- 1. All chemical bonds result from
 - A) overlapping of unoccupied orbitals of two or more atoms.
 - B) loss of one or more electrons by atoms which are gained by other atoms.
 - C) simultaneous attraction of one electron by two nuclei.
 - D) overlapping of two electron–filled orbitals with different energy levels.
 - E) the attraction of two ions.
- 2. Atoms within a molecule are primarily held together by which attraction force?
 - A) electrical
- B) magnetic
- C) gravitational
- D) van der Waals
- 3. The sharing of electrons during bond formation always involves
 - A) formation of polar molecules.
 - B) formation of positive and negative ions.
 - C) shared electrons being attracted more by one atom than another.
 - D) lower energy content for the bonded atoms than for the unbonded atoms.
- 4. Which term indicates how strongly an atom attracts the electrons in a chemical bond?
 - A) alkalinity
- B) atomic mass
- C) electronegativity
- D) activation energy

- 5. Electronegativity is a measure of an atom's ability to
 - A) attract the electrons in the bond between the atom and another atom
 - B) repel the electrons in the bond between the atom and another atom
 - C) attract the protons of another atom
 - D) repel the protons of another atom
- 6. Which term refers to how strongly an atom of an element attracts electrons in a chemical bond with an atom of a different element?
 - A) entropy
 - B) electronegativity
 - C) activation energy
 - D) first ionization energy
- 7. The amount of energy to remove its most loosely bound electron is the definition of:
 - A) electronegativity
- B) ionization energy
- C) chemical bond
- D) radiation
- 8. Which element requires the *least* amount of energy to remove its most loosely bound electron?
 - A) Li
- B) Mg
- C) Ba
- D) Ca