**‘’Mini-quiz #20 Chemistry 1114 section 2 (Fong) 17 October 2014 3 pts A**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Gasoline, C8H18, burns according to the balanced equation:**

 **2C8H18 + 25 O2 🡪 16CO2  + 18H2O**

**MW 114 g/mol**

**A 22.8 g sample of gasoline is experimentally burned in excess O2 to produce 0.8 moles of CO2.**

**What is the % yield for the reaction ?**

**Mol C8H18= 22.8/114=0.2**

**In theory moles of CO2 = 16 = x % yield =0.8 mol CO2\*100=50**

**Moles C8H18 2 0.2 1.6 mol theory**

 **1.6 = x(theory)**

 **` \_\_\_\_\_50\_\_\_\_\_\_% yield**

**Mini-quiz #20 Chemistry 1114 section 2 (Fong) 17 October 2014 3 pts B**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Gasoline, C8H18, burns according to the balanced equation:**

 **2C8H18 + 25 O2 🡪 16CO2  + 18H2O**

**MW 114 g/mol**

**A 11.4 g sample of gasoline is experimentally burned in excess O2 to produce 0.3 moles of H2O.**

**What is the % yield for the reaction ?**

**11.4 g/114 = 0.1 mol C8H18**

**In theory moles of H2O = 18 = x % yield =0.3 mol O2\*100=33**

**Moles C8H18 2 0.1 0.9 mol theory**

 **0.9 = x(theory)**

 **` \_\_\_\_\_33\_\_\_\_\_\_% yield**

**Mini-quiz #20 Chemistry 1114 section 2 (Fong) 17 October 2014 3 pts C**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Pentane, C5H112, burns according to the balanced equation:**

 **C5H12 + 8 O2  🡪 5CO2  + 6H2O**

**MW 72**

**An 18 g sample of pentane is experimentally burned in excess O2 to produce 0.375 mol H2O.**

**What is the % yield for the reaction ?**

**18 g/72 = 0.25 mol C5H12 %yield= 0.375\*100=25**

**In theory Mol H2O = 6 = x 1.5**

 **Mol C5H12 1 0.75**

 **1.5 =x(theory)**

 **` \_25\_\_\_\_\_\_\_\_\_\_% yield**