History of Chemical Discovery

Chemistry History · Answer Key · 10 Questions

1. In 1869, Dmitri Mendeleev presented his Periodic Table to the Russian Chemical Society. Which element did he correctly predict and name 'eka-aluminium' before its actual discovery?

A) Gallium
B) Germanium
C) Scandium
D) Indium

2. Who is credited with the discovery of oxygen in 1774, though he originally termed it 'dephlogisticated air'?

A) Antoine Lavoisier
B) Carl Wilhelm Scheele
C) Joseph Priestley
D) Henry Cavendish

3. The first synthetic organic compound, urea, was synthesized in 1828 by which chemist, effectively challenging the theory of vitalism?

A) Justus von Liebig
B) Friedrich Wöhler
C) August Kekulé
D) Hermann Kolbe

4. Ernest Rutherford's 1911 gold foil experiment led to the discovery of which atomic component?

A) Electron
B) Neutron
C) Proton
D) Atomic Nucleus

5. Which scientist was awarded two Nobel Prizes in different scientific fields (Chemistry in 1911 and Physics in 1903) for her work on radioactivity?

A) Irène Joliot-Curie
B) Marie Curie
C) Lise Meitner
D) Dorothy Hodgkin

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6. In 1803, John Dalton published his atomic theory. Which specific concept did he formalize regarding the behavior of gases?

A) The law of partial pressures
B) The kinetic molecular theory
C) The principle of molar volume
D) The ideal gas law

7. Humphry Davy successfully isolated several elements through electrolysis in the early 19th century. Which of these was NOT among his discoveries?

A) Sodium
B) Potassium
C) Calcium
D) Oxygen

8. Gilbert N. Lewis introduced the concept of electron-pair bonding in 1916. What term did he use to describe these structures?

A) Lewis dots
B) Electron octets
C) Valence shells
D) Coordinate bonds

9. In 1932, James Chadwick proved the existence of the neutron. What particle did he bombard with alpha particles to achieve this?

A) Nitrogen-14
B) Beryllium-9
C) Boron-10
D) Lithium-7

10. The Solvay process, developed in the 1860s for the industrial production of soda ash, relies on the reaction of ammonia with which two primary substances?

A) Sodium chloride and carbon dioxide
B) Calcium carbonate and sulfuric acid
C) Sodium hydroxide and hydrogen gas
D) Sodium nitrate and water

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