ENGLAND GCSE PHYSICS AQA HIGHER · UNIT 3 · 10 QUESTIONS

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

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

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

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2 **A swimming pool holds water with a density of 1000 kg per cubic metre. What is the mass of 2 cubic metres of the water?**

- A 2000 kg
- B 1000 kg
- C 500 kg
- D 4000 kg

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3 **An object has a mass of 100 g and a volume of 20 cubic centimetres. What is its density?**

- A 2.5 g/cm³
- B 5 g/cm³
- C 120 g/cm³
- D 10 g/cm³

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

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5 **A 2 kg mass of ice melts. The specific latent heat of fusion of ice is 200 J/kg. How much energy is needed?**

- A 400 J
- B 800 J
- C 200 J
- D 500 J

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6 **In the specific heat capacity practical, why is insulation put around the block?**

- A to keep the heater cool
- B to stop the block melting
- C to make the block heavier
- D to cut heat loss

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7 **A block has a mass of 400 g and a volume of 500 cubic centimetres. What is its density?**

- A 1.6 g/cm³
- B 0.4 g/cm³
- C 0.8 g/cm³
- D 3.8 g/cm³

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8 **What happens to the particles when a solid melts?**

- A they disappear
- B they stop moving altogether
- C they move more freely
- D they get smaller

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9 **An object has a mass of 20 g and a volume of 25 cubic centimetres. What is its density?**

A 45 g/cm³

B 1.6 g/cm³

C 0.8 g/cm³

D 0.4 g/cm³

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10 **How much energy is needed to heat 5 kg of a substance with a specific heat capacity of 900 J per kg per degree Celsius by 10 degrees Celsius?**

A 22500 J

B 4500 J

C 45000 J

D 90000 J

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ANSWER KEY

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

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