ASSIGNMENT 6 CHEMISTRY 302 Due: 4:30 pm Monday 9 March 2009

- 1. Calculate, as a function of pH, the concentration of carbonate ion and bicarbonate ion in equilibrium with atmospheric CO_2 at 382 ppmv.
- 2. Calculate, as a function of pH, the atmospheric pressure of H₂S in equilibrium with reduced sulfur at a total concentration of 42 ppm S. Assume that all reduced sulfur is in the forms of H₂S, HS⁻, and S²⁻. $K_H = 1.03 \times 10^{-1}$ 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.