

Name _____ Lab Partner _____
TA Name _____ Section _____ Date _____

Buffers PreLab Worksheet

1. Which chemicals in the experiment are considered corrosive? Select all that apply.

- $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$
- $\text{Na}_2\text{HPO}_4 \cdot 7 \text{H}_2\text{O}$
- NaOH
- $\text{HC}_2\text{H}_3\text{O}_2$
- $\text{NaC}_2\text{H}_3\text{O}_2 \cdot 3 \text{H}_2\text{O}$
- HCl
- $\text{Na}_3\text{PO}_4 \cdot 12 \text{H}_2\text{O}$

2. What action should you take if you splash a corrosive material in your eye? Select all that apply.

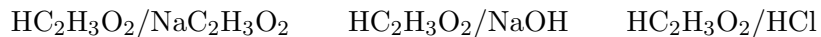
- Have your lab partner notify your lab instructor about the accident.
- Use the eyewash immediately.
- Hold your eyes open and flush with water.
- Go to your instructor immediately for assistance.
- Have your lab partner find the correct solution to neutralize the chemical.

3. What should be done with the wastes associated with this experiment? Select all that apply.

- The HCl and NaOH should be poured into the container on the side shelf, but all the others can be flushed down the sink with water.
- There is no waste.
- They all be flushed down the sink with water.
- They should be kept in a labeled beaker at the desk and poured into the container by the side shelf at the end of the experiment.

4. Three methods for preparing a buffer were presented in this lab: the direct method and two indirect methods.

- a) Select the materials needed to prepare a fluoride buffer by the direct method. Place a square around the materials needed to prepare a fluoride buffer by the indirect method.



- b) Select the materials needed to prepare a pH=7 buffer by the direct method. Place a square around the materials needed to prepare a pH = 7 buffer by the indirect method. The first deprotonation of H_3PO_4 has a pK_{a1} value of 2.12; the second deprotonation has a pK_{a2} value of 7.21; the third deprotonation has a pK_{a3} value of 12.32.

