OBJWS Bonding and Nomenclature (Ch 6 & some of Ch 7)

Chem IH

- 1. What is the electron configuration of fluoride? How is it different that fluorine?
- 2. When an aluminum atom loses its valence e-, the charge on the resulting ion is _____?
- 3. List three physical/chemical properties of metals.
- 4. What is a pseudo noble-gas configuration?
- 5. List three properties of ionic bonds and three properties of covalent bonds.
- 6. Give an example of an ionic compound (besides NaCl) and a molecular compound.
- 7. Write the e- dot structure for the atom and ion of Sr and I and Mg. ATOM ION

Write the formulas obtained when each of these atoms loses or gains e- and becomes an ion. List whether each is a cation or anion.
A. Li

B. O

C. Ca

- 9. Write the electron configurations for the ions in #8.
- 10. Which group can sometimes form a double bond with another atom? Which group can sometimes form a triple bond with another atom?
- 11. Draw e- dot structures for these compounds and give the VSEPR names. A) Br₂, B) NH₃ C) H₂O
- 12. What does VSEPR stand for?
- 13. What is the difference between a nonpolar and a polar covalent bond?
- 14. How can the polarity of a bond be shown?
- 15. What is the periodic trend and group trend for electronegativity?
- 16. If the electronegativity is > 2.0, what kind of bond exists?
 - 17. Indicate the degree of polarity for the following (nonpolar, moderately polar, very polar, ionic) A) BaCl₂ , B) HF, C) K₂S, C) N₂, D) NO₂
 - 18. Write the symbol for each ion: A) oxide B) calcium ion
 - 19. Name the following ions: A) Sn⁺⁴ B) P⁻³
 - 20. What is the meaning behind NO CO SO da PO p?
 - 21. Name the folloiwng compounds: A) CaCO₃ B) BaCl₂ C) H₃PO₄ D) Na₂SO₄
 - 22. What is the formula for the following ionic compounds?A) potassium chromate, B) magnesium acetate, C) ammonium phosphate, D) iron (II) nitrate
 - 23. These are binary MOLECULAR compounds. How can you tell? Also, write the formula for the following. A) tribromine tetrafluoride, B) sulfur dioxide, C) monosulfur trioxide