Mini-quiz 19 Chem 1013 Monday 15 March 2013 8 pts

Your name: \_\_\_\_\_\_\_answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The molecular weight of SiO2 is 60 g/mol. If you have 480 grams of SiO2 how many moles do you have ? \_\_\_\_\_\_\_8\_\_\_\_\_\_\_\_\_\_\_moles SiO2 *480 ~~g SiO~~~~2~~\* 1 mole SiO2/60 ~~g SiO~~~~2~~ =8 moles SiO2*
2. The molecular weight of fructose is 360 g/mole. How many grams of fructose in 0.27777 moles of fructose? \_\_\_100\_ grams *0.27777 ~~mol fructose~~ \*360 g fructose/~~1 mol fructose~~= 99.997~100 g fructose*
3. The atomic mass of Neon is 20 g/mol. How many grams are present in 3.01\*1024 atoms of Ne given that 1 mole count = 6.02\*1023? \_\_\_\_\_100\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ grams Ne

*3.01\*1824 ~~atoms Ne~~ \* 1 ~~mol Ne~~ \* 20 g Ne =100 g Ne*

*6.02\*1023 ~~atoms Ne~~ ~~mol Ne~~*

1. The molecular weight of ammonia (NH3) is 17 g/mol. How many molecules of NH3 are present in 0.28239 g NH3 given that 1 mole count = 6.02\*1023 ? \_\_\_\_\_1\*1022\_\_\_\_\_\_\_\_\_\_\_\_ molecules NH3

*0.28239 ~~g NH~~~~3~~ \*1 ~~mole NH~~~~3~~ \* 6.02\*1023 molecules NH3 =9.9999\*1021 ~1\* 1022 molecules NH3*

*17 ~~g NH~~~~3~~ ~~mole NH~~~~3~~*