

1. Which element is found in potassium chlorate and zinc nitrate?

- A. Hydrogen
- B. Oxygen
- C. Potassium
- D. Zinc

2. Atoms of which element have the weakest attraction for electrons?

- A. Na
- B. P
- C. Si
- D. S

3. Which element is classified as a metalloid?

- A. Sulfur
- B. Silicon
- C. Barium
- D. Bromine

4. Which metal is most likely obtained by the electrolysis of its fused salt?

- A. Au
- B. Ag
- C. Li
- D. Zn

5. Because of its high reactivity, which element is never found free in nature?

- A. O
- B. F
- C. N
- D. Ne

6. Iron corrodes more easily than aluminum and zinc because aluminum and zinc both

- A. Are reduced
- B. Are oxidizing agents
- C. Form oxides that are self-protective
- D. Form oxides that are very reactive

7. Which substance is produced by the Haber process?

- A. Aluminum
- B. Ammonium
- C. Nitric acid
- D. Sulfuric acid

8. What is the total number of moles of hydrogen atoms contained in one mole of  $(\text{NH}_4)_2\text{C}_2\text{O}_4$ ?

A. 6

B. 2

C. 8

D. 8

E. 4

9. The observed regularities in the properties of elements are periodic functions of their

A. Atomic numbers

B. Mass numbers

C. Oxidation states

D. Nonvalence electrons

10. Which physical characteristic of a solution may indicate the presence of a transition element?

A. Its density

B. Its color

C. Its effect on litmus

D. Its effect on phenolphthalein

11. Which element has a crystalline lattice composed of positive ions through which electrons flow freely?

- A. Bromine
- B. Calcium
- C. Carbon
- D. Sulfur

12. Red litmus paper will turn blue when placed in an aqueous solution of

- A. KCl
- B. KOH
- C. CH<sub>3</sub>COOH
- D. CH<sub>3</sub>COOH

13. Equilibrium is attained in a chemical cell when cell voltage is equal to

- A. +1.00 V
- B. +2.00 V
- C. 0.00 V
- D. -1.00 V

Answer Key

- 1. B
- 2. A
- 3. B
- 4. C
- 5. B

6. C

7. B

8. C

9. A

10. B

11. B

12. B

13. C