ENGLAND GCSE CHEMISTRY AQA FOUNDATION · UNIT 1 · 25 QUESTIONS

Atomic Structure and the Periodic Table — 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 is put in a freezer. What happens to the liquid?**

- **A** it boils
- **B** it evaporates
- **C** it condenses
- **D** it freezes

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2 **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 vibrate in fixed positions
- D particles flow past each other easily

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

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

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4 **Hardcover books are dropped. What happens to their speed as they fall?**

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

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5 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

- A above normal
- B impossible to tell
- C exactly normal
- D below normal

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6 **A hot air balloon is filled with hot air. Why does it rise?**

- A hot air is heavier than cold air
- B hot air is colder
- C hot air has no mass
- D hot air is less dense

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7 **What did Dalton think an atom was?**

- A a cloud of electrons with no centre
- B a tiny solid ball
- C a small nucleus with shells around it
- D a ball of positive charge with electrons in it

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8 **Which electronic structure is a noble gas?**

- A 2,8,1
- B 2,8,8
- C 2,6
- D 2,8,7

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9 **An element, magnesium, has isotopes. 79 percent have a mass of 24 and 10 percent have a mass of 25 and 11 percent have a mass of 26. What is the relative atomic mass of magnesium?**

- A 24.3
- B 24.8
- C 25.3
- D 23.3

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10 **What does the atomic number tell you?**

- A the number of neutrons
- B the number of protons
- C the mass of the atom
- D the number of electrons and neutrons

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11 **An atom has 11 protons and 6 neutrons. What is its mass number?**

- A 6
- B 19
- C 17
- D 11

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12 **How many electrons can the second shell hold?**

- A 8
- B 2
- C 18
- D 4

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13 **What did Mendeleev predict about the gaps in his table?**

- A the gaps would stay empty for ever
- B elements would be found to fill them
- C new groups would appear in the gaps one day
- D the table would need to be remade

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14 **How does reactivity change down Group 1?**

A it stays the same

B it increases

C it stops

D it decreases

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15 **Do isotopes of the same element have the same mass number?**

A no, their proton numbers differ

B yes, their mass numbers are the same

C no, their mass numbers differ

D yes, they are identical in every way

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16 **Which particle has no charge?**

A the proton

B the neutron

C the nucleus

D the electron

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17 **How many electrons are in the outer shell of a Group 1 element?**

A 2

B 1

C 8

D 7

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18 **An element, boron, has isotopes. 20 percent have a mass of 10 and 80 percent have a mass of 11. What is the relative atomic mass of boron?**

A 9.8

B 10.8

C 11.8

D 11.3

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19 **An atom has atomic number 8 and mass number 16. How many electrons does it have?**

A 8

B 16

C 6

D 24

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20 **An atom has 6 protons and 8 neutrons. What is its mass number?**

- A 8
- B 16
- C 6
- D 14

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21 **How many electrons can the first shell hold?**

- A 8
- B 4
- C 1
- D 2

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22 **Which transition metal is used in construction?**

A iron

B sodium

C lithium

D calcium

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23 **How did Mendeleev arrange the elements?**

A by the date each was found

B by atomic number in order

C by atomic mass

D by colour and appearance

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24 **What is the relative atomic mass of an element?**

A the total mass of all its isotopes

B the number of protons in its atoms

C the mass of its heaviest isotope

D the average mass of its atoms

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25 **In Rutherford's gold foil experiment, what happened to most alpha particles?**

A they bounced straight back off the foil

B they were absorbed by the gold foil

C they turned into electrons in the foil

D they passed straight through

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ANSWER KEY

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

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