STATE UNIVERSITY
General Chemistry 2
pH measurement

Name $\qquad$

Part A

| Solution | Relevant Observation 1 | Relevant observation 2 | pH est |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Could you have predicted the pH of some of these solutions? Explain.

## Part B

| Solution | pH | Equation showing the substance reacting as acid or base |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Part C

| Quantity | Value for 0.1 M acetic acid | Value for 0.1 M acetate |
| :--- | :--- | :--- |
| pH |  |  |
| $[\mathrm{H} 3 \mathrm{O}+]$ at equilibrium in mol/L |  |  |
| $[\mathrm{OH}-]$ at equilibrium in mol/L |  |  |
| [acetic acid $]$ at equilibrium in $\mathrm{mol} / \mathrm{L}$ |  |  |
| [acetate] at equilibrium in $\mathrm{mol} / \mathrm{L}$ |  |  |
| K |  |  |
| pKa |  |  |

## Part D

What pH are you trying to set the buffer to: $\mathrm{pH}=$ $\qquad$
What volumes of acetic acid and acetate will you use?

Show the pH calculation

What pH did you measure?

Reflect on your experience today (e.g. which calculation was the most challenging for you)

