CHM 1046 Summer, 2010

Quiz 3

Name (print)_____

Show your work for complete (and partial) credit. Report your answers to the correct number of significant figures, and use units where appropriate. All equations should balance; indicate phases.

1. If you wanted the calculate the vapor pressure of a solution of NaCl(aq) at 75°C, what information would you need? If the information is specific to a certain compound, be sure to specify the compound. For example, if you need a molecular weight, you'd indicate the compound.

The following information applies to the next two problems.

Compound	Formula	Boiling pt.	Freezing pt.	K_b (°C/m)	K_f (°C/m)
Benzene	C_6H_6	80.2°C	5.455°C	2.61	5.065
Cyclohexane	C_6H_{12}	80.74°C	6.55°C	2.79	20.0

2. What would be the melting point of a 0.10m solution of benzene (the solute) in cyclohexane (the solvent)?

3. What is the melting point of 0.10m naphthalene (a molecular compound) in cyclohexane? If you do not have enough information to calculate an answer, what additional information do you require?

4. What is/are the characteristic(s) of stable colloids? Why are the stable ones stable? How are they stabilized?

5 points extra credit: What is the molal concentration of 2.00M urea. Urea has the formula H_2NCONH_2 and the solution has a density of 1.029g/ml.