ENGLAND GCSE PHYSICS EDEXCEL FOUNDATION · UNIT 15 · 25 QUESTIONS

Forces and Matter — 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 wristwatch is used to time a race. What is speed calculated from?**

- A distance only, not time
- B distance and time
- C mass and time together
- D time only, not distance

Understand It with Pulse | Flag a mistake

2 **Glass marbles are shaken in a tray. What does this model?**

- A particles freezing into place
- B particles bonding together
- C particles gaining energy
- D particles disappearing completely

Understand It with Pulse | Flag a mistake

3 **Hardcover books have mass. What is mass measured in?**

A newtons, the unit of force

B joules

C watts

D kilograms

Understand It with Pulse | Flag a mistake

4 **A ladder is climbed. Which energy store increases?**

A gravitational potential

B thermal energy from friction

C kinetic energy of motion

D elastic potential energy

Understand It with Pulse | Flag a mistake

5 **A cardboard box sits on a floor. What is the force between the box and the floor?**

- A the friction between the surfaces
- B the upthrust from the floor
- C the air pressure all around it
- D the weight of the box

Understand It with Pulse | Flag a mistake

6 **A calculator runs on a small current. What is current measured in?**

- A watts, the unit of power
- B volts, the unit of voltage
- C amperes
- D ohms, the unit of resistance

Understand It with Pulse | Flag a mistake

7 **What is the limit of proportionality for a spring?**

A the point where the spring breaks

B force stops matching extension

C the point where the spring is longest

D the point where no force is needed

Understand It with Pulse | Flag a mistake

8 **What is elastic behaviour?**

A breaking as soon as a force is applied

B melting when a force is applied

C staying stretched after the force is removed

D returning to the original shape

Understand It with Pulse | Flag a mistake

9 **A spring has a spring constant of 100 N/m. It is stretched by 4 cm. What is the elastic potential energy stored?**

- A 0.08 J
- B 0.16 J
- C 0.04 J
- D 0.32 J

Understand It with Pulse | Flag a mistake

10 **A spring has a spring constant of 25 N/m. It is stretched by 0.4 m. Calculate the force in N.**

- A 25
- B 5
- C 20
- D 10

Understand It with Pulse | Flag a mistake

11 **A spring has a spring constant of 25 N/m. It is stretched by 5 cm. What is the force?**

- A 1.75 N
- B 0.625 N
- C 1.25 N
- D 2.5 N

Understand It with Pulse | Flag a mistake

12 **A spring with spring constant 200 N/m is stretched by 0.2 m. Calculate the elastic potential energy stored in J.**

- A 2
- B 16
- C 8
- D 4

Understand It with Pulse | Flag a mistake

13 **What happens to a spring if it is stretched past its limit of proportionality?**

A it snaps at once

B it stays stretched

C it stops stretching

D it gets stronger

Understand It with Pulse | Flag a mistake

14 **What happens to the extension if the force doubles?**

A it increases by four times

B it halves, becoming smaller

C it stays the same as before

D it doubles

Understand It with Pulse | Flag a mistake

15 **A spring has a spring constant of 100 N/m. It is stretched by 10 cm. What is the elastic potential energy stored?**

- A 0.5 J
- B 1 J
- C 2 J
- D 0.25 J

Understand It with Pulse | Flag a mistake

16 **A spring has a spring constant of 50 N/m. It is stretched by 0.1 m. Calculate the force in N.**

- A 10
- B 20
- C 5
- D 2.5

Understand It with Pulse | Flag a mistake

17 **A spring has a spring constant of 50 N/m. It is stretched by 4 cm. What is the force?**

- A 2.5 N
- B 1 N
- C 4 N
- D 2 N

Understand It with Pulse | Flag a mistake

18 **A spring has a spring constant of 20 N/m. It is stretched by 10 cm. What is the elastic potential energy stored?**

- A 0.4 J
- B 0.05 J
- C 0.2 J
- D 0.1 J

Understand It with Pulse | Flag a mistake

19 **A spring has a spring constant of 25 N/m. It is stretched by 0.1 m. Calculate the force in N.**

- A 17.5
- B 2.5
- C 1.25
- D 5

Understand It with Pulse | Flag a mistake

20 **A spring has a spring constant of 25 N/m. It is stretched by 10 cm. What is the force?**

- A 1.25 N
- B 5 N
- C 2.5 N
- D 3 N

Understand It with Pulse | Flag a mistake

21 **A spring with spring constant 50 N/m is stretched by 0.2 m. Calculate the elastic potential energy stored in J.**

- A 2
- B 0.5
- C 4
- D 1

Understand It with Pulse | Flag a mistake

22 **What happens to a spring stretched past its limit of proportionality?**

- A it does not return to its original length
- B it turns into a different metal
- C it returns to its original length at once, unchanged
- D it becomes stronger than before

Understand It with Pulse | Flag a mistake

23 **A spring has a spring constant of 100 N/m. It is stretched by 2 cm. What is the elastic potential energy stored?**

- A 0.01 J
- B 0.08 J
- C 0.04 J
- D 0.02 J

Understand It with Pulse | Flag a mistake

24 **A spring has a spring constant of 10 N/m. It is stretched by 4 cm. What is the force?**

- A 0.2 N
- B 0.4 N
- C 0.8 N
- D 0.9 N

Understand It with Pulse | Flag a mistake

25

A spring with spring constant 100 N/m is stretched by 0.2 m. Calculate the elastic potential energy stored in J.

A 1

B 4

C 2

D 8

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.