CHM 111 Acid/Base Quiz 2   **Name:** _____
Due: 4/4/08, 11:15 AM
Solve the following. Round pH values to the nearest 0.01 pH units (ex: pH = 2.34) [20]

1) Calculate the pH of a buffer solution that contains 0.25 M ammonium chloride mixed with 0.20 M ammonia.

2) Calculate the pH of the solution that results when you mix 150. mL of the buffer above (0.25 M ammonium chloride mixed with 0.20 M ammonia) with 5.0 mL of 0.25 M hydrochloric acid.

3) Calculate the pH of an 0.18 M solution of sodium cyanide, NaCN. (Hint: HCN is the conjugate acid!)

4) Classify these salts as *acidic*, *basic*, or *neutral* in water.

- _____Na_2CO_3

- _____$NaNO_3$

- _____CH_3NH_2Cl

- _____KCl

- _____NH_4NO_3

5) Calculate the pH of the solution that results when you add 25.0 mL of water to 75.0 mL of 0.18 M NH_3.