

Chemistry-4311
October 14, 2016

Quiz #5

Name Key

$$R = 1.987 \text{ cal K}^{-1} \text{ mol}^{-1} = 8.314 \text{ J K}^{-1} \text{ mol}^{-1} = 0.08206 \text{ L atm K}^{-1} \text{ mol}^{-1} \text{ K} = ^\circ\text{C} + 273.15$$

1. Matching (Use a letter only once)

For equilibrium between two phases α and β , the e of the two phases are equal.

ΔH_{vap} may be determined by measuring the vapor pressure of the liquid versus c.

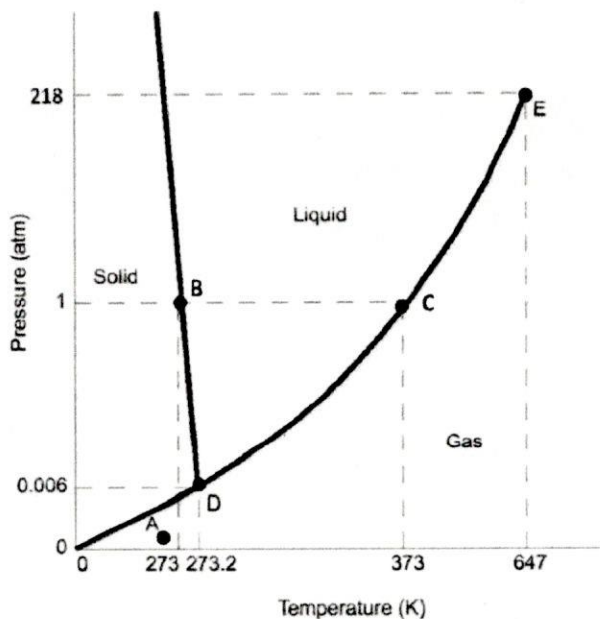
For an ideal solution the chemical potential for component i in a liquid mixture is given by a.

The molar entropy of liquid water is j than that of water vapor.

Raoult's Law is b.

- a. $\mu_i(l) = \mu_i^*(l) + RT \ln x_i$
- b. $P_i = x_i P_i^*$
- c. temperature
- d. $a_i = \gamma_i x_i$
- e. chemical potential
- f. greater
- g. pressure
- h. $\mu_i(l) = \gamma_i x_i$
- i. entropy
- j. less

2. Below is the phase diagram for water. Identify each of the following:



The temperature at point B is the c.

The temperature at point C is the d.

Point D is a.

Point E is b.

Point A is at gas-solid phase equilibrium. f (yes or no)

- a. triple point
- b. critical point
- c. freezing point
- d. boiling point
- e. yes
- f. no