Time: 10'

Chem 205 Drop Quiz 8 Friday, April 19, 2013

H. Deeb

Name:



1. Given the following solutions:

0.005 m Na<sub>2</sub>SO<sub>4</sub>; 0.008 m CaCl<sub>2</sub>; 0.01 m sucrose; 0.01 m NaCl.

0.0.24

0.01.



a) Which of the above solutions should have the highest boiling point?

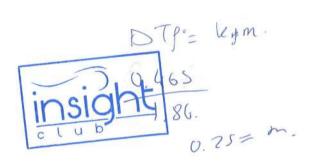
0.008- Cacly

b) Which of the above solutions should have the highest freezing point?

0.01 pm. Dueron.

2. A solution of 0.400 g of a nonelectrolyte in 40.0 g of water freezes at -0.465°C. What is the molecular weight of the nonelectrolyte? ( $K_f$  of water is 1.86°C/m).

MA -100



3. While determining the normal boiling point of an unknown liquid, darkening in color and decomposition occurred before it boils. How would you bring the liquid to boil without decomposition? Be brief.

we add solute. to to higher lesso. He capapersure.



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1. Given the following solutions: 0.005 m Na<sub>2</sub>SO<sub>4</sub>; 0.008 m CaCl<sub>2</sub>; 0.01 m sucrose; 0.01 m NaCl.

0.02.

a) Which of the above solutions should have the highest boiling point?

highest boiling pt: 0,01 m Wall

b) Which of the above solutions should have the highest freezing point?

highest breezing point: 0,005 m Na 25040

2. A solution of 0.400 g of a nonelectrolyte in 40.0 g of water freezes at -0.465°C. What is the molecular weight of the nonelectrolyte? (K<sub>f</sub> of water is 1.86°C/m).

DTF=TF'-TF = 0-(-0,465) = 0,4652.\*. 0.4652.\*

 $m = \frac{\Delta TF}{KF} = \frac{0.465}{1.86} = 0.25 m.$ 

 $m = \frac{m}{mas}$   $\Rightarrow 0$   $m = m \times mass$  of volver  $t = 0.25 \times 40 \times 10^{-3}$   $m = \frac{m}{11}$   $\Rightarrow 10 = \frac{m}{m} = \frac{9.4}{0.01} = 40 \text{ g/mel.} = 0.01.$ 3. While determining the normal boiling point of an unknown liquid, darkening in color and decomposition occurred before it boils. How would you bring the liquid to boil without decomposition? Be brief.



