ENGLAND GCSE COMBINED SCIENCE EDEXCEL FOUNDATION · UNIT 19 · 25 QUESTIONS

Conservation of 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 so it can be fixed.

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

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

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2 **A red race car speeds up. What happens to its kinetic energy?**

- A it becomes heat
- B it increases
- C it decreases
- D it stays the same

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3 **A bicycle freewheels downhill. What happens to its speed?**

- A it decreases
- B it increases
- C it becomes zero
- D it stays the same

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

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

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

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

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

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

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7 **A machine uses 80 J of energy and gives out 40 J of useful energy. What is its efficiency?**

- A 25%
- B 60%
- C 50%
- D 100%

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8 **What does it mean if an energy resource is renewable?**

- A it works in any weather
- B it will not run out
- C it makes no pollution at all
- D it is cheap to build

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9 **What is the unit of energy?**

A the volt

B the newton

C the watt

D the joule

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10 **A motor lifts a load and does 500 J of work in 10 seconds. What is the power?**

A 500 W

B 50 W

C 5000 W

D 5 W

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11 **What is kinetic energy?**

- A energy of movement
- B energy of heat
- C energy of position
- D energy of light

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12 **A 5 kg object is lifted 3 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

- A 15 J
- B 300 J
- C 75 J
- D 150 J

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13 **A 10 kg object moves at 5 m/s. What is its kinetic energy?**

- A 62.5 J
- B 125 J
- C 250 J
- D 135 J

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14 **A Sankey display for a light bulb shows 100 J in, 10 J of light out and 90 J of heat out. What is the useful energy?**

- A 100 J of electricity
- B 10 J of light
- C 110 J in total
- D 90 J of heat

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15 **A device transfers 200 J of energy in 10 seconds. What is its power?**

- A 20 W
- B 10 W
- C 40 W
- D 2000 W

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16 **A machine uses 200 J of energy and gives out 40 J of useful energy. What is its efficiency?**

- A 30%
- B 10%
- C 20%
- D 40%

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17 **Which energy resource is reliable in any weather and produces no carbon dioxide while running?**

A wave power, which needs waves

B solar power, which needs sun

C wind power, which needs wind

D nuclear power

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

A the watt

B the volt

C the newton

D the joule

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19 **Two motors do the same work. One takes half the time of the other. How does its power compare?**

- A twice as much
- B four times as much
- C the same
- D half as much

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20 **Which of these is a non-renewable energy resource?**

- A coal
- B tidal
- C solar
- D wind

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

- **A** 200 J
- **B** 40 J
- **C** 400 J
- **D** 800 J

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22 **A 4 kg object moves at 2 m/s. What is its kinetic energy?**

- **A** 4 J
- **B** 16 J
- **C** 18 J
- **D** 8 J

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23 **A device transfers 1000 J of energy in 50 seconds. What is its power?**

- A 20 W
- B 50000 W
- C 40 W
- D 10 W

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24 **A machine uses 300 J of energy and gives out 60 J of useful energy. What is its efficiency?**

- A 40%
- B 10%
- C 30%
- D 20%

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25

Which energy resource will run out first?

A geothermal power

B solar power

C tidal power

D a fossil fuel

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Flag a mistake

ANSWER KEY

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

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