ENGLAND GCSE PHYSICS EDEXCEL FOUNDATION · UNIT 14 · 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 to let Brett know so he can fix it.

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

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

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2 **An ice cream cone melts. What is the melting point of the ice cream?**

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

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

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

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

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

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

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

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6 **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 too small to see properly
- C marbles are the wrong colour for atoms
- D marbles are much bigger than atoms

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7 **How much energy is needed to heat 1 kg of a substance with a specific heat capacity of 4200 J per kg per degree Celsius by 20 degrees Celsius?**

- A 4200 J
- B 42000 J
- C 168000 J
- D 84000 J

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

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

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

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

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10 **A block has a mass of 500 g and a volume of 200 cubic centimetres. What is its density?**

- **A** 2.5 g/cm³
- **B** 5 g/cm³
- **C** 1.25 g/cm³
- **D** 5.5 g/cm³

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11 **How much energy is needed to change 3 kg of a substance from liquid to gas, if the specific latent heat is 2260000 J per kg?**

- A 6780000 J
- B 3390000 J
- C 13560000 J
- D 2260003 J

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12 **In the specific heat capacity practical, what is measured with a joulemeter?**

- A the time taken to melt
- B the temperature of the room
- C the energy supplied
- D the mass of the block

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

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

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14 **A 5 kg mass of ice melts. The specific latent heat of fusion of ice is 100 J/kg. How much energy is needed?**

- A 1000 J
- B 600 J
- C 500 J
- D 250 J

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

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

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16 **How much energy is needed to heat 2 kg of a substance with a specific heat capacity of 900 J per kg per degree Celsius by 20 degrees Celsius?**

- **A** 1800 J
- **B** 18000 J
- **C** 36000 J
- **D** 72000 J

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

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

Understand It with Pulse | Flag a mistake

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

- A 1 g/cm³
- B 4 g/cm³
- C 30 g/cm³
- D 2 g/cm³

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19 **A block has a mass of 400 g and a volume of 100 cubic centimetres. What is its density?**

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

Understand It with Pulse | Flag a mistake

20 **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 2260005 J
- B 5650000 J
- C 22600000 J
- D 11300000 J

Understand It with Pulse | Flag a mistake

21 **What happens to gas pressure when the volume falls at fixed temperature?**

A it increases

B it stays the same

C it decreases

D it becomes zero

Understand It with Pulse | Flag a mistake

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

A 25 g

B 50 g

C 100 g

D 27 g

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23 **A 4 kg mass of ice melts. The specific latent heat of fusion of ice is 400 J/kg. How much energy is needed?**

- A 1700 J
- B 3200 J
- C 1600 J
- D 800 J

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24 **A gas is compressed into half its volume at constant temperature. What happens to the pressure?**

- A it falls to zero
- B it halves
- C it stays the same
- D it doubles

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25 **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 20 degrees Celsius?**

A 900 J

B 36000 J

C 18000 J

D 9000 J

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ANSWER KEY

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

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