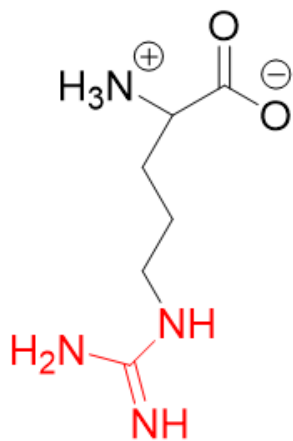


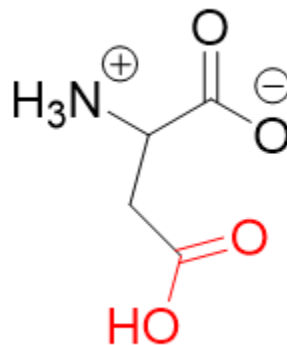
## SchoolNova Chem 2 Homework 22 - Acid/Base

1. Predict if the amino acid side chains will be protonated or deprotonated at pH 7.4 (physiological pH). The functional groups are highlighted in red.

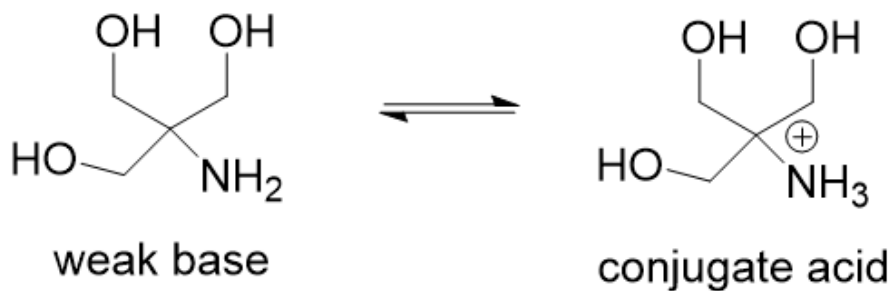
Arginine:



Aspartic acid:



2. Tris is a buffer that functions around pH 8. The equilibrium is shown below:



If a small amount of acid is added, will the left or right side be favored? (how will Tris mostly exist in solution?) How does this prevent the pH from changing?