Name:_		
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Chemistry 12 ACID BASE PART II Lesson # 19 BUFFERS

A BUFFER is a solution containing appreciable amounts of a and it's conjugate!!!
Example: $CH_3COOH + H_2O <> CH_3COO- + H_3O+$ 1M 1M 1f you have "appreciable" amounts then [CH ₃ COOH] = [CH ₃ COO-]
Ka =
CONCLUSION:
IMPT: a solution of CH ₃ COOH by itself IS NOT A BUFFER!!! You need substantial amounts of both weak acid and conjugate base to have a buffer!
The purpose of a BUFFER is to!!! Therefore, the addition of small quantities of acid or base to a buffer results in a shift in the equilibrium to counter the added substance. ex. HCO ₃ - + H ₂ O <> CO ₃ ² - + H ₃ O+ If a base is added to the above buffer system, the that is present will react with the added and the buffer will shift to the with little effect on
the pH. ex.
If an acid is added to this buffer system, the with little effect on the pH. ex.
NOTE: There is a LIMIT to the amount of H_3O^+ or OH^- that can be neutralized by a buffer. This is referred to as the! If it is exceeded the pH will not be maintained.
There are TWO TYPES OF BUFFERS 1. 2.

ACIDIC BUFFERS- try to maintain a pH in the ACIDIC REGION		
buffer is made by adding appreciable amounts of a	and it's	
(in the form of a SOLUBLE SALT) into solution.		
ex.		
This buffer would maintain a pH of		
BASIC BUFFERS- try to maintain a pH in the BASIC REGION		. A basic
buffer is made by adding apprecable amounts of a into solution.	and it's	
ex.		
6 4.		
This buffer would maintain a pH of		
There is a BUFFERING REGION on both the weak acid/ STRONG		weak

SEATWORK/HOMEWORK: Excercises 131-140 pgs 181-182 READ pgs 182-183 and do Exercises 141-143 pg 183 PLO's: Q1-Q6