

\* Note: 3b ~~answer~~ question should ask what mdes of CO<sub>2</sub>

1. Endothermic

2 b) Entropy effect is greater. energy is more dispersed

2 true. gas molecules are fast moving and must be compressed or slowed down to dissolve.

b.) decreases

3.  $S_g = k_H \cdot P_g$   
 $(4.4 \times 10^{-5}) (0.42)$   
 $1.85 \times 10^{-5} M$

\* b) ~~answer~~  $(1.85 \times 10^{-5}) 2 \leftarrow \frac{\text{mdes}}{L} = M$   
 $\times 00003690 \underline{\underline{\text{mdes}}}$

4) True  $\uparrow S_g = k_H \cdot P_g \uparrow$

5.  $S_g = k_H \cdot P_g$   
 $(2 \times 10^{-2}) = 1.66 \times 10^{-6} \cdot P_g$   
 solve for  $P_g$

6.) Solubility of a gas is exothermic  
 $CO_2(g) + \text{Soda} \rightleftharpoons CO_2(aq) + \text{heat}$   
 Removing heat shifts reaction to the right  
 Increasing pressure shifts reaction to the right

7.) Addition of solutes decrease surface area for vaporization causing vapor pressure to lower.

b)  $P_i = X_i P_i^0$

~~$(\frac{25}{100+25}) (23.76)$~~

$\frac{g}{ml} = \text{density}$        $\frac{g}{ml} = \text{density}_{H_2O}$   
 $\frac{2}{25} = 1.15$        $\frac{X}{100} = 1$   
 $100g / 18 = 5.55 \text{ mdes}$

$g = \frac{28.75}{62} = 0.4637 \text{ mdes}$   
 ethylene-OH

$\frac{0.4637}{5.55 + 0.4637} = 0.0771$

$P = (X) (23.76)$

$P = 1.832 \text{ mm Hg}$

c) boiling point temp. would decrease since atmospheric ~~water~~ pressure decreases

8) True

b)  $\Delta T = m \cdot (K_f) (i)$        $\frac{25}{58.44} = 0.4278 \text{ mdes}$   
 $(0.4278) (1.86) (2)$

$\Delta T = 1.5913^\circ C$

$0 - 1.5913 = -1.5913^\circ C$