These are the answers that we went over as a class.
Your answers should be similar.
This assignment is due on MON. NOVEMBER 19, 2007
E-mail your work to Mr. Bregar with the subject line as follows:
Per. 4 Your Name Biochem. Intro. Questions

Biochemistry Intro Questions
Biology

1. **Define each of the following terms and explain the differences between terms in the same row:**

Atom: the smallest component of an element having the chemical properties of the element	***Molecule:*** a group of two or more atoms	***Difference:*** an atom is composed of a single element while a molecule is a group of two or more
Covalent Bond: bond formed by the sharing of electrons	***Ionic Bond:*** bond formed that involves the transfer of electrons	***Difference:*** the use of electrons is different (covalent shares and ionic transfers)
Molecule: a group of two or more atoms	***Compound:*** formed when elements combine to form substances consisting of 2 or more different atoms.	***Difference:*** Molecules are composed of the same atoms while compounds have 2 or more different

		atoms.
Protein: organic compounds that contain nitrogen in addition to carbon, hydrogen and oxygen.	***Enzyme:*** a catalyst found in living organisms (it speeds up the rate of chemical reactions)	***Difference:*** An enzyme is a type of protein.
Acid: a compound that releases hydrogen ions.	***Base:*** a compound that releases hydroxide ions	***Difference:*** different ions are released (acid – hydrogen ions and bases – hydroxide ions)
Carbohydrate: organic compound used for energy	***Fat:*** used for energy storage (common type of lipids)	***Difference:*** one is used for energy and the other for energy storage.

2. List five **ions** that are important for cells and living organisms

Na^+
K^+
Mg^{2+}
Cl^-
Ca^{2+}
H^+
NO_3^-
NH_4^+

Remember, we said that an **ion** is an atom or molecule that has lost or gained electrons, resulting in a positive or negative charge.

3. List five **molecules** that are important for cells and living organisms

DNA
H_2O
Lipids
Proteins
Carbohydrates
CO_2

Recall that a **molecule** is two or more different atoms joined together.