

1. Please draw the structure of tetrapeptide Ala-Tyr-Cys-Asn: (5) The net charge of this tetrapeptide at pH =7 is _____ (1)
2. For amino acids with neutral R groups, at any pH below the pI of the amino acid, the population of amino acids in solution will have: _____
(a) a net negative charge. (b) a net positive charge. (c) no net charge.
3. Which tripeptide has the highest UV absorbance at 280 nm? _____ why? _____
(a) Asp-Glu-Tyr (b) Ser-Phe-Thr (c) Trp-Lys-Arg
4. Which tripeptide will have a net positive charge in a pH 7.0 buffer? _____
(a) Asp-Glu-Tyr (b) Ser-Phe-Thr (c) Trp-Lys-Arg
5. Textbook p.81: Worked example 3-1:
A biochemist wants to separate two peptides by ion-exchange chromatography. At the pH of the mobile phase to be used on the column, one peptide (A) has a net charge of -3, due to the presence of more Glu and Asp residues than Arg, Lys, and His residues. Peptide B has a net charge of +1. Which peptide would elute first from a cation-exchange resin? Which would elute first from an anion-exchange resin?