ASSIGNMENT 6
CHEMISTRY 302
Due: 4:30 pm Friday 5 March 2010

1. Calculate, as a function of pH, the concentration of carbonate ion and bicarbonate ion in equilibrium with atmospheric CO_2 at 338 ppmv.

2. Calculate, as a function of pH, the atmospheric pressure of H_2S in equilibrium with reduced sulfur at a total concentration of 49 ppm S. Assume that all reduced sulfur is in the forms of H_2S, HS^-, and S^{2-}. $K_H = 1.03 \times 10^{-1}$ M atm^{-1}, $K_{a1} = 9.5 \times 10^{-8}$ M, and $K_{a2} = 1.0 \times 10^{-19}$ M.

3. Do Problem 15, Chapter 5, Bunce page 155.

4. (a) Do Problem 2, Chapter 5, page 152.
   (b) Do Problem 14, Chapter 5, page 155.

5. Do Problem 25, Chapter 6, Bunce page 196.