**Honors Final Exam Review**

**Worksheet 15**

1. Calculate the pH of a solution which has a concentration of 0.5 M HCl. (Ch. 14) **(0.3)**
2. What is the difference between boiling point and “normal” boiling point? (Ch. 12)
3. Determine the volume of a 0.5 M solution of HCl needed to neutralize 250 ml of 0.25 M Ca(OH)2. (Ch. 14) **(0.25 L)**
4. What are the correct units for molarity? (Ch. 13)
5. Calculate the frequency of a photon of light which has a wavelength of 220 nm. (Ch. 9) **(1.36E15 Hz)**
6. Determine the grams of oxygen (O2) present if you have 2.5 L of the gas at 1.5 atm and 25⁰C. (Ch. 11) **(4.9 g)**
7. What is the shape of a molecule which has two pairs of unshared electrons and three bonding pair? (Ch. 10)
8. How many grams of NaCl are present in 50 ml of a 0.25 M solution? (Ch. 13) **(0.725 g)**
9. Calculate the pOH of a solution which has a pH of 7.4. (Ch. 14) **(6.6)**
10. Which of the following are not conjugate base pairs: H2SO4 and HSO4 1-; H2O and OH-; H2CO3 and CO3 2-; HCl and Cl- (Ch. 14)