ENGLAND GCSE PHYSICS EDEXCEL HIGHER · UNIT 14 · 10 QUESTIONS

Particle Model — 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 to let Brett know so he can fix it.

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

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2 **A swimming pool is filled with water. What is the density of water?**

- A about 1 kilogram per cubic metre
- B about 10 kilograms per cubic metre
- C about 100 kilograms per cubic metre, roughly
- D about 1000 kilograms per cubic metre

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3 **A material has a density of 2 g per cubic centimetre. What is the mass of 25 cubic centimetres of it?**

- A 100 g
- B 50 g
- C 27 g
- D 25 g

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

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

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5 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

- A above normal
- B below normal
- C impossible to tell
- D exactly normal

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6 **In the specific heat capacity practical, why is the heater left on for the same time for each block?**

- A so each block melts
- B the energy supplied is the same
- C so the thermometer reads zero
- D so the heater does not cool down

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7 **How much energy is needed to heat 4 kg of a substance with a specific heat capacity of 900 J per kg per degree Celsius by 20 degrees Celsius?**

- A 144000 J
- B 72000 J
- C 36000 J
- D 3600 J

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8 **A gas in a sealed container is heated. What happens to the pressure?**

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

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9 **A 2 kg mass of ice melts. The specific latent heat of fusion of ice is 100 J/kg. How much energy is needed?**

- A 200 J
- B 300 J
- C 100 J
- D 400 J

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10 **An object has a mass of 200 g and a volume of 50 cubic centimetres. What is its density?**

- A 4 g/cm³
- B 2 g/cm³
- C 8 g/cm³
- D 250 g/cm³

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ANSWER KEY

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

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