OHIO CHEMISTRY · UNIT 1

Matter and Atomic Structure — Practice Test

Ohio Chemistry • 25 questions

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 to let Brett know so he can fix it.

1 **Which particle has a negative charge**

A Proton

B Neutron

C Electron

D Nucleus

Understand It with Pulse | Flag a mistake

2 **An atom has 11 protons and 12 neutrons. The element is**

A sodium

B magnesium

C neon

D aluminum

Understand It with Pulse | Flag a mistake

3 **Chlorine has atomic number 17 and mass number 37. The number of neutrons in this atom is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Isotopes of an element have the same number of**

- A neutrons but different numbers of protons
- B protons but different numbers of neutrons
- C electrons but different numbers of protons
- D protons and neutrons in every case

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5 **A neutral atom has 8 protons. The number of electrons it has is**

- A 6
- B 8
- C 10
- D 16

Understand It with Pulse | Flag a mistake

6 **Magnesium has atomic number 12. The number of electrons in Mg^{2+} is _____**

ANSWER

Understand It with Pulse | Flag a mistake

7 **The mass number of an atom is the sum of its**

A protons and electrons

B neutrons only

C protons and neutrons

D electrons and neutrons

Understand It with Pulse | Flag a mistake

8 **The element in group 2 and period 4 is**

A potassium

B calcium

C strontium

D argon

Understand It with Pulse | Flag a mistake

9 **Sulfur is in group 16. The number of valence electrons it has is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **Going down a group in the periodic table, atomic radius generally**

- A decreases because nuclear charge increases
- B stays the same in every group
- C decreases because electrons are lost
- D increases because a new energy level is added

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11 **Going across a period from left to right, ionization energy generally**

- A increases
- B decreases
- C stays the same
- D falls to zero

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12 **A cation forms when a neutral atom**

A loses electrons

B gains electrons

C gains protons

D loses neutrons

Understand It with Pulse | Flag a mistake

13 **An atom has 26 protons and 30 neutrons. Its mass number is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **In the Bohr model of the atom, electrons are described as**

- A orbiting inside the nucleus
- B occupying energy levels around the nucleus
- C mixed with protons in shells
- D fixed in the nucleus

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15 **Which of these is an element**

- A salt water
- B air
- C iron
- D brass

Understand It with Pulse | Flag a mistake

16 **The number of protons in a carbon-14 atom is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **Which of these is a heterogeneous mixture**

A salt dissolved in water

B sand and water

C air

D sugar dissolved in water

Understand It with Pulse | Flag a mistake

18 **Which of these is a physical change**

A burning wood

B rusting iron

C melting ice

D baking a cake

Understand It with Pulse | Flag a mistake

19 **A sample has mass 50 g and volume 25 cm³. Its density, in grams per cm³, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **The electron arrangement of a sodium atom is**

- A 2, 8, 2
- B 2, 8, 1
- C 2, 7, 2
- D 2, 8, 0

Understand It with Pulse | Flag a mistake

21 **Going down a group, electronegativity generally**

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

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22 **Using whole number atomic masses (H = 1, O = 16), the molar mass of water, in grams per mole, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Carbon dioxide is a compound because it**

A contains only one element

B is a mixture of gases

C can be separated by filtering

D contains two elements chemically bonded

Understand It with Pulse | Flag a mistake

24 **Which particles are found in the nucleus of an atom**

- A protons and neutrons
- B electrons and protons
- C electrons only
- D neutrons only

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25 **Using whole number atomic masses (Ca = 40, C = 12, O = 16), the molar mass of calcium carbonate, in grams per mole, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. A
3. 20
4. B
5. B
6. 10
7. C
8. B
9. 6
10. D
11. A
12. A
13. 56
14. B
15. C
16. 6
17. B
18. C
19. 2
20. B
21. D
22. 18
23. D
24. A
25. 100

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