HW02 - Colligative Properties

This is a preview of the published version of the quiz

Started: Sep 14 at 5:46pm

Quiz Instructions

Homework 02

Colligative Properties

Question 1	2 pts
some distilled water is added to an empty beaker. A gram of copper (II) nitrate is added to the beaker and weing stirred. After a few minutes, what is in the beaker?	hile the water is
solid copper (II), nitrate, and water	
solid copper, nitrate ions, and water	
nitrogen gas, copper atoms, electrons, and water	
copper ions, nitrate ions, and water	
Question 2	2 pts
which of the following pairs do both compounds have a van't Hoff factor ($m{i}$) of 2?	
sodium sulfate and potassium chloride	
perchloric acid and barium hydroxide	
sodium chloride and magnesium sulfate	
glucose and sodium chloride	
Question 3	2 pt
or solutions of a non-electrolyte, the van't Hoff factor is:	
$\bigcirc i = 0$	
$\bigcirc i = 2$	
$\bigcirc i = 3$	
$\bigcirc i = 1$	

0.741 mol 2.22 mol Question 5 2 p Theoretically, it should be harder to dissolve (NaCl / Al ₂ S ₃) in water because the (higher / lower) the charge density of a substance, the lower its solubility. Al ₂ S ₃ , higher Al ₂ S ₃ , lower NaCl, higher NaCl, lower Question 6 3 p The freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then calculate the molality of NaCl in seawater. The K ₁ for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p Question 7 3 p	○ 4.45 mol	
Question 5 Question 5 Question 5 Question 5 Question 6 Question 7 Question 6 Question 7 Question 8 Question 8 Question 9 Questi	○ 6.67 mol	
Cluestion 5 Cheoretically, it should be harder to dissolve (NaCl / Al ₂ S ₃) in water because the (higher / lower) the charge density of a substance, the lower its solubility. Al ₂ S ₃ , higher Al ₂ S ₃ , higher NaCl, higher NaCl, flower Puestion 6 3 p Che freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then calculate the molality of NaCl in seawater. The K ₁ for water is 1.86 K/m. 0.497 m 0.497 m Question 7 3 p Question 7 2 p 2 p 2 p 2 p 2 p 2 p 2 p 2	○ 0.741 mol	
Theoretically, it should be harder to dissolve (NaCl / Al ₂ S ₃) in water because the (higher / lower) the charge density of a substance, the lower its solubility. Al ₂ S ₃ , higher Al ₂ S ₃ , lower NaCl, higher NaCl, lower Question 6 3 p The freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then calculate the motality of NaCl in seawater. The K ₁ for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the ollowing values: (s ₁ = 0.512 K/m (s ₂ = 1.86 K/m) 270.2 K	○ 2.22 mol	
Al ₂ S ₃ , higher Al ₂ S ₃ , lower NaCl, higher NaCl, lower Aucustion 6 The freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then calculate the molality of NaCl in seawater. The K ₁ for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the ollowing values: (k ₃ = 0.512 K/m (c ₄ = 1.86 K/m) 270.2 K	Question 5	2 p
Al ₂ S ₃ , lower NaCl, higher NaCl, higher NaCl, lower Question 6 3 p The freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then alculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the ollowing values: (b ₂ = 0.512 K/m (c ₃ = 1.86 K/m) 270.2 K		e (higher / lower) the charge density of a
NaCl, higher NaCl, lower Question 6 A proper seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then alculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 proper seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then alculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 2.995 m 1.99 m -0.497 m 2.196 k/m	○ Al ₂ S ₃ , higher	
NaCl, lower Question 6 3 p The freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then alculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the ollowing values: is = 0.512 K/m is = 1.86 K/m 2.270.2 K 2.8°C	Al ₂ S ₃ , lower	
Question 6 3 p The freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then alculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the ollowing values: (S _b = 0.512 K/m K _f = 1.86 K/m 270.2 K 2.8°C	NaCl, higher	
The freezing point of seawater is about -1.85°C. Assume that seawater is an aqueous solution of sodium chloride and then calculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the collowing values: K _b = 0.512 K/m K _f = 1.86 K/m 270.2 K 2.8°C	NaCl, lower	
alculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: K _b = 0.512 K/m K _f = 1.86 K/m 270.2 K 28°C		
0.995 m 1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the collowing values: 6 _b = 0.512 K/m 6 _f = 1.86 K/m 270.2 K 2.8°C	Question 6	3 р
1.99 m -0.497 m Question 7 3 p What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: Solution of 8 moles	he freezing point of seawater is about -1.85°C. Assume that seawater is an aq	
Question 7 Squestion 7 What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the ollowing values: Squestion 7 Via twill be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the ollowing values: Squestion 7 2 to 2 t	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqual alculate the molality of NaCl in seawater. The $K_{\rm f}$ for water is 1.86 K/m.	
Question 7 What will be the freezing point of a solution of 8 moles of sodium dichromate (Na ₂ Cr ₂ O ₇) dissolved in 16 kg of water? Use the following values: $K_b = 0.512 \text{ K/m}$ $K_f = 1.86 \text{ K/m}$ 270.2 K 2.8°C	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqual calculate the molality of NaCl in seawater. The $K_{\rm f}$ for water is 1.86 K/m. 0.497 m	
What will be the freezing point of a solution of 8 moles of sodium dichromate ($Na_2Cr_2O_7$) dissolved in 16 kg of water? Use the ollowing values: $C_b = 0.512 \text{ K/m}$ $C_f = 1.86 \text{ K/m}$ $C_f = 270.2 \text{ K}$	Question 6 The freezing point of seawater is about -1.85°C. Assume that seawater is an aqualculate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m	
ollowing values: K _b = 0.512 K/m K _f = 1.86 K/m 270.2 K 2.8°C	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqual calculate the molality of NaCl in seawater. The $K_{\rm f}$ for water is 1.86 K/m. 0.497 m 0.995 m	
	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqualculate the molality of NaCl in seawater. The $K_{\rm f}$ for water is 1.86 K/m. 0.497 m 0.995 m	ueous solution of sodium chloride and then
○ 270.2 K ○ 2.8°C	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqual culate the molality of NaCl in seawater. The K _f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m	ueous solution of sodium chloride and then
○ 2.8°C	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqualculate the molality of NaCl in seawater. The $K_{\rm f}$ for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 What will be the freezing point of a solution of 8 moles of sodium dichromate (Nacollowing values:	ueous solution of sodium chloride and then
	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqualculate the molality of NaCl in seawater. The K_f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m Question 7 What will be the freezing point of a solution of 8 moles of sodium dichromate (Nacollowing values:	ueous solution of sodium chloride and then
○ 275.8 K	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqualculate the molality of NaCl in seawater. The $K_{\rm f}$ for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m What will be the freezing point of a solution of 8 moles of sodium dichromate (Nacollowing values: $K_{\rm b} = 0.512 {\rm K/m}$ $K_{\rm f} = 1.86 {\rm K/m}$	ueous solution of sodium chloride and then
	The freezing point of seawater is about -1.85°C. Assume that seawater is an aqualculate the molality of NaCl in seawater. The K_f for water is 1.86 K/m. 0.497 m 0.995 m 1.99 m -0.497 m What will be the freezing point of a solution of 8 moles of sodium dichromate (Nacollowing values: $K_b = 0.512 \text{ K/m}$ $K_f = 1.86 \text{ K/m}$	ueous solution of sodium chloride and then

