ENGLAND GCSE PHYSICS EDEXCEL HIGHER · UNIT 15 · 10 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 ladder leans against a wall. What force keeps it from slipping?**

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

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

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

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3 **A spring has a spring constant of 50 N/m. It is stretched by 10 cm. What is the force?**

- A 5 N
- B 2.5 N
- C 5.5 N
- D 10 N

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4 **Glass marbles are used to model atoms. What is a limitation of the model?**

- A marbles cannot be counted accurately at all
- B marbles are too small to see properly
- C marbles are much bigger than atoms
- D marbles are the wrong colour for atoms

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5 **A wristwatch is used to time a race. What is speed calculated from?**

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

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6 **What is Hooke's law?**

- A force is proportional to extension
- B extension is proportional to the square of the force
- C extension does not depend on the force
- D force is always equal to the extension

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

- **A** force stops matching extension
- **B** the point where the spring is longest
- **C** the point where no force is needed
- **D** the point where the spring breaks

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

- **A** 2
- **B** 4
- **C** 8
- **D** 19

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9 **A spring has a spring constant of 50 N/m. It is stretched by 4 cm. What is the elastic potential energy stored?**

- **A** 0.16 J
- **B** 0.08 J
- **C** 0.04 J
- **D** 0.02 J

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

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

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ANSWER KEY

1. B
2. C
3. A
4. C
5. A
6. A
7. A
8. B
9. C
10. C

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