ENGLAND GCSE COMBINED SCIENCE AQA TRILOGY FOUNDATION · UNIT 20 · 25 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 so it can be fixed.

1 **Glass marbles are shaken in a tray. What does this model?**

- A particles disappearing completely
- B particles freezing into place
- C particles bonding together
- D particles gaining energy

Understand It with Pulse | Flag a mistake

2 **A swimming pool is heated. What happens to the water particles?**

- A they stop moving
- B they move faster
- C they get smaller
- D they disappear

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3 **An ice cream cone is put in a freezer. What happens to the liquid?**

A it freezes

B it evaporates

C it boils

D it condenses

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4 **A cup of coffee is left for an hour. What happens to its temperature?**

A it rises above room temperature

B it falls to room temperature

C it stays the same all day

D it falls to zero degrees

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5 **A thermometer measures temperature in degrees Celsius. What is the freezing point of water on this scale?**

- A 0
- B 100
- C 32
- D 10

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

- A hot air is colder
- B hot air is heavier than cold air
- C hot air is less dense
- D hot air has no mass

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7 **How much energy is needed to heat 4 kg of a substance with a specific heat capacity of 4200 J per kg per degree Celsius by 20 degrees Celsius?**

- A 672000 J
- B 168000 J
- C 336000 J
- D 16800 J

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8 **In which state can particles flow but stay close together?**

- A liquid
- B plasma
- C solid
- D gas

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9 **How much energy is needed to change 2 kg of a substance from liquid to gas, if the specific latent heat is 2260000 J per kg?**

- A 9040000 J
- B 2260002 J
- C 2260000 J
- D 4520000 J

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10 **A material has a density of 5 g per cubic centimetre. What is the mass of 25 cubic centimetres of it?**

- A 30 g
- B 250 g
- C 125 g
- D 62.5 g

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

- A 10 g/cm³
- B 210 g/cm³
- C 20 g/cm³
- D 40 g/cm³

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12 **How much energy is needed to heat 1 kg of a substance with a specific heat capacity of 900 J per kg per degree Celsius by 5 degrees Celsius?**

- A 4500 J
- B 900 J
- C 9000 J
- D 2250 J

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13 **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 334003 J
- B 2004000 J
- C 501000 J
- D 1002000 J

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14 **A material has a density of 4 g per cubic centimetre. What is the mass of 20 cubic centimetres of it?**

- A 24 g
- B 40 g
- C 160 g
- D 80 g

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15 **An object has a mass of 200 g and a volume of 20 cubic centimetres. What is its density?**

- A 20 g/cm³
- B 220 g/cm³
- C 5 g/cm³
- D 10 g/cm³

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16 **What happens to gas pressure when the temperature rises at fixed volume?**

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

Understand It with Pulse | Flag a mistake

17 **What happens to internal energy when a substance is heated?**

A it becomes zero

B it decreases

C it increases

D it stays the same

Understand It with Pulse | Flag a mistake

18 **How much energy is needed to change 2 kg of a substance from solid to liquid, if the specific latent heat is 334000 J per kg?**

A 668000 J

B 334002 J

C 334000 J

D 1336000 J

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19 **A material has a density of 8 g per cubic centimetre. What is the mass of 10 cubic centimetres of it?**

- A 80 g
- B 40 g
- C 160 g
- D 18 g

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20 **An object has a mass of 100 g and a volume of 10 cubic centimetres. What is its density?**

- A 5 g/cm³
- B 20 g/cm³
- C 110 g/cm³
- D 10 g/cm³

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21 **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 20 degrees Celsius?**

- A 90000 J
- B 4500 J
- C 180000 J
- D 45000 J

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22 **How much energy is needed to change 1 kg of a substance from solid to liquid, if the specific latent heat is 334000 J per kg?**

- A 334000 J
- B 334001 J
- C 668000 J
- D 167000 J

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23 **A material has a density of 8 g per cubic centimetre. What is the mass of 20 cubic centimetres of it?**

- **A** 80 g
- **B** 160 g
- **C** 28 g
- **D** 320 g

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

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

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25 **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 5 degrees Celsius?**

A 11250 J

B 22500 J

C 45000 J

D 4500 J

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ANSWER KEY

1. D
2. B
3. A
4. B
5. A
6. C
7. C
8. A
9. D
10. C
11. C
12. A
13. D
14. D
15. D
16. C
17. C
18. A
19. A
20. D
21. A
22. A
23. B
24. C
25. B

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