ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 28 · 25 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 **An ice cream cone melts. What is the melting point of the ice cream?**

- A around 0 degrees Celsius
- B around minus 20 degrees Celsius
- C around 37 degrees Celsius
- D around 100 degrees Celsius

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2 **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 falls to zero degrees
- D it stays the same all day

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3 **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 4000 kg
- B 500 kg
- C 2000 kg
- D 1000 kg

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

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

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

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

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

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

- **A** 40 g/cm³
- **B** 1 g/cm³
- **C** 2 g/cm³
- **D** 0.5 g/cm³

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8 **A block has a mass of 400 g and a volume of 200 cubic centimetres. What is its density?**

- **A** 5 g/cm³
- **B** 1 g/cm³
- **C** 4 g/cm³
- **D** 2 g/cm³

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9 **How much energy is needed to change 5 kg of a substance from solid to liquid, if the specific latent heat is 334000 J per kg?**

- A 835000 J
- B 3340000 J
- C 1670000 J
- D 334005 J

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10 **Why are the results of the specific heat capacity practical not exact?**

- A energy escapes to the room
- B the heater makes extra energy
- C the thermometer adds energy
- D the block gains mass as it heats

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11 **Why does a gas exert pressure on the walls of its container?**

A gravity pulls the gas down

B particles stick to the walls

C the walls push the gas

D particles hit the walls

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12 **A 10 kg mass of ice melts. The specific latent heat of fusion of ice is 400 J/kg. How much energy is needed?**

A 4100 J

B 4000 J

C 8000 J

D 2000 J

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

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

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

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

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15 **How much energy is needed to heat 2 kg of a substance with a specific heat capacity of 2100 J per kg per degree Celsius by 5 degrees Celsius?**

- A 42000 J
- B 4200 J
- C 10500 J
- D 21000 J

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

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

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17 **An object has a mass of 40 g and a volume of 20 cubic centimetres. What is its density?**

- A 2 g/cm³
- B 4 g/cm³
- C 60 g/cm³
- D 1 g/cm³

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18 **A block has a mass of 1000 g and a volume of 250 cubic centimetres. What is its density?**

- A 2 g/cm³
- B 7 g/cm³
- C 4 g/cm³
- D 8 g/cm³

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19 **In the density practical, how is the volume of an irregular object found?**

A by weighing it twice

B by the rise in water level

C by measuring its length only

D by heating it and timing it

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20 **What happens to the pressure of a gas if its temperature falls and its volume stays the same?**

A it stays the same

B it rises

C it doubles

D it falls

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21 **A material has a density of 8 g per cubic centimetre. What is the mass of 25 cubic centimetres of it?**

- A 33 g
- B 400 g
- C 200 g
- D 100 g

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22 **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 42000 J
- C 10500 J
- D 21000 J

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23 **A substance is heated but its temperature does not change. What is the energy doing?**

- **A** escaping as light
- **B** breaking bonds
- **C** making the particles stop
- **D** heating the container only

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

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25

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

A 3.8 g/cm³

B 1.6 g/cm³

C 0.4 g/cm³

D 0.8 g/cm³

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ANSWER KEY

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

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