**C:\Documents and Settings\toukonen\Local Settings\Temporary Internet Files\Content.IE5\VQ3BI0MW\MCSY01854_0000[1].wmfHonors Final Exam Review**

**Worksheet 18**

1. Calculate the pH of a solution which has a hydroxide concentration [OH1-] of 2.99 X 10-5. (Ch. 14) **(9.48)**
2. Determine the hydrogen ion concentration [H+] for a solution which has a pH of 9.42. (Ch. 14) (3.8E-10 M)
3. How many grams of calcium iodide would you need to make 50 ml of a 2.5M solution. (Ch. 13) **(37 g)**
4. What mass of water would you need to prepare a 2.6m solution with 46 grams of strontium nitrate? (Ch. 13) **(0.083 kg)**
5. Determine the moles of hydrogen produced when 92 grams of water decomposes according to the following unbalanced equation: H2O 🡪 H2 + O2 (Ch. 11) **(5.1 mol)**
6. What volume of 0.25 M HNO3 is required to react with 95 ml of 0.2 M Mg(OH)2? (Ch. 14)   
   **(0.152L)**
7. What volume of oxygen gas is consumed at STP when 50 grams of octane is burned according to the unbalanced equation: C8H18 + O2 🡪 CO2 + H2O? (Ch. 11) **(122.8 L)**
8. Determine the freezing point of 500 ml of an aqueous solution containing 655 grams of sodium chloride. (Ch. 13) **(-84oC (unrealistic!!!))**
9. Calculate the energy in a wave that has a frequency of 9 X 1018 Hz. (Ch. 9) **(5.9E-15 J)**
10. Which of the following is/are electrolytes: C24H50, NaI, CH3OH, SCl3 (Ch. 13)