 **A machine takes in 600 joules of energy and delivers 300 joules of useful energy. Its efficiency, in percent, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A force of 30 newtons pushes an object 3 metres in the direction of the force. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A red rubber ball of mass 8 kilograms moves at 3 metres per second. Its kinetic energy, in joules, is**



ANSWER

Understand It with Pulse | Flag a mistake

24 **A spring has force constant 100 newtons per metre and is stretched 0.4 metres. Its elastic potential energy, in joules, is**

ANSWER

Understand It with Pulse | Flag a mistake

25 **A spring has force constant 60 newtons per metre and is stretched 0.3 metres. The spring force, in newtons, is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	100	**10.**	D	**19.**	4
2.	36	**11.**	D	**20.**	20
3.	5	**12.**	C	**21.**	50
4.	20	**13.**	B	**22.**	90
5.	40	**14.**	B	**23.**	36
6.	A	**15.**	A	**24.**	8
7.	A	**16.**	B	**25.**	18
8.	D	**17.**	60		
9.	A	**18.**	50		

© 2026 Brett Robbins. All Rights Reserved.