Grossmont College Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Spring 2016

Chemistry 141 Quiz (26 points)

1. (15 points) A 10.7 m solution of NaOH has a density of 1.33 g/mL at 20oC. Calculate
   1. the mole fraction of NaOH
   2. the mass percentage of NaOH
   3. the molarity of the solution
   4. the osmotic pressure
2. (3 points) How does addition of a solute to a solvent affect vapor pressure?
3. (8 points). The addition of 0.240 g sample of sulfur to 100. g of carbon tetrachloride lowers the freezing point from -23.00 ˚C to -23.28 ˚C. What is the molar mass and molecular formula of sulfur, kf = 29.8 ˚C/*m (this is from the lecture slides)*