ENGLAND GCSE PHYSICS EDEXCEL HIGHER · 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 calculator runs on a small current. What is current measured in?**

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

Understand It with Pulse | Flag a mistake

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

- A watts
- B kilograms
- C joules
- D newtons, the unit of force

Understand It with Pulse | Flag a mistake

3 **A cardboard box is pushed across a floor. What opposes the push?**

- A thrust
- B friction
- C gravity
- D air resistance

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

5 **A ladder is used to reach a roof. What is the ladder an example of?**

A a power source

B a simple machine

C a lever only

D a complex machine

Understand It with Pulse | Flag a mistake

6 **A wristwatch measures time. What is the unit of time?**

A the minute

B the day

C the second

D the hour

Understand It with Pulse | Flag a mistake

7 **What is the limit of proportionality?**

A the length of a spring with no force

B the force needed to stretch a spring

C the point where a spring breaks completely

D the point where Hooke's law stops working

Understand It with Pulse | Flag a mistake

8 **A spring with spring constant 50 N/m is stretched by 0.1 m. Calculate the elastic potential energy stored in J.**

A 0.25

B 0.125

C 1

D 0.5

Understand It with Pulse | Flag a mistake

9 **A spring has a spring constant of 20 N/m. It is stretched by 0.4 m. Calculate the force in N.**

A 4

B 8

C 23

D 16

Understand It with Pulse | Flag a mistake

10 **A spring is stretched and then released. What happens to the stored elastic potential energy?**

A it stays in the spring for ever

B it becomes kinetic energy

C it disappears

D it becomes heat only

Understand It with Pulse | Flag a mistake

11 **A spring has a spring constant of 40 N/m. It is stretched by 10 cm. What is the elastic potential energy stored?**

- A 0.1 J
- B 0.2 J
- C 0.4 J
- D 0.8 J

Understand It with Pulse | Flag a mistake

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

- A it increases by four times
- B it halves, becoming smaller
- C it doubles
- D it stays the same as before

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

14 **A spring has a spring constant of 10 N/m. It is stretched by 0.1 m. Calculate the force in N.**

- A 2
- B 1
- C 16
- D 0.5

Understand It with Pulse | Flag a mistake

15 **A spring has a spring constant of 10 N/m. It is stretched by 2 cm. What is the force?**

- A 0.2 N
- B 0.7 N
- C 0.4 N
- D 0.1 N

Understand It with Pulse | Flag a mistake

16 **What is elastic behaviour?**

- A breaking as soon as a force is applied
- B staying stretched after the force is removed
- C melting when a force is applied
- D returning to the original shape

Understand It with Pulse | Flag a mistake

17 **A spring with spring constant 200 N/m is stretched by 0.1 m. Calculate the elastic potential energy stored in J.**

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

Understand It with Pulse | Flag a mistake

18 **A spring has a spring constant of 20 N/m. It is stretched by 0.1 m. Calculate the force in N.**

- A 2
- B 17
- C 4
- D 1

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

20 **Two identical springs are stretched by the same force. How do their extensions compare?**

- A one does not stretch at all
- B one stretches twice as far
- C they are the same
- D both stretch to zero

Understand It with Pulse | Flag a mistake

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

A 0.04 J

B 0.08 J

C 0.01 J

D 0.02 J

Understand It with Pulse | Flag a mistake

22 **A spring has a spring constant of 50 N/m. It is stretched by 0.5 m. Calculate the force in N.**

A 40

B 12.5

C 25

D 50

Understand It with Pulse | Flag a mistake

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

- A 1 N
- B 2 N
- C 1.5 N
- D 0.5 N

Understand It with Pulse | Flag a mistake

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

- A it snaps at once
- B it stops stretching
- C it gets stronger
- D it stays stretched

Understand It with Pulse | Flag a mistake

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

A 1 J

B 2 J

C 0.5 J

D 0.25 J

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.