Name _____

The Electrons that Make the Magic Happen: The Role of Valence Electrons in Chemical Bonding

Multiple Choice Questions

1. What are valence electrons?

a) Electrons in the innermost shell of an atom

b) Electrons in the valence shell of an atom

c) Protons in the nucleus

d) Neutrons in the nucleus

2. Why are valence electrons important in chemical bonding?

a) They determine an atom's mass

b) They make an atom radioactive

c) They are involved in forming chemical bonds

d) They give an atom its name

3. What type of bond involves the sharing of valence electrons?

a) Covalent bond

b) Ionic bond

c) Metallic bond

d) Hydrogen bond

4. How do valence electrons relate to an atom's stability?

a) An atom is stable when it has no valence electrons

b) An atom is stable when its valence shell is full

c) Valence electrons have no impact on an atom's stability

d) An atom is stable when its valence shell is empty

5. What do elements in the same group on the periodic table have in common regarding valence electrons?

a) They have different numbers of valence electrons

b) They have the same number of valence electrons

c) They have no valence electrons

d) They have opposite charges