

Chemical Milestones and Constants

Chemistry · Answer Key · 12 Questions

1. In what year did Dmitri Mendeleev publish his first version of the Periodic Table of Elements?

A) 1869

B) 1875

C) 1882

D) 1890

2. How many elements are currently officially recognized on the IUPAC Periodic Table?

A) 108

B) 118

C) 128

D) 138

3. What is the approximate value of Avogadro's constant, representing the number of particles in one mole?

A) 6.022×10^{21}

B) 6.022×10^{22}

C) 6.022×10^{23}

D) 6.022×10^{24}

4. Who is credited with the discovery of the element Oxygen in 1774?

A) Antoine Lavoisier

B) Joseph Priestley

C) John Dalton

D) Robert Boyle

5. What is the atomic number of the element Gold?

A) 47

B) 79

C) 82

D) 92

6. Marie Curie was awarded her first Nobel Prize in Physics in which year?

A) 1901

B) 1903

C) 1905

D) 1911

7. Standard atmospheric pressure at sea level is defined as how many kilopascals (kPa)?

- A) 95.2 kPa
- B) 101.3 kPa**
- C) 105.5 kPa
- D) 110.1 kPa

8. How many valence electrons does a neutral atom of Carbon have in its ground state?

- A) 2
- B) 4**
- C) 6
- D) 8

9. What is the pH value of pure water at a temperature of 25 degrees Celsius?

- A) 5.0
- B) 6.0
- C) 7.0**
- D) 8.0

10. The isotope Carbon-14 is commonly used for radiocarbon dating; how many neutrons does it possess?

- A) 6
- B) 8**
- C) 10
- D) 14

11. Which scientist proposed the 'Plum Pudding' model of the atom in 1904?

- A) J.J. Thomson**
- B) Ernest Rutherford
- C) Niels Bohr
- D) James Chadwick

12. What is the maximum number of electrons that can occupy the second electron shell (n=2) of an atom?

- A) 2
- B) 8**
- C) 18
- D) 32