

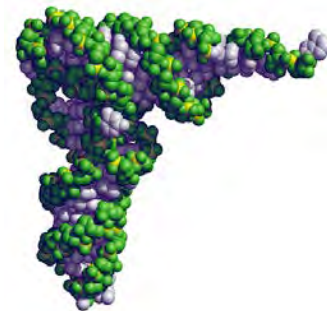
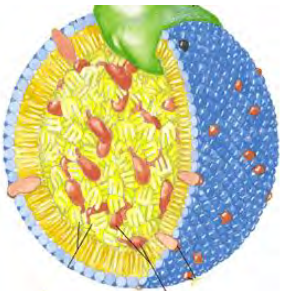


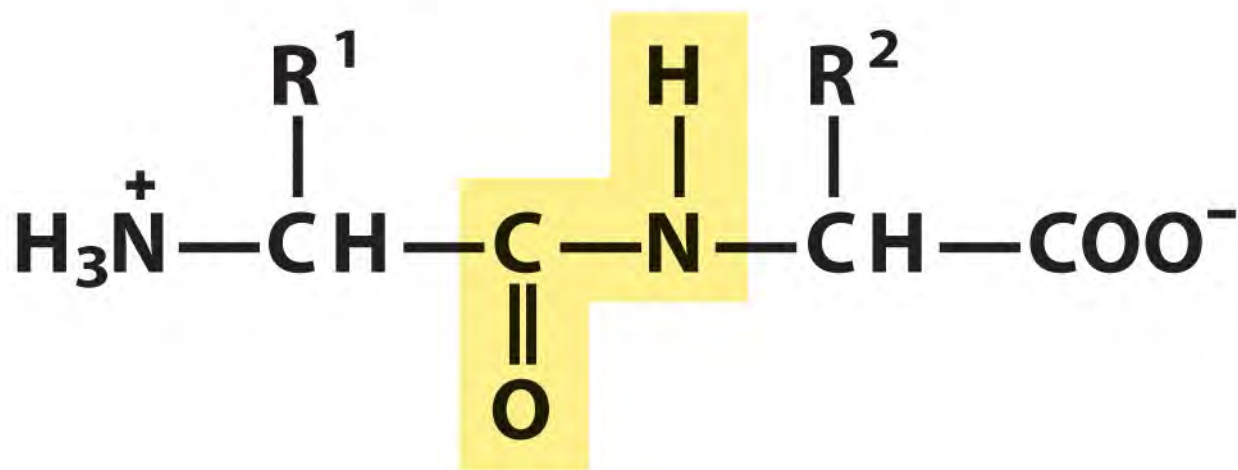
