ENGLAND GCSE COMBINED SCIENCE OCR GATEWAY HIGHER · UNIT 13 · 10 QUESTIONS

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

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

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2 **A thermometer is placed in hot water. What happens to the liquid inside the thermometer?**

- A it freezes
- B it contracts
- C it expands
- D it evaporates

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3 **A swimming pool holds water. Why does a person float in the pool?**

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

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4 **How much energy is needed to heat 1 kg of a substance with a specific heat capacity of 2100 J per kg per degree Celsius by 10 degrees Celsius?**

- A 2100 J
- B 21000 J
- C 10500 J
- D 42000 J

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

- A by conduction and convection
- B by evaporation only, from the top
- C by radiation only, from the surface
- D by condensation on the cold cup

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

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

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7 **A 5 kg mass of ice melts. The specific latent heat of fusion of ice is 400 J/kg. How much energy is needed?**

- A 4000 J
- B 1000 J
- C 2100 J
- D 2000 J

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8 **Why does a change of state need energy even though the temperature stays the same?**

- A the particles need to slow down
- B energy is needed to break bonds
- C the temperature is wrong
- D energy is destroyed in the change

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9 **An object has a mass of 100 g and a volume of 25 cubic centimetres. What is its density?**

- A 2 g/cm³
- B 8 g/cm³
- C 125 g/cm³
- D 4 g/cm³

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10 **A hot air balloon rises because the air inside it is less dense than the air outside. What happens to the density of air when it is heated?**

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

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ANSWER KEY

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

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