**Quiz 6 Chemical Principles I Chem 1984 Fall 2013**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_/15**

Octane (C8H18) burns in O2 according to the balanced reaction below:

MW (g/mol)= 114 32 44 18

**2C8H18 + 25 O2 🡪 16CO2 + 18H2O**

1. What is the maximum grams of CO2 formed when we burn 3.2387 g C8H18 together with 22.70 g O2 ? (5 pts)

Maximum grams CO2= \_\_\_\_\_\_\_\_\_\_\_\_g

1. What is the maximum count of molecules of H2O formed if we burn 42.18 g C8H18 with 1.3888\*1024 molecules of O2 ? (5 pts) Assume 1 mol count= 6\*1023

Maximum count of H2O molecules=\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine the most likely formulas for the binary compounds formed from the element pairs below: (use Periodic Table on back of this quiz) 5 pts/ 1 pt each
2. B F 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Ca P 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Mg S 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. K O 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Li N 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_