ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 23 · 25 QUESTIONS

Energy, Forces Doing Work — 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 rocket launches straight up. Which force acts downwards on the rocket?**

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

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2 **A bicycle is ridden uphill. Which energy store increases?**

- A thermal energy from friction
- B kinetic energy of motion
- C gravitational potential
- D elastic potential energy

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3 **A cup of coffee is left for an hour. What happens to its temperature?**

- A it falls to room temperature
- B it falls to zero degrees
- C it stays the same all day
- D it rises above room temperature

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4 **A basketball bounces. What type of energy is stored when the ball squashes?**

- A elastic potential
- B kinetic
- C gravitational potential
- D thermal

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5 **A red race car speeds up on a straight track. What is the resultant force doing?**

- A causing deceleration
- B doing nothing
- C causing acceleration
- D causing a turn

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6 **A cheese pizza is cooked in an oven. How is energy transferred in the oven?**

- A by conduction only, through the tray
- B by radiation and convection
- C by condensation on the oven walls
- D by evaporation from the cheese

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7 **A mass of 10 kg is lifted 3 m. Calculate the gravitational potential energy gained in J. Use g = 10 N/kg.**

- A 600
- B 300
- C 150
- D 350

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8 **A mass of 4 kg moves at 5 m/s. Calculate its kinetic energy in J.**

- A 50
- B 25
- C 150
- D 100

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9 **A force of 10 N pushes an object 3 m. Calculate the work done in J.**

- A 60
- B 15
- C 40
- D 30

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10 **A motor lifts a load. Where does the energy go?**

- A it is destroyed by the motor completely
- B it disappears into the wires
- C it is created by the motor
- D to the load as potential energy

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11 **A machine transfers 6000 J of energy in 50 s. Calculate the power in W.**

- A 240
- B 1200
- C 120
- D 60

Understand It with Pulse | Flag a mistake

12 **A force of 20 N pushes a box 5 m along the ground. How much work is done?**

- A 130 J
- B 200 J
- C 100 J
- D 50 J

Understand It with Pulse | Flag a mistake

13 **A mass of 5 kg is lifted 3 m. Calculate the gravitational potential energy gained in J. Use g = 10 N/kg.**

- A 200
- B 75
- C 150
- D 300

Understand It with Pulse | Flag a mistake

14 **A mass of 2 kg moves at 4 m/s. Calculate its kinetic energy in J.**

- A 16
- B 48
- C 32
- D 8

Understand It with Pulse | Flag a mistake

15 **A force of 10 N pushes an object 10 m. Calculate the work done in J.**

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

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16 **What is power?**

- A the force needed to lift an object
- B the total energy stored in an object
- C the rate of energy transfer
- D the distance a force moves an object

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17 **A machine transfers 3000 J of energy in 50 s. Calculate the power in W.**

- A 600
- B 60
- C 30
- D 120

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18 **A force of 25 N pushes a box 5 m along the ground. How much work is done?**

- A 125 J
- B 250 J
- C 155 J
- D 62 J

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19 **A mass of 4 kg is lifted 5 m. Calculate the gravitational potential energy gained in J. Use g = 10 N/kg.**

- A 250
- B 400
- C 100
- D 200

Understand It with Pulse | Flag a mistake

20 **A mass of 4 kg moves at 3 m/s. Calculate its kinetic energy in J.**

- A 36
- B 9
- C 18
- D 54

Understand It with Pulse | Flag a mistake

21 **A force of 50 N pushes an object 4 m. Calculate the work done in J.**

- A 400
- B 200
- C 100
- D 210

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22 **Why does a moving object slow down on a rough surface?**

- A gravity pulls the object backwards
- B air pressure pushes it forwards
- C friction transfers energy to heat
- D the surface creates new energy

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23 **A force of 20 N pushes a box 4 m along the ground. How much work is done?**

- A 110 J
- B 40 J
- C 160 J
- D 80 J

Understand It with Pulse | Flag a mistake

24 **A mass of 5 kg is lifted 10 m. Calculate the gravitational potential energy gained in J. Use g = 10 N/kg.**

- A 550
- B 1000
- C 500
- D 250

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25 **A mass of 4 kg moves at 2 m/s. Calculate its kinetic energy in J.**

A 24

B 4

C 8

D 16

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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