NOVA SCOTIA ADVANCED PHYSICS 11 · UNIT C · 25 QUESTIONS

Work, Energy and Power — 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 crate of mass 6 kilograms moves at 5 metres per second. Its kinetic energy, in joules, is**



ANSWER

Understand It with Pulse | Flag a mistake

2 **A force of 70 newtons moves an object 6 metres. The work done, in joules, is**

ANSWER

Understand It with Pulse | Flag a mistake

3 **A mass of 4 kilograms rises 15 metres . Use g = 10 metres per second squared . The gain in gravitational potential energy , in joules , is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A motor does 480 joules of work in 6 seconds. Its power, in watts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A car braking transforms kinetic energy mainly into thermal energy in the**



A brakes

B engine

C tyres only

D fuel

Understand It with Pulse | Flag a mistake

6 **A falling object loses gravitational potential energy and gains kinetic energy if air resistance is**

- A large
- B zero mass
- C negligible
- D constant speed

Understand It with Pulse | Flag a mistake

7 **A falling object with air resistance reaches terminal velocity when drag equals**

- A mass
- B speed
- C weight
- D height

Understand It with Pulse | Flag a mistake

8 **A hydroelectric station transforms gravitational potential energy of water into electrical energy via**

- A chemical energy
- B kinetic energy of turbines
- C nuclear energy
- D elastic energy

Understand It with Pulse | Flag a mistake

9 **A joule is equivalent to a newton multiplied by a**

- A second
- B metre
- C kilogram
- D watt

Understand It with Pulse | Flag a mistake

10 **A joule per second is a**



A newton

B pascal

C volt

D watt

Understand It with Pulse | Flag a mistake

11 **A kilowatt hour is a unit of**

A power

B force

C energy

D current

Understand It with Pulse | Flag a mistake

12 **A lift raises 100 kilograms by 10 metres . Use g = 10 metres per second squared . The energy gain , in joules , is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A machine outputs 300 joules from 500 joules input. Its efficiency, in percent, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A motor does 1000 joules in 20 seconds. Its power, in watts, is**

ANSWER

Understand It with Pulse | Flag a mistake

15 **A motor rated at 500 watts does 500 joules of work each**



A second

B minute

C hour

D metre

Understand It with Pulse | Flag a mistake

16 **A pendulum at its highest point has maximum**

A kinetic energy

B gravitational potential energy

C speed

D tension only

Understand It with Pulse | Flag a mistake

17 **A pendulum at its lowest point has maximum**

A gravitational potential energy

B height

C kinetic energy

D extension

Understand It with Pulse | Flag a mistake

18 **A pumped storage station stores energy as gravitational potential energy of**

A moving water only

B steam

C batteries only

D water at height

Understand It with Pulse | Flag a mistake

19 **A spring compressed twice as far stores**

A twice the elastic energy

B the same energy

C half the energy

D four × the elastic energy

Understand It with Pulse | Flag a mistake

20 **A wagon of mass 8 kilograms moves at 10 metres per second. Its kinetic energy, in joules, is**



ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A force of 90 newtons moves an object 5 metres. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A mass of 12 kilograms rises 5 metres . Use g = 10 metres per second squared . The gain in gravitational potential energy , in joules , is**

ANSWER

Understand It with Pulse | Flag a mistake

23 **A motor does 900 joules of work in 15 seconds. Its power, in watts, is**

ANSWER

Understand It with Pulse | Flag a mistake

24 **A cart of mass 3 kilograms moves at 12 metres per second. Its kinetic energy, in joules, is**

ANSWER

Understand It with Pulse | Flag a mistake

25 **A force of 35 newtons pulls a sled 8 metres. The work done, in joules, is**



ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	75	**10.**	D	**19.**	D
2.	420	**11.**	C	**20.**	400
3.	600	**12.**	10000	**21.**	450
4.	80	**13.**	60	**22.**	600
5.	A	**14.**	50	**23.**	60
6.	C	**15.**	A	**24.**	216
7.	C	**16.**	B	**25.**	280
8.	B	**17.**	C		
9.	B	**18.**	D		

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