Participation Assignment
CHEM 1100-General Chemistry II

Name: **#8**

Section: 31, TR **Due Date: Tuesday 2/5/2019**

1. At 800 K, equilibrium concentrations for the formation of sulfur trioxide, SO_3, were:

$$2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$$

$[SO_2]_{eq} = 0.0030$ M $[O_2]_{eq} = 0.0035$ M $[SO_3]_{eq} = 0.050$ M

Calculate the equilibrium constant.

2. At 800 K, a mixture of 0.250 M H_2O and 0.250 M CO is allowed to come to equilibrium. Calculate the equilibrium concentrations of all the chemical species. K_c is 4.11 at 800 K.

$$H_2O(g) + CO(g) \rightleftharpoons H_2(g) + CO_2(g)$$

3. At 430 °C, 0.600 mol of HI is added to a 2.00 L container and allowed to come to equilibrium. Calculate the equilibrium concentrations of all the chemical species. K_c is 54.3 at this temperature.

$$H_2(g) + I_2(g) \rightleftharpoons 2HI(g)$$