ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY FOUNDATION · UNIT 14 · 10 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 cup of coffee is left for an hour. What happens to its temperature?**

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

Understand It with Pulse | Flag a mistake

3 **A spring has a spring constant of 50 N/m. It is stretched by 10 cm. What is the elastic potential energy stored?**

- A 0.125 J
- B 0.5 J
- C 1 J
- D 0.25 J

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

5 **Energy transfers can be shown with arrows whose widths show the amount of energy. What is this way of showing transfers called?**

- A a ray diagram
- B a circuit diagram
- C a force diagram
- D a Sankey diagram

Understand It with Pulse | Flag a mistake

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

- A 5 W
- B 500 W
- C 5000 W
- D 50 W

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

9 **A machine uses 800 J of energy and gives out 400 J of useful energy. What is its efficiency?**

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. A
2. C
3. D
4. C
5. D
6. D
7. B
8. D
9. A
10. D

© 2026 Brett Robbins. All Rights Reserved.