Chem 210-Jasperse   Test 3   Name: _____

Additional Aqueous Equilibria: Buffers, Titrations, Acid-Base-Buffer Mixtures, Solubility
Thermodynamics: Entropy, Free Energy, Enthalpy, and Directionality of Chemical Reactions

Key Equations:

For weak acids alone in water: $$[H^+] = \sqrt{K_a x [WA]}$$	For weak bases alone in water: $$[OH^-] = \sqrt{K_b x [WB]}$$
pZ= -logZ General definition for p of anything	pH + pOH = 14
$[H^+][HO^-] = 1.00 \times 10^{-14}$	$K_a K_b = 1.00 \times 10^{-14}$ for conjugate acid/base pair
For Buffer: pH = pK$_a$ + log[base]/[acid] Henderson-Hasselbalch Equation	$\Delta S° = S°$ (products) – S° (reactants)
$\Delta G° = G°$ (products) – G° (reactants)	$\Delta G° = \Delta H° - T\Delta S°$ (T in Kelvin)