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Creative Project 2

1. Matching:

\_\_\_ Bronstead-Lowry acid

\_\_\_ Enthalpy

\_\_\_ Conjugate base

\_\_\_ Entropy

\_\_\_ Bronstead-Lowry base

\_\_\_ Conjugate acid

a) protonated weak base

b) proton acceptor

c) is the heat absorbed or released  
when the reaction takes place  
under constant pressure

d) proton donor

e) deprotonated weak acid

f) is a measure of the disorder

2. 25 mL of .100 M  $\text{HC}_2\text{H}_3\text{O}_2$  is titrated using .100 M NaOH.

A. What is the equivalence point?

B. What is the  $\frac{1}{2}$  equivalence point?

C. What is the pH before addition of any NaOH?

D. After addition of 10.00mL of .100 M NaOH?

E. After addition of 12.5 mL of .100 M NaOH?

F. At the equivalence point?

G. After addition of 26 mL of .100 M NaOH?

3. A 25.00mL sample of tap water was titrated with 0.0100 M EDTA. 2.63 mL of the EDTA solution was required to reach the endpoint. Calculate the hardness of the tap water as ppm equivalent  $\text{CaCO}_3$ .