ENGLAND GCSE PHYSICS AQA FOUNDATION · UNIT 1 · 25 QUESTIONS

Energy — 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 bicycle rolls down a hill. What happens to its gravitational potential energy?**

- A it stays the same
- B it increases
- C it becomes chemical energy stored in the bike
- D it decreases as kinetic energy increases

Understand It with Pulse | Flag a mistake

2 **A red race car brakes hard. What happens to its kinetic energy?**

- A it becomes sound only, nothing else
- B it increases
- C it disappears
- D it is transferred to heat

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

4 **A rocket in space has no air around it. What happens to air resistance?**

- A it stays the same
- B it becomes gravity
- C it increases
- D there is none

Understand It with Pulse | Flag a mistake

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

A by radiation and convection

B by condensation on the oven walls

C by evaporation from the cheese

D by conduction only, through the tray

Understand It with Pulse | Flag a mistake

6 **A basketball is thrown up. What happens to its speed as it rises?**

A it decreases

B it stays the same

C it increases

D it becomes zero

Understand It with Pulse | Flag a mistake

7 **A device transfers 200 J of energy in 20 seconds. What is its power?**

- A 5 W
- B 10 W
- C 20 W
- D 4000 W

Understand It with Pulse | Flag a mistake

8 **In a Sankey display, what does a wider arrow show?**

- A energy transferred faster
- B more energy transferred
- C energy transferred for longer
- D energy transferred in a straight line

Understand It with Pulse | Flag a mistake

9 **Why do some people object to wind turbines?**

A they use up the wind

B they produce carbon dioxide

C they spoil the view

D they only work at night

Understand It with Pulse | Flag a mistake

10 **A spring has a spring constant of 20 N/m. It is stretched by 5 cm. What is the elastic potential energy stored?**

A 0.1 J

B 0.025 J

C 0.0125 J

D 0.05 J

Understand It with Pulse | Flag a mistake

11 **A force of 10 N pushes a box 10 m along the ground. How much work is done?**

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

Understand It with Pulse | Flag a mistake

12 **Which of these is an energy store?**

- A a hot drink
- B a battery being charged
- C a moving car
- D a stretched spring

Understand It with Pulse | Flag a mistake

13 **A machine uses 240 J of energy and gives out 60 J of useful energy. What is its efficiency?**

- A 50%
- B 12.5%
- C 35%
- D 25%

Understand It with Pulse | Flag a mistake

14 **A 5 kg object moves at 4 m/s. What is its kinetic energy?**

- A 50 J
- B 20 J
- C 80 J
- D 40 J

Understand It with Pulse | Flag a mistake

15 **A 2 kg object is lifted 2 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

- **A** 20 J
- **B** 4 J
- **C** 80 J
- **D** 40 J

Understand It with Pulse | Flag a mistake

16 **A kettle transfers 60000 J in 60 seconds. What is its power?**

- **A** 1000 W
- **B** 60 W
- **C** 3600 W
- **D** 100 W

Understand It with Pulse | Flag a mistake

17 **A 10 kg block has a specific heat capacity of 200 J/kg degrees Celsius. Its temperature rises by 5 degrees Celsius. How much energy is needed?**

- A 10500 J
- B 10000 J
- C 20000 J
- D 5000 J

Understand It with Pulse | Flag a mistake

18 **Which of these is a renewable energy resource?**

- A wind
- B coal
- C oil
- D natural gas

Understand It with Pulse | Flag a mistake

19 **A device transfers 500 J of energy in 50 seconds. What is its power?**

A 20 W

B 25000 W

C 10 W

D 5 W

Understand It with Pulse | Flag a mistake

20 **A spring has a spring constant of 40 N/m. It is stretched by 2 cm. What is the elastic potential energy stored?**

A 0.004 J

B 0.008 J

C 0.032 J

D 0.016 J

Understand It with Pulse | Flag a mistake

21 **A force of 20 N pushes a box 2 m along the ground. How much work is done?**

- A 40 J
- B 70 J
- C 20 J
- D 80 J

Understand It with Pulse | Flag a mistake

22 **A machine uses 1600 J of energy and gives out 400 J of useful energy. What is its efficiency?**

- A 35%
- B 25%
- C 12.5%
- D 50%

Understand It with Pulse | Flag a mistake

23 **A 5 kg object is lifted 4 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

- **A** 20 J
- **B** 200 J
- **C** 400 J
- **D** 100 J

Understand It with Pulse | Flag a mistake

24 **What is the unit of power?**

- **A** the joule, which is energy
- **B** the newton, which is force
- **C** the volt, which is potential difference
- **D** the watt

Understand It with Pulse | Flag a mistake

25

A 4 kg block has a specific heat capacity of 200 J/kg degrees Celsius. Its temperature rises by 20 degrees Celsius. How much energy is needed?

A 32000 J

B 8000 J

C 16000 J

D 16500 J

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.