

Name _____ Date _____ Period _____

BIO H – STUDY GUIDE CHAPTER 2

1. There will be 15 multiple choice questions based on the following topics:
 - the periodic table
 - the pH scale
 - protons, neutrons, and electrons
 - ionic, covalent, and hydrogen bonds
2. Know how to answer all the questions on the “Periodic Table Scavenger Hunt”.
3. Know the differences between protons, neutrons, and electrons. For each one, be able to state the location, the function, and the charge.
4. Know the properties of water. You will be given examples. You will have to determine which property of water is being described. Also be able to define each one.
5. You will be given chemical formulas. Be able to write the type of atom (and the number of them). Be able to add them up to determine the total number of atoms. (Refer to the “Counting Atoms” worksheet.)
6. Be able to determine if something is an acid, a base, or neutral based on...
 - a. the pH value
 - b. the amount of $[H^+]$ or $[OH^-]$
 - c. the chemical formula
7. Draw the H-bonds onto a water molecule. Know that there are supposed to be FOUR!
8. In the water molecule, know that hydrogen is always partially positive and that oxygen is always partially negative. Be able to explain why. Know what the word “electronegativity” means. Know what the word “polar” means.
9. Be able to determine if a particle is positive or negative based on the way that the water molecules surround it.
10. Know the difference between an ionic bond and a covalent bond.
11. Be able to draw orbital diagrams. Be able to show ionic and covalent bonds.
12. There will be a couple of thought questions based on the pH and water labs. You shouldn't have trouble with them as long as you know the properties of water and the pH scale.