ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 28 · 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 so it can be fixed.

1 **Glass marbles are used to model atoms. What is a limitation of the model?**

- A marbles cannot be counted accurately at all
- B marbles are much bigger than atoms
- C marbles are the wrong colour for atoms
- D marbles are too small to see properly

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

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

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3 **Which change of state releases energy to the surroundings?**

A boiling, which takes energy in

B subliming, which takes energy in

C condensing

D melting, which takes energy in

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

A by condensation on the cold cup

B by conduction and convection

C by radiation only, from the surface

D by evaporation only, from the top

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5 **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 5 degrees Celsius?**

- A 2100 J
- B 10500 J
- C 21000 J
- D 5250 J

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6 **A 2 kg mass of ice melts. The specific latent heat of fusion of ice is 400 J/kg. How much energy is needed?**

- A 400 J
- B 800 J
- C 1600 J
- D 900 J

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

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

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8 **A hot air balloon cools down. What happens?**

- A it rises faster
- B it bursts
- C it stays still
- D it sinks

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

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

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10 **How much energy is needed to change 5 kg of a substance from liquid to gas, if the specific latent heat is 2260000 J per kg?**

- A 5650000 J
- B 11300000 J
- C 2260005 J
- D 22600000 J

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ANSWER KEY

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

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