ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY HIGHER · UNIT 14 · 25 QUESTIONS

Sustainable 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 river flows to the sea. What is this part of?**

- A the water cycle
- B the nitrogen cycle
- C the rock cycle
- D the carbon cycle

Understand It with Pulse | Flag a mistake

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

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

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3 **A kite flies in the wind. Which force holds the kite up?**

- A thrust
- B drag
- C weight
- D lift

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4 **A cheese pizza provides energy. Which nutrient provides most energy?**

- A fat
- B protein
- C vitamins
- D fibre

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5 **A cup of coffee cools down. Energy is transferred to the surroundings. What type of change is this?**

- A a reversible reaction
- B an energy transfer
- C a chemical change
- D a neutralisation

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

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

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

- A 50 J
- B 1000 J
- C 250 J
- D 500 J

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8 **What is a disadvantage of biofuels?**

- A they release no carbon dioxide at all
- B they cannot be burned
- C they never run out
- D growing the crops takes land

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9 **A sunflower turns its head to follow the Sun. What is this a response to?**

- A gravity
- B light
- C touch
- D water

Understand It with Pulse | Flag a mistake

10 **What is kinetic energy?**

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

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11 **A spring has a spring constant of 100 N/m. It is stretched by 2 cm. What is the elastic potential energy stored?**

- A 0.08 J
- B 0.01 J
- C 0.04 J
- D 0.02 J

Understand It with Pulse | Flag a mistake

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

- A the newton
- B the volt
- C the watt
- D the joule

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13 **Why do fossil fuels cause climate change?**

A they are hard to find underground

B burning makes carbon dioxide

C they run out slowly

D they are expensive

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

A 18 J

B 16 J

C 4 J

D 8 J

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15 **A device transfers 100 J of energy in 10 seconds. What is its power?**

- A 5 W
- B 20 W
- C 1000 W
- D 10 W

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16 **Which energy resource is best for a windy island?**

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

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17 **Why is nuclear power not renewable?**

A it makes carbon dioxide

B uranium will run out

C it makes no waste

D it needs sunlight

Understand It with Pulse | Flag a mistake

18 **A machine uses 400 J of energy and gives out 200 J of useful energy. What is its efficiency?**

A 100%

B 50%

C 25%

D 60%

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

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

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20 **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 110 J in total
- B 10 J of light
- C 90 J of heat
- D 100 J of electricity

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21 **What is an advantage of solar power?**

A it works in any weather at all

B it needs no panels

C it works at night

D no carbon dioxide is made

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

A 70 J

B 40 J

C 20 J

D 80 J

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23 **A 5 kg object is lifted 2 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

- A 100 J
- B 50 J
- C 10 J
- D 200 J

Understand It with Pulse | Flag a mistake

24 **A spring has a spring constant of 40 N/m. It is stretched by 4 cm. What is the elastic potential energy stored?**

- A 0.128 J
- B 0.016 J
- C 0.032 J
- D 0.064 J

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25

How can heat loss from a house be reduced?

A by insulating the loft

B by opening windows

C by removing curtains

D by turning the heating up

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

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