**Honors Chemistry II** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 7 Review

Things you need to have a thorough understanding of (all topics covered in Honors Chemistry and in this class so far are fair game):

* Law of Constant Composition and Calculations based on Law (i.e. percent composition)
* Using Moles to find a Quantity
* Stoichiometry
* Limiting Reagents
* Using Density
* Solution Terms
* Stoichiometry - Solutions

1. A compound contains 30. percent sulfur and 70. percent fluorine by mass. The empirical formula of the compound is

(A) SF

(B) SF2

(C) SF4

(D) SF6

(E) S2F

2. If 0.40 mol of H2 and 0.15 mol of O2 were to react as completely as possible to produce H2O, what mass of reactant would remain?

(A) 0.20 g of H2

(B) 0.40 g of H2

(C) 3.2 g of O2

(D) 4.0 g of O2

(E) 4.4 g of O2

3. ... Fe(OH)2 + ... O2 + ... H2O ---> ... Fe(OH)3

If 1 mole of O2 oxidizes Fe(OH)2 according to the reaction represented above, how many moles of Fe(OH)3 can be formed?

(A) 2
(B) 3
(C) 4
(D) 5
(E) 6



1. #3 Answer the following questions about acetylsalicylic acid, the active ingredient in aspirin.
2. The amount of acetylsalicylic acid in a single aspirin tablet is 325 mg, yet the tablet has a mass of 2.00 g. Calculate the mass percent of acetylsalicylic acid in the tablet.
3. The elements contained in acetylsalicylic acid are hydrogen, carbon, and oxygen. The combustion of 3.00 g of the pure compound yields 1.200 g of water and 3.72 L of dry carbon dioxide, measured at 750. mm Hg and 25 oC. Calculate the mass, in g of each element in the 3.00 g sample.