ENGLAND GCSE CHEMISTRY OCR GATEWAY FOUNDATION · UNIT 1 · 25 QUESTIONS

Particles — 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 hot air balloon is filled with hot air. Why does it rise?**

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

Understand It with Pulse | Flag a mistake

2 **Hardcover books have mass. What is mass measured in?**

- A joules
- B watts
- C kilograms
- D newtons, the unit of force

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3 **A swimming pool holds water. Why does a person float in the pool?**

- A they are made of air
- B the water pushes them down
- C their density is close to water
- D they are heavier than water and sink

Understand It with Pulse | Flag a mistake

4 **Silver coins are made of a metal. Which property do metals have?**

- A they conduct electricity
- B they are brittle
- C they do not conduct electricity at all
- D they dissolve in water

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

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7 **An element is in period 2 of the periodic table. How many electron shells do its atoms have?**

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

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8 **What is the mass number of an isotope with 6 protons and 8 neutrons?**

- A 6
- B 20
- C 14
- D 8

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9 **What is the electronic structure of sodium (atomic number 11)?**

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

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10 **An atom has 6 protons. How many electrons does the neutral atom have?**

- A 6
- B 8
- C 5
- D 7

Understand It with Pulse | Flag a mistake

11 **An element, chlorine, has isotopes. 75 percent have a mass of 35 and 25 percent have a mass of 37. What is the relative atomic mass of chlorine?**

- A 36.5
- B 34.5
- C 36
- D 35.5

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

13 **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

14 **Which of these is a typical property of a metal?**

A it does not conduct heat

B it is brittle

C it is dull

D it conducts electricity

Understand It with Pulse | Flag a mistake

15 What is the electronic structure of magnesium (atomic number 12)?

- A 2,8,1
- B 2,8,8
- C 2,7,3
- D 2,8,2

Understand It with Pulse | Flag a mistake

16 An atom has 17 protons and 6 neutrons. What is its mass number?

- A 23
- B 17
- C 25
- D 6

Understand It with Pulse | Flag a mistake

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

A 6

B 24

C 16

D 8

Understand It with Pulse | Flag a mistake

18 **Who discovered the neutron?**

A Thomson, who found the electron

B Dalton, who first described atoms

C Chadwick

D Bohr, who described shells

Understand It with Pulse | Flag a mistake

19 **What is a period in the periodic table?**

A a row

B a group

C a block

D a column

Understand It with Pulse | Flag a mistake

20 **Why do isotopes of the same element have the same chemical properties?**

A they have the same mass number

B they have the same number of electrons

C they have the same number of neutrons in the nucleus

D they have the same density always

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21 What is the electronic structure of oxygen (atomic number 8)?

- A 2,6
- B 2,7
- C 2,8
- D 2,4

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

23 **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 23.3
- C 25.3
- D 24.8

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24 **Why did other scientists not accept Newlands' Law of Octaves?**

- A it only worked for the first elements
- B he had left too many gaps in it
- C it worked for every element known
- D he had arranged them by atomic number

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25 **An atom of oxygen gains 2 electrons. What is the charge on the ion formed?**

A 0

B -2

C +2

D -1

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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