NEW BRUNSWICK SCIENCE 10 (SCIENCE FOR SUSTAINABLE SOCIETIES) · UNIT A · 25 QUESTIONS

Power, Work and Energy — 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 10 newtons moves a crate 5 metres. The work done in joules is**



ANSWER

Understand It with Pulse | Flag a mistake

2 **A force of 20 newtons moves an object 3 metres. The work done in joules is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A force of 25 newtons moves an object 4 metres. The work done in joules is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Work of 200 joules done in 10 seconds gives a power in watts of**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A motor does 300 joules of work in 15 seconds. Its power in watts is**



ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Work of 120 joules done in 6 seconds gives a power in watts of**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A mass of 2 kilograms at a height of 10 metres has gravitational potential energy in joules using g = 10 of**

ANSWER

Understand It with Pulse | Flag a mistake

8 **A mass of 5 kilograms at a height of 4 metres has gravitational potential energy in joules using g = 10 of**

ANSWER

Understand It with Pulse | Flag a mistake

9 **A mass of 2 kilograms moving at 10 metres per second has kinetic energy in joules of**

ANSWER

Understand It with Pulse | Flag a mistake

10 **A bowling ball of 4 kilograms moving at 5 metres per second has kinetic energy in joules of**



ANSWER

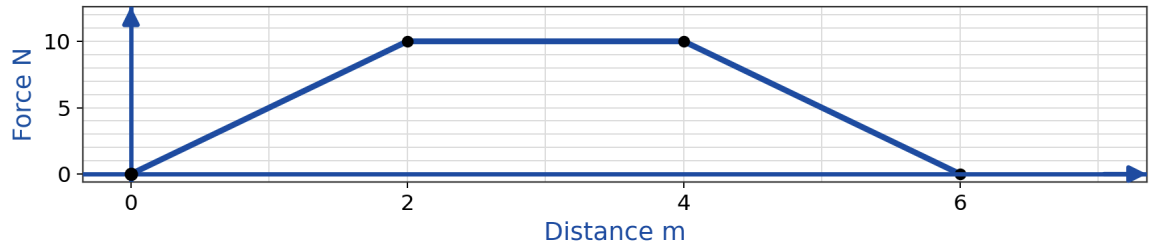
Understand It with Pulse | Flag a mistake

11 **A mass of 3 kilograms moving at 4 metres per second has kinetic energy in joules of**

ANSWER

Understand It with Pulse | Flag a mistake

12 **The graph shows force against distance from 0 comma 0 to 2 comma 10 then to 4 comma 10 then to 6 comma 0. The work done in joules is the area under the graph**



ANSWER

Understand It with Pulse | Flag a mistake

13 **Work is done when a force causes an object to**

A move in the direction of the force

B stay still

C change colour

D get warmer only

Understand It with Pulse | Flag a mistake

14 **Power measures how quickly work is**

A stored

B done

C wasted only

D measured

Understand It with Pulse | Flag a mistake

15 **Gravitational potential energy depends on mass height and**



A gravity

B speed

C colour

D temperature

Understand It with Pulse | Flag a mistake

16 **Kinetic energy depends on mass and**

A height

B colour

C time

D speed

Understand It with Pulse | Flag a mistake

17 **Energy cannot be created or destroyed but it can be**

A transformed

B lost completely

C doubled freely

D ignored

Understand It with Pulse | Flag a mistake

18 **A machine that lifts a load slowly uses less power than one that lifts it quickly when the work is the**

A greater

B same

C smaller

D zero

Understand It with Pulse | Flag a mistake

19 **One watt equals one joule per**

A metre

B kilogram

C second

D newton

Understand It with Pulse | Flag a mistake

20 **Efficiency compares useful energy output to total energy**



A wasted only

B stored only

C colour

D input

Understand It with Pulse | Flag a mistake

21 **When friction acts some kinetic energy is transformed into**

- A thermal energy
- B potential energy only
- C light only
- D sound only in all cases

Understand It with Pulse | Flag a mistake

22 **A raised object has more gravitational potential energy when its height is**

- A smaller
- B greater
- C zero only
- D unchanged

Understand It with Pulse | Flag a mistake

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



A 2

B 8

C 4

D 1

Understand It with Pulse | Flag a mistake

24 **The joule is the unit of work and**

A power

B force

C speed

D energy

Understand It with Pulse | Flag a mistake

25 **A watt is the unit of**

A power

B energy

C work

D force

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	50	**10.**	50	**19.**	C
2.	60	**11.**	24	**20.**	D
3.	100	**12.**	40	**21.**	A
4.	20	**13.**	A	**22.**	B
5.	20	**14.**	B	**23.**	C
6.	20	**15.**	A	**24.**	D
7.	200	**16.**	D	**25.**	A
8.	200	**17.**	A		
9.	100	**18.**	B		

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