ENGLAND GCSE CHEMISTRY EDEXCEL HIGHER · UNIT 2 · 25 QUESTIONS

States of Matter and Mixtures — 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 **A swimming pool is filled with water. What is the density of water?**

- **A** about 1000 kilograms per cubic metre
- **B** about 10 kilograms per cubic metre
- **C** about 100 kilograms per cubic metre, roughly
- **D** about 1 kilogram per cubic metre

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2 **Lemons taste sour. What does sour taste show?**

A an alkali is present

B a metal is present

C an acid is present

D a salt is present

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3 **Glass marbles in a tray are used as a model for particles in a solid. What do the marbles show?**

A particles move freely through space

B particles flow past each other easily

C particles are far apart from each other

D particles vibrate in fixed positions

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4 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

- A they get smaller
- B they gain energy and move more
- C they lose energy and slow down a lot
- D they stop moving

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

- A it falls to zero degrees
- B it rises above room temperature
- C it stays the same all day
- D it falls to room temperature

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6 **Paintbrushes are used with paint. What is paint an example of?**

A a compound

B a formulation

C an element

D a pure substance

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7 **What does an Rf value of 0 mean?**

A the spot moved with the solvent

B the spot dissolved completely

C the solvent did not move at all

D the spot did not move

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8 **In a chromatogram, a spot moves 4 cm and the solvent moves 10 cm. What is the Rf value?**

- A 0.55
- B 0.4
- C 0.8
- D 0.5

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

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10 **How do you test for hydrogen gas?**

A it turns limewater cloudy

B it burns with a squeaky pop

C it turns damp litmus red

D it relights a glowing splint

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11 **What is the test for hydrogen?**

A bromine water turns colourless

B a glowing splint relights

C limewater turns cloudy

D a lighted splint pops

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12 **How many atoms of oxygen are there in one molecule of carbon dioxide?**

A 4

B 1

C 2

D 3

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13 **In which state do particles vibrate in fixed positions?**

A gas

B solid

C liquid

D plasma

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14 **A sample containing potassium is put in a flame. What colour is the flame?**

- A crimson red
- B bright yellow
- C orange-red flame
- D lilac

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15 **What is chromatography used for in the food industry?**

- A making food taste better
- B checking dyes in food
- C heating food more quickly
- D keeping food cold longer

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16 **In a chromatogram, a spot moves 2 cm and the solvent moves 12 cm. What is the Rf value?**

- A 0.17
- B 0.33
- C 0.32
- D 0.27

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17 **What is the test for chlorine?**

- A damp litmus paper is bleached
- B limewater turns cloudy in the gas
- C a lighted splint pops with a squeak
- D a glowing splint relights brightly

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18 **How many atoms of hydrogen are there in one molecule of methane?**

A 4

B 3

C 6

D 5

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19 **In which state are the particles closest together?**

A solid

B plasma

C liquid

D gas

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

A gas

B liquid

C solid

D plasma

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21 **A sample containing lithium is put in a flame. What colour is the flame?**

A pale lilac

B bright yellow

C crimson

D orange-red flame

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22 **What does it mean if a chromatogram shows several spots?**

A the solvent is impure

B the paper is too short

C the sample is a pure substance

D the sample is a mixture

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23 **Which gas is given off when an acid reacts with a carbonate?**

A chlorine gas from the salt

B hydrogen gas from the acid

C oxygen gas from the air

D carbon dioxide

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24 How many atoms of hydrogen are there in one molecule of water?

- A 2
- B 4
- C 1
- D 3

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25 In a chromatogram, a spot moves 3 cm and the solvent moves 8 cm. What is the Rf value?

- A 0.53
- B 0.47
- C 0.38
- D 0.75

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ANSWER KEY

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

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