ENGLAND GCSE COMBINED SCIENCE AQA TRILOGY FOUNDATION · UNIT 9 · 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 **A chocolate cake is made from flour, sugar and eggs. Which ingredient provides protein?**

A flour

B eggs

C sugar

D water

Understand It with Pulse | Flag a mistake

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

- A Si
- B Ag
- C Sv
- D S

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

A it stays still

B it rises faster

C it sinks

D it bursts

Understand It with Pulse | Flag a mistake

5 **Glass marbles are used to model atoms. What is a limitation of the model?**

A marbles are much bigger than atoms

B marbles are the wrong colour for atoms

C marbles cannot be counted accurately at all

D marbles are too small to see properly

Understand It with Pulse | Flag a mistake

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

A the paint dissolves

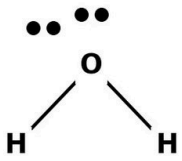
B the paint melts in the water

C the paint freezes in the water

D the paint burns in the water

Understand It with Pulse | Flag a mistake

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



A 4

B 2

C 1

D 3

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8 **An atom has 11 protons. How many electrons does the neutral atom have?**

A 10

B 12

C 11

D 13

Understand It with Pulse | Flag a mistake

9 **Which of these is a simple covalent molecule?**

A CO_2

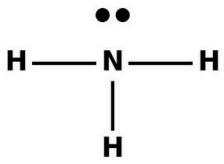
B MgO

C $CaCl_2$

D NaCl

Understand It with Pulse | Flag a mistake

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



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

Understand It with Pulse | Flag a mistake

11 **What type of bonding is in water?**

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

Understand It with Pulse | Flag a mistake

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

A -1

B +1

C 0

D -2

Understand It with Pulse | Flag a mistake

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

A 5

B 3

C 6

D 4

Understand It with Pulse | Flag a mistake

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

A plasma

B solid

C liquid

D gas

Understand It with Pulse | Flag a mistake

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

A 1

B 3

C 2

D 4

Understand It with Pulse | Flag a mistake

16 **What type of bonding is in copper?**

A metallic

B ionic

C intermolecular forces

D covalent

Understand It with Pulse | Flag a mistake

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

A 3

B 4

C 2

D 5

Understand It with Pulse | Flag a mistake

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

A condensing

B solidifying

C freezing

D melting

Understand It with Pulse | Flag a mistake

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

A 8

B 7

C 9

D 10

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

22 **An atom of calcium 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 **What is the charge on a sodium ion?**

- A Na^{2+}
- B Na^{-}
- C Na
- D Na^{+}

Understand It with Pulse | Flag a mistake

24 **What is the formula of methane?**

- A C_2H_4
- B CH_4
- C CH_2
- D CH_3

Understand It with Pulse | Flag a mistake

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

- A -1
- B +2
- C 0
- D +1

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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