ENGLAND GCSE CHEMISTRY OCR GATEWAY FOUNDATION · UNIT 2 · 25 QUESTIONS

Elements, Compounds 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 **An ice cream cone melts. What is the melting point of the ice cream?**

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

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2 **Paintbrushes apply paint to a wall. What is the paint made of?**

- A a single element, nothing else
- B a mixture of substances
- C pure water with nothing in it
- D a single compound, nothing else

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

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

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

- A an acid is present
- B a salt is present
- C a metal is present
- D an alkali is present

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

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

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

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

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7 **What type of bonding is in diamond?**

- A intermolecular forces
- B ionic
- C covalent
- D metallic

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8 **Why is graphene strong?**

A its atoms are joined in a strong layer

B it has weak forces between its atoms

C it is made of metal ions in a lattice

D its layers slide over each other easily

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9 **Why do simple covalent molecules have low melting points?**

A weak forces between molecules

B molecules are small

C no forces at all

D strong bonds between molecules

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

- **A** the spot did not move
- **B** the spot moved with the solvent
- **C** the solvent did not move at all
- **D** the spot dissolved completely

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11 **What holds the molecules together in a simple molecular substance?**

- **A** strong covalent bonds between molecules
- **B** a sea of delocalised electrons
- **C** strong ionic bonds between molecules
- **D** weak intermolecular forces

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12 **What does adding carbon to iron do?**

- **A** it makes it melt more easily
- **B** it makes it conduct less heat
- **C** it makes it softer and weaker
- **D** it makes it harder

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13 **What is the formula of sodium chloride?**

- **A** Na_2Cl_2
- **B** NaCl
- **C** Na_2Cl
- **D** $NaCl_2$

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

A 3

B 4

C 2

D 1

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15 **What is seen when sodium hydroxide is added to iron(II) sulfate solution?**

A a blue precipitate forms at once

B a white precipitate forms at once

C a green precipitate

D a brown precipitate forms at once

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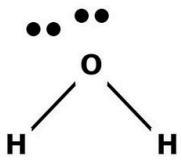
16 **The diagram shows a water molecule. How many lone pairs of electrons does the oxygen atom have?**



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

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

- **A** bromine water turns colourless
- **B** a glowing splint relights
- **C** a lighted splint pops
- **D** limewater turns cloudy

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18 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

A S

B Si

C Ag

D Sv

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19 **Which change of state is endothermic?**

A melting

B condensing

C solidifying

D freezing

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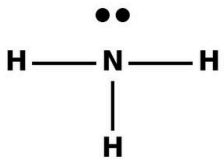
20 **The diagram shows an ammonia molecule. How many covalent bonds does the nitrogen atom form?**



A 2

B 3

C 1

D 4

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21 **In a chromatogram, a spot moves 2 cm and the solvent moves 10 cm. What is the Rf value?**

- A 0.2
- B 0.35
- C 0.3
- D 0.4

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22 **What type of bonding is in sodium chloride?**

- A ionic
- B intermolecular forces
- C metallic
- D covalent

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23 **Why is graphite soft and slippery?**

- A it has strong bonds between its layers
- B its atoms are joined to four other atoms
- C its layers slide over each other
- D it has no covalent bonds at all

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24 **What is a covalent bond?**

- A an attraction between ions
- B a sea of electrons
- C an attraction between molecules
- D a shared pair of electrons

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25 **How many spots does a pure substance give on a chromatogram?**

A one spot

B two spots side by side

C three spots in a row

D no spots at all

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ANSWER KEY

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

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