**Homework #9 Chemistry 1114 section 2 (Fong) due Monday 2 April 2018 20 pts (in class)**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1 pt**

 **MW(g/mol): 44 32 44 18**

**Given the balanced equation: C3H8 + 5O2 🡪 3CO2 + 4H2O**

**1) How many grams of CO2 are created if 0.18939 mol of O2 and 0.0757 mol of C3H8 are burned ? (3 pts)**

 **\_\_\_\_\_ g CO2**

**2) How many grams of H2O are created if 4.1666\*1023 molecules of C3H8 and 22.22 g**

 **of O2 are burned ? (3 pts)**

 **\_\_\_\_\_\_ g H2O**

**3) Ethanol, C2H5OH is drinking alcohol. It burns in your body according to the**

 **balanced equation below:**

**MW(g/mol): 46 32 44 18**

 **C2H5OH + 3O2 🡪 2CO2 + 3H2O**

 **Friday night you drink 92 g of ethanol and from that you create 81 grams of water in your urine after an hour. What is the % yield (efficiency) of your body in metabolizing ethanol ? (3 pts)**

 **\_\_\_\_\_\_\_\_\_\_\_ % efficiency (yield) of body to**

 **burn ethanol**

**4)Circle all the Bronsted Bases in the list below. (2 pts)**

**HF NaOH Na2CO3 HNO3**

**5) What kind of reaction is the one written below ?**

 **PO43- + H-OH 🡪 HPO42- + OH‑ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**6) Circle all the Arrhenius Bases in the list below.**

**HCl NaOH KF CO3 2- O2**

**7) What is the conjugate acid of NH3 ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8) What is the conjugate base of HCO3- ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**9) Identify the acid(A), base(B) and conjugate base (CB) and**

 **conjugate acid (CA) in the reactions below. (2 pts each)**

1. **HPO32- + HSO4- 🡪 PO33- + H2SO4**
2. **HCrO3- + HCO3- 🡪 H2CrO3 + CO32-**