

## Quiz 10.2 – Buffers and Titrations

Name: \_\_\_\_\_

**Question 1**

You need to prepare a buffer with  $pH = 10.45$ . Use table 10.2 from your book to determine the best acid/base conjugate pair for this buffer.

**Question 2**

A buffer is made using the formic acid/formate ion conjugate pair. Find the buffer  $pH$  when  $[HCHO_2] = 0.76M$  and  $[CHO_2^-] = 0.32M$

**Question 3**

A buffer is made using the  $HF/F^-$  conjugate pair. The buffer has  $pH = 4.15$  and  $[F^-] = 0.76M$ . Find  $[HF]$

**Question 4**

A  $25ml$  sample of  $HCl$  with unknown concentration is titrated using  $0.125M$   $NaOH$ . Titrating to the end point required  $36ml$  of the  $NaOH$  titrant. What was the original unknown concentration?

## *When You See Water*

By Alice Walker

When you see water in a stream  
you say: oh, this is stream  
water;  
When you see water in the river  
you say: oh, this is water  
of the river;  
When you see ocean  
water  
you say: This is the ocean's  
water!  
But actually water is always  
only itself  
and does not belong  
to any of these containers  
though it creates them.  
And so it is with you.

## *Wild Geese*

By Mary Oliver

You do not have to be good.  
You do not have to walk on your knees  
for a hundred miles through the desert repenting.  
You only have to let the soft animal of your body  
love what it loves.  
Tell me about despair, yours, and I will tell you mine.  
Meanwhile the world goes on.  
Meanwhile the sun and the clear pebbles of the rain  
are moving across the landscapes,  
over the prairies and the deep trees,  
the mountains and the rivers.  
Meanwhile the wild geese, high in the clean blue air,  
are heading home again.  
Whoever you are, no matter how lonely,  
the world offers itself to your imagination,  
calls to you like the wild geese, harsh and exciting -  
over and over announcing your place  
in the family of things.