

# Chemistry Fundamentals Quiz

Chemistry · Answer Key · 25 Questions

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**1. In what year did John Dalton publish his atomic theory in 'A New System of Chemical Philosophy'?**

**A) 1808**

B) 1785

C) 1902

D) 1850

**2. How many protons does a neutral Carbon atom have in its nucleus?**

A) 4

**B) 6**

C) 8

D) 12

**3. What is the standard freezing point of water in degrees Celsius at sea level?**

**A) 0**

B) 32

C) 100

D) -1

**4. Who is widely credited with arranging the first version of the Periodic Table in 1869?**

A) Marie Curie

**B) Dmitri Mendeleev**

C) Niels Bohr

D) Isaac Newton

**5. How many valence electrons does a neutral atom of Neon have?**

A) 2

**B) 8**

C) 10

D) 18

**6. What is the atomic number of Hydrogen?**

**A) 1**

B) 2

C) 3

D) 4

7. Which scientist is known for the 1661 publication 'The Sceptical Chymist'?

- A) Robert Boyle
- B) Antoine Lavoisier
- C) John Dalton
- D) Henry Cavendish

8. The prefix 'milli-' represents what power of ten?

- A)  $10^{-1}$
- B)  $10^{-2}$
- C)  $10^{-3}$
- D)  $10^{-6}$

9. How many grams are in one kilogram?

- A) 10
- B) 100
- C) 1000
- D) 10000

10. What is the chemical symbol for Gold?

- A) Ag
- B) Au
- C) Fe
- D) Gd

11. In which year did Antoine Lavoisier publish the first modern chemistry textbook, 'Traité Élémentaire de Chimie'?

- A) 1789
- B) 1800
- C) 1750
- D) 1820

12. How many atoms of oxygen are in one molecule of water (H<sub>2</sub>O)?

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

13. What is the approximate percentage of Nitrogen in Earth's atmosphere?

- A) 21%
- B) 78%
- C) 0.04%
- D) 50%

14. How many states of matter are traditionally taught in basic chemistry?

- A) 2
- B) 3**
- C) 5
- D) 7

15. What is the atomic mass unit (amu) of a single proton approximately equal to?

- A) 1**
- B) 10
- C) 100
- D) 0.5

16. Which element has the atomic number 8?

- A) Nitrogen
- B) Oxygen**
- C) Fluorine
- D) Carbon

17. What century did the transition from Alchemy to modern Chemistry primarily occur?

- A) 15th
- B) 17th**
- C) 19th
- D) 20th

18. How many electrons can the first electron shell of an atom hold?

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

19. At what temperature in Kelvin does water boil at 1 atmosphere of pressure?

- A) 273 K
- B) 373 K**
- C) 100 K
- D) 473 K

20. The 'Law of Conservation of Mass' was proposed by which chemist in the late 18th century?

- A) Antoine Lavoisier**
- B) Dmitri Mendeleev
- C) John Dalton
- D) Ernest Rutherford

21. How many periods are there in the standard modern Periodic Table?

- A) 7
- B) 8
- C) 10
- D) 18

22. What is the chemical symbol for Iron?

- A) I
- B) Ir
- C) Fe
- D) In

23. Which group number on the Periodic Table contains the Noble Gases?

- A) 1
- B) 2
- C) 17
- D) 18

24. How many neutrons are typically in a common Hydrogen-1 isotope nucleus?

- A) 0
- B) 1
- C) 2
- D) 3

25. What is the value of Avogadro's number rounded to the nearest integer for moles?

- A)  $6.022 \times 10^{23}$
- B)  $3.14 \times 10^{23}$
- C)  $9.81 \times 10^{23}$
- D)  $1.60 \times 10^{-19}$