Quiz 16.1 – Acid/Base Reactions

Name:

Question 1

Give the conjugate acid for each of these bases:

$$NH_3$$

$$CO_3^{2}$$

$$HCO_3$$

$$CO_3^{2-}$$
 $HCO_3^ NO_2^ ClO_4^ HPO_4^{2-}$ HSO_3^-

$$\mathbf{F}^{-}$$

Question 2

Give the conjugate base for each of these acids:

$$HCO_3^-$$

$$H_2SO_4$$

$$H_2PO_2$$

$$HBr$$
 H_3PO_4 $H_2PO_4^ HPO_4^{2-}$ HIO_3

Question 3

Predict the products for each acid/base reaction below:

$${\rm ClO^-}$$
 with ${\rm HNO_2}$

Question 4

For each reaction, identify the conjugate acid/base pairs

$$HCO_3^-(aq) + HSO_4^-(aq) \longrightarrow H_2CO_3(aq) + SO_4^{2-}(aq)$$

$$H_2O(l) + H_2O(l) \implies H_3O^+(aq) + OH^-(aq)$$

$$HN_3(aq) + H_2O(l) \implies NH_4^+(aq) + OH^-(aq)$$

Question 5

 HNO_2 is a stronger acid than HF is. What can you say about the relative base strengths of NO_2^- and F^- ?

A Litany for Survival

By Audre Lorde

For those of us who live at the shoreline standing upon the constant edges of decision crucial and alone for those of us who cannot indulge the passing dreams of choice who love in doorways coming and going in the hours between dawns looking inward and outward at once before and after seeking a now that can breed futures like bread in our children's mouths so their dreams will not reflect the death of ours;

For those of us
who were imprinted with fear
like a faint line in the center of our foreheads
learning to be afraid with our mother's milk
for by this weapon
this illusion of some safety to be found
the heavy-footed hoped to silence us
For all of us
this instant and this triumph
We were never meant to survive.

And when the sun rises we are afraid it might not remain when the sun sets we are afraid it might not rise in the morning when our stomachs are full we are afraid of indigestion when our stomachs are empty we are afraid we may never eat again when we are loved we are afraid love will vanish when we are alone we are afraid love will never return and when we speak we are afraid our words will not be heard nor welcomed but when we are silent we are still afraid

So it is better to speak remembering we were never meant to survive.