ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY FOUNDATION · UNIT 18 · 10 QUESTIONS

Matter - Models and Explanations — 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 swimming pool holds water. Why does a person float in the pool?**

- **A** the water pushes them down
- **B** their density is close to water
- **C** they are made of air
- **D** they are heavier than water and sink

Understand It with Pulse | Flag a mistake

2 **A cup of coffee is hot. How is energy transferred to the air?**

A by evaporation only, from the top

B by conduction and convection

C by radiation only, from the surface

D by condensation on the cold cup

Understand It with Pulse | Flag a mistake

3 **A hot air balloon is filled with hot air. Why does it rise?**

A hot air is heavier than cold air

B hot air is less dense

C hot air has no mass

D hot air is colder

Understand It with Pulse | Flag a mistake

4 **A material has a density of 4 g per cubic centimetre. What is the mass of 10 cubic centimetres of it?**

- A 80 g
- B 20 g
- C 14 g
- D 40 g

Understand It with Pulse | Flag a mistake

5 **A block has a mass of 200 g and a volume of 500 cubic centimetres. What is its density?**

- A 3.4 g/cm³
- B 0.2 g/cm³
- C 0.8 g/cm³
- D 0.4 g/cm³

Understand It with Pulse | Flag a mistake

6 **A spring has a spring constant of 10 N/m. It is stretched by 4 cm. What is the force?**

- A 0.4 N
- B 0.8 N
- C 0.9 N
- D 0.2 N

Understand It with Pulse | Flag a mistake

7 **How much energy is needed to change 3 kg of a substance from solid to liquid, if the specific latent heat is 334000 J per kg?**

- A 501000 J
- B 334003 J
- C 1002000 J
- D 2004000 J

Understand It with Pulse | Flag a mistake

8 **A 5 kg block has a specific heat capacity of 100 J/kg degrees Celsius. Its temperature rises by 5 degrees Celsius. How much energy is needed?**

- A 1250 J
- B 5000 J
- C 3000 J
- D 2500 J

Understand It with Pulse | Flag a mistake

9 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

- A they lose energy and slow down a lot
- B they get smaller
- C they gain energy and move more
- D they stop moving

Understand It with Pulse | Flag a mistake

10 **How much energy is needed to heat 1 kg of a substance with a specific heat capacity of 4200 J per kg per degree Celsius by 10 degrees Celsius?**

A 42000 J

B 21000 J

C 84000 J

D 4200 J

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.