Question 8	3 pts
Calculate the vapor pressure at 20°C of a solution containing 0.61g of naphthalene in 16g ($C_{10}H_8$) has a low vapor pressure and may be assumed to be nonvolatile. The vapor pressure	
The vapor pressure would not change as naphthalene is considered non-volatile.	
28.10 torr	
○ 150.65 torr	
Question 9	2 pts
Rank the following aqueous solutions from lowest to highest boiling point: 0.5 m NaCl, 1 n $Ba(NO_3)_2$. All salt are dissolved in water.	n KCl, 0.5 m BaCl $_2$, and 1 m
1 m KCl < 1 m Ba(NO ₃) ₂ < 0.5 m NaCl < 0.5 m BaCl ₂	
0.5 m NaCl < 0.5 m BaCl ₂ < 1 m KCl < 1 m Ba(NO ₃) ₂	
1 m Ba(NO ₃) ₂ < 0.5 m NaCl < 0.5 m BaCl ₂ < 1 m KCl	
\bigcirc 0.5 m BaCl $_2$ < 1 m KCl < 1 m Ba(NO $_3)_2$ < 0.5 m NaCl	
Question 10	2 pts
A semi-permeable membrane can withstand an osmotic pressure of 0.75 atm. What molar solution would reach the limit for this membrane? (Assume RT = 25 L·atm·mol ⁻¹)	rity of aqueous magnesium bromide
○ 0.03 M	
○ 0.01 M	
○ 0.01 mM	
○ 0.03 mM	
Question 11	2 nt
Question 11	3 pts
Catalase (a liver enzyme) dissolves in water. A 14mL solution containing 0.166g of catalast Torr at 20°C. What is the molar mass of catalase?	se exhibits an osmotic pressure of 1.2
○ 1.49x10 ⁵ g/mol	
○ 2.81x10 ⁵ g/mol	
○ 1.81x10 ⁵ g/mol	
○ 1.69x10 ⁵ g/mol	

Question 12	2 pts
Two aqueous solutions are separated by a semi-permeable membrane:	
Solution A = 0.34 M KCl	
Solution B = 0.34 M MgCl ₂	
Which of the following statements is TRUE?	
There is a net flow of Cl⁻ ions from solution B to solution A.	
○ There is a net flow of H ₂ O molecules from solution A to solution B.	
○ There is no net flow of H₂O molecules from one solution to another.	
There is a net flow of H ₂ O molecules from solution B to solution A.	
Question 13	2 pts
Red blood cells contain Na^+ ions, K^+ ions, and water. If we place some red blood cells into a beaker full of phappen to them?	oure water, what will
they will swell and burst	
nothing	
they will shrivel and collapse	
they will wiggle around rapidly	

Not saved

Submit Quiz