

Chemistry 342  
Fall, 2001  
Problem Set 11

Due Wednesday, November 21

Finish chapter 7 and read chapter 8, sections 1-5.

Do the following exercises (part b) in chapter 7: 6, 7, 8, 9, 12, 15, 17.

Also do the following:

1. What are the abundances and compositions of the phases in a 50% mole fraction mixture of water and nicotine at 100 C. Refer to Figure 8.24
2. Use the tables in the book to calculate the vapor pressures of methanol and ethanol at 20 C. Use this result to do exercise 8.4(b).
3. Calculate the compositions of the liquid and vapor phases of a methanol/ethanol solution with mole fractions equal to 20%, 40%, 60%, and 80%. Then plot the entire pressure composition diagram.
4. Construct the temperature composition diagram for methanol and ethanol at 1 atm.