Lecture Guide **Bonding Between Atoms** Due Feb 27 ,01

Please try and keep answers to single page **_____Name**

I. Molecules

1. Diagram the classification of matter.

2. What are the three classification for compounds? Describe how the electrons behave for each type

3. Name the 6 ways to represent chemicals and give examples.

4. Define the Octet rule. What are the exceptions?

5. Write the Lewis Dot structure for N and F.

6. What is the distance for which the most effective overlap between occurs?

7. Explain Bohr Model of the atom.

8. Explain why fluorine molecule possesses a single bond but an oxygen molecule possesses a double bond?

9. Which two atoms will only form a single bond?

10. How many total bonds are in formaldehyde?

11. Define the following in the context of Lewis Structures:
Connectivity
Number of Bonds
Remaining electrons

12. How many valence electrons does the CO_2 molecule have?

13. How many total bonds are in the perchlorate ion?

14. How many total bonds in the SO_2 molecule?

II. Ionic Compounds

1. Define Electronegativity

2. By how much must the difference in electronegativity be between two atom for the compound to be polar covalent? What is the difference in order for the compound to be ionic?

3. What is the filling order for the orbitals of the elements ?

4. Are ions more reactive than ions? If not explain why.

5. What is meant by a crystalline lattice. Give one example of a compound that exist as a crystalline lattice..

6. IS the Octet rule always obeyed? Explain your answer.

7. Define the principle of electrical neutrality.

8. What is the basis of the "Criss-Cross" method?

9. When sodium combines with oxygen what is the name of the chemical which forms?

10. What are oxy ions?

11. Name the five elements whose oxy anion name the –ate has four oxygen in its formula.

12 Name the acid in which bromite is the anion.

13. What experiment might prove that a salt dissolves by its ions being solvated by water?

II. Chemical Nomenclature

1. How many atoms does a binary compound contain?

2. What information will yield the type of compound

3. What type of compound is a type III ?