

001

version

last name

first name

signature

Exam 1

McCord Classes · Spring 2016

(uniques: 49330 and 49335)

REMEMBER: Bubble in ALL Bubblesheet information!

This includes your first and last name, your UTEID, and your version number.

Please refer to the back of the bubble sheet for more info.

$$R = 8.314 \text{ J/mol}\cdot\text{K}$$

$$R = 0.08206 \text{ L atm/mol}\cdot\text{K}$$

$$R = 62.36 \text{ L torr/mol}\cdot\text{K}$$

$$1 \text{ atm} = 1.01325 \times 10^5 \text{ Pa}$$

$$1 \text{ atm} = 760 \text{ torr}$$

$$1 \text{ atm} = 14.7 \text{ psi}$$

$$PV = nRT$$

$$q = m \cdot C_s \cdot \Delta T \quad q = m \cdot \Delta H_{\text{change}}$$

$$\ln\left(\frac{P_2}{P_1}\right) = \frac{\Delta H_{\text{vap}}}{R} \left(\frac{1}{T_1} - \frac{1}{T_2}\right)$$

$$\Delta H_{\text{solution}} = \Delta H_{\text{lattice}} + \Delta H_{\text{hydration}}$$

$$P_A = \chi_A \cdot P_A^\circ \quad C_{\text{gas}} = k_H P_{\text{gas}}$$

water data

$$K_f = 1.86 \text{ }^\circ\text{C}/m$$

$$K_b = 0.512 \text{ }^\circ\text{C}/m$$

$$C_{s,\text{ice}} = 2.09 \text{ J/g K}$$

$$C_{s,\text{water}} = 4.184 \text{ J/g K}$$

$$C_{s,\text{steam}} = 2.03 \text{ J/g K}$$

$$\Delta H_{\text{fus}} = 334 \text{ J/g}$$

$$\Delta H_{\text{vap}} = 2260 \text{ J/g}$$

$$\Delta T_f = i \cdot K_f \cdot m \quad \Delta T_b = i \cdot K_b \cdot m$$

$$\Pi = i \cdot MRT$$

$$G = H - TS \quad \Delta G = \Delta H - T\Delta S$$

NOTE: Please keep your Exam copy intact (all pages still stapled). You must turn in your exam copy, plus your bubble sheet, and any scratch paper.