

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:

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

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

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

Na<sup>+</sup>

K<sup>+</sup>

Mg<sup>2+</sup>

Cl<sup>-</sup>

Ca<sup>2+</sup>

H<sup>+</sup>

NO<sub>3</sub><sup>-</sup>

NH<sub>4</sub><sup>+</sup>

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<sub>2</sub>O

Lipids

Proteins

Carbohydrates

CO<sub>2</sub>

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