

Name \_\_\_\_\_

Date \_\_\_\_\_

# CHEMICAL BONDING

## Answer the following questions.

A chemical bond between atoms results from the attraction between the valence electrons and of different atoms.

- (a) nuclei
- (b) inner electrons
- (c) isotopes
- (d) Lewis structures

A covalent bond consists of

- (a) a shared electron.
- (b) a shared electron pair.
- (c) two different ions.
- (d) an octet of electrons.

If two covalently bonded atoms are identical, the bond is identified as

- (a) nonpolar covalent.
- (b) polar covalent.
- (c) ionic.
- (d) dipolar.

A covalent bond in which there is an unequal attraction for the shared electrons is

- (a) nonpolar.
- (b) polar.
- (c) ionic.
- (d) dipolar.

Atoms with a strong attraction for electrons they share with another atom exhibit

- (a) zero electronegativity.
- (b) low electronegativity.
- (c) high electronegativity.
- (d) Lewis electronegativity.

Bonds that possess between 5% and 50% ionic character are considered to be

- (a) ionic.
- (b) pure covalent.
- (c) polar covalent.
- (d) nonpolar covalent.

The greater the electronegativity difference between two atoms bonded together, the greater the bond's percentage of

- (a) ionic character.
- (b) nonpolar character.
- (c) metallic character.
- (d) electron sharing.

If electrons involved in bonding spend most of the time closer to one atom rather than the other, the bond is **polar covalent**

If a bond's character is more than 50% ionic, then the bond is called a(n) **ionic bond**

A bond's character is more than 50% ionic if the electronegativity difference between the two atoms is greater than **1.7**