ENGLAND GCSE CHEMISTRY AQA FOUNDATION · UNIT 2 · 25 QUESTIONS

Bonding, Structure, and the Properties 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 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

A they gain energy and move more

B they lose energy and slow down a lot

C they stop moving

D they get smaller

Understand It with Pulse | Flag a mistake

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

A it sinks

B it rises faster

C it bursts

D it stays still

Understand It with Pulse | Flag a mistake

3 **Silver coins conduct electricity well. Why?**

A they are shiny and reflective

B they are cold

C they are heavy

D they have free electrons

Understand It with Pulse | Flag a mistake

4 **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 are far apart from each other
- C particles flow past each other easily
- D particles vibrate in fixed positions

Understand It with Pulse | Flag a mistake

5 **Paintbrushes are cleaned in water. Why does the paint wash off?**

- A the paint burns in the water
- B the paint melts in the water
- C the paint freezes in the water
- D the paint dissolves

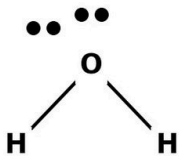
Understand It with Pulse | Flag a mistake

6 **A chocolate cake rises in the oven. What makes it rise?**

- A the flour melts
- B the sugar freezes
- C a gas is made
- D the egg evaporates

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



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

Understand It with Pulse | Flag a mistake

8 **What type of bonding is in graphite?**

A covalent

B ionic

C intermolecular forces

D metallic

Understand It with Pulse | Flag a mistake

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

A liquid

B gas

C solid

D plasma

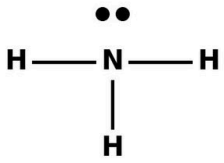
Understand It with Pulse | Flag a mistake

10 **Why is diamond a good material for cutting tools?**

- **A** it conducts electricity very well
- **B** it is very hard
- **C** it is soft and easy to shape
- **D** it melts at a low temperature

Understand It with Pulse | Flag a mistake

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



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

Understand It with Pulse | Flag a mistake

12 **An atom of sodium loses 1 electron. What is the charge on the ion formed?**

A 0

B +1

C +2

D -1

Understand It with Pulse | Flag a mistake

13 **What is steel?**

A iron with a lot of copper added

B pure iron with nothing added

C iron with a little carbon

D iron mixed with aluminium only

Understand It with Pulse | Flag a mistake

14 **What is the formula of water?**

- A H_2O_3
- B H_2O_2
- C HO
- D H_2O

Understand It with Pulse | Flag a mistake

15 **An atom has 17 protons. How many electrons does the neutral atom have?**

- A 16
- B 17
- C 19
- D 18

Understand It with Pulse | Flag a mistake

16 **An element is in period 4 of the periodic table. How many electron shells do its atoms have?**

A 3

B 6

C 5

D 4

Understand It with Pulse | Flag a mistake

17 **Why are nanoparticles useful as catalysts?**

A their surface area is large

B they are heavy and sink to the bottom

C they are magnetic and easy to collect

D they dissolve easily in water

Understand It with Pulse | Flag a mistake

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

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

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

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

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20 **In which state do particles move most freely?**

A solid

B plasma

C liquid

D gas

Understand It with Pulse | Flag a mistake

21 **Why does diamond not conduct electricity?**

A it has no covalent bonds at all

B it is made of ions not atoms

C it has no free electrons

D its atoms are too far apart

Understand It with Pulse | Flag a mistake

22 **An atom of magnesium loses 2 electrons. What is the charge on the ion formed?**

A +2

B -2

C +1

D 0

Understand It with Pulse | Flag a mistake

23 **How many covalent bonds does an oxygen atom form in a water molecule?**

A 3

B 1

C 4

D 2

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24 An atom has 8 protons. How many electrons does the neutral atom have?

- A 7
- B 9
- C 8
- D 10

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25 An element is in period 3 of the periodic table. How many electron shells do its atoms have?

- A 2
- B 5
- C 3
- D 4

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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