Chem 112 **Spring 2020** **Quiz 6** **Whelan**

SID | | | | | | | | | **Last** _____ **First** _____

Question 1
2 Points

In the laboratory, a general chemistry student measured the **pH** of a **0.312 M** aqueous solution of **nitrous acid** to be 1.854 What is the **Ka** for HNO_2?

		I		I
I				
C				
E				

Ka = _____

Question 2
2 Points

Calculate the pH of a **0.267 M** aqueous solution of **caffeine** ($C_8H_{10}N_4O_2$, K_b = **4.1x10^{-4}**).

		I		I
I				
C				
E				

pH = _____

Question 3
2 Points

Indicate whether each of the following compounds will give an **acidic**(**A**), **basic**(**B**) or **neutral**(**N**) solution when dissolved in water.

ammonium nitrate: _____ **lithium nitrate**: _____

sodium acetate: _____ **potassium nitrite**: _____

Question 4
4 Points

The substance **benzoic acid** (C_6H_5COOH) is a weak acid (K_a = **6.30x10^{-5}**).
What is the **pH** of a **0.246 M** aqueous solution of **sodium benzoate**, (NaC_6H_5COO)?

		+		+
I				
C				
E				

pH = _____