Session #30: Homework Solutions

Problem #1

Draw the form of L-lysine which is present at biological pH.

Solution

Problem #2

What is the net charge of arginine in a solution of pH 1.0?

Solution

+2

Problem #3

Draw the form in which glutamate exists at pH = 0.

Solution

At pH = 0, groups will be in their acidic form:

Problem #4

Draw structures for the forms of glycine present in basic, neutral, and acidic solutions.

Solution

 $_{2}^{+}$ $_{2}^{+}$ $_{3}^{+}$ $_{3}^{+}$ $_{3}^{+}$ $_{3}^{+}$ $_{4}^{-}$ $_{3}^{+}$ $_{3}^{+}$ $_{4}^{-}$ $_{5}^{-}$ $_{1}^{+}$ $_{1}^{+}$ $_{1}^{+}$ $_{2}^{+}$ $_{3}^{-}$ $_{1}^{-}$ $_{2}^{-}$ $_{3}^{-}$ $_{3}^{-}$ $_{4}^{-}$ $_{1}^{-}$ $_{2}^{-}$ $_{3}^{-}$ $_{3}^{-}$ $_{4}^{-}$ $_{2}^{-}$ $_{3}^{-}$ $_{4}^{-}$

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