ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 24 · 25 QUESTIONS

Forces and Their Effects — 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 so it can be fixed.

1 **A Ferris wheel turns. What force keeps a person moving in a circle?**

- A air resistance pushing them back
- B friction only, gripping the seat
- C centripetal force
- D gravity only, pulling them down

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2 **A ladder leans against a wall. What force keeps it from slipping?**

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

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3 **A cardboard box is full of books. What is its mass like?**

A smaller than when empty

B zero

C larger than when empty

D the same as when empty

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4 **A wristwatch ticks every second. How many ticks in a minute?**

A 30

B 60

C 12

D 100

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

A newtons, the unit of force

B joules

C watts

D kilograms

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6 **A car goes around a roundabout. Which force keeps it turning?**

A air resistance

B gravity

C thrust

D friction

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7 **A see-saw balances when the moments on each side are what?**

- A bigger on the heavy side
- B doubled on the left side
- C zero on both sides
- D equal

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8 **Why does a dam have thicker walls at the bottom?**

- A fish push on the bottom
- B the dam is older at the bottom
- C pressure is greatest at the bottom
- D the water is hotter at the bottom, by a lot

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9 **A force of 100 N acts on an area of 20 square metres. Calculate the pressure in pascals.**

- A 5
- B 20
- C 2
- D 10

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10 **A force of 200 N acts on an area of 5 square metres. What is the pressure?**

- A 80 Pa
- B 40 Pa
- C 20 Pa
- D 1000 Pa

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11 **A force of 200 N acts on an area of 10 square metres. What is the pressure?**

- A 25 Pa
- B 40 Pa
- C 20 Pa
- D 10 Pa

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12 **A force of 25 N acts 1 m from a pivot. Calculate the moment in Nm.**

- A 25
- B 12
- C 50
- D 40

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13 **A force of 10 N acts 10 m from a pivot. What is the moment of the force?**

- A 50 Nm
- B 110 Nm
- C 100 Nm
- D 200 Nm

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14 **What does a gear do in a bicycle?**

- A it makes the wheels bigger and heavier
- B it changes force and speed
- C it stops the bike
- D it stores energy

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15 **Two containers hold water to the same depth. One is wide and one is narrow. How do the pressures at the bottom compare?**

- A the wide one has more pressure
- B the narrow one has more pressure
- C neither has any pressure
- D they are the same

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16 **A force of 200 N acts on an area of 2 square metres. Calculate the pressure in pascals.**

- A 100
- B 200
- C 50
- D 115

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17 **A force of 100 N acts on an area of 4 square metres. What is the pressure?**

- A 400 Pa
- B 50 Pa
- C 25 Pa
- D 12.5 Pa

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18 **A force of 200 N acts on an area of 4 square metres. What is the pressure?**

- A 25 Pa
- B 55 Pa
- C 100 Pa
- D 50 Pa

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19 **A force of 10 N acts 3 m from a pivot. Calculate the moment in Nm.**

- A 15
- B 60
- C 30
- D 45

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20 **A force of 25 N acts 10 m from a pivot. What is the moment of the force?**

- A 250 Nm
- B 125 Nm
- C 500 Nm
- D 260 Nm

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21 **Why does a long spanner undo a tight nut more easily?**

A the force is smaller

B the moment is bigger

C the spanner is heavier

D the nut gets hotter

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22 **What is the pressure in a liquid caused by?**

A the liquid above weighs on it

B the temperature of the liquid, which is hot

C the speed of the liquid

D the colour of the liquid

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23 **A force of 1000 N acts on an area of 20 square metres. Calculate the pressure in pascals.**

- A 25
- B 50
- C 100
- D 65

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24 **A force of 400 N acts on an area of 10 square metres. What is the pressure?**

- A 80 Pa
- B 4000 Pa
- C 40 Pa
- D 20 Pa

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25 **A force of 25 N acts 3 m from a pivot. Calculate the moment in Nm.**

- A 37
- B 75
- C 90
- D 150

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ANSWER KEY

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

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