

CHEM106 Quiz 3

Please show all equations, all substitutions, all units, and all work to receive any credit

Draw the complete Lewis structures for each of the following amino acids in the **form that is most abundant at a physiological pH of 7.4**. Except for aromatic rings; show all atoms, bonds, lone electron pairs, and full charges (not partial charges) for these compounds:

- a. Tyrosine
 - b. Cysteine
 - c. Aspartic Acid
 - d. Lysine
 - e. Glycine
 - f. Alanine
 - g. Valine
 - h. Threonine
2. Lactic acid [$\text{CH}_3\text{CHOHCOOH}$] is an alpha hydroxy acid (AHA) with a pK_a of 3.08. For an aqueous lactic acid solution at a pH of 2.5, calculate the relative amounts of ionized and unionized lactic acid. Draw the complete Lewis structure for each form and identify which is present in a greater concentration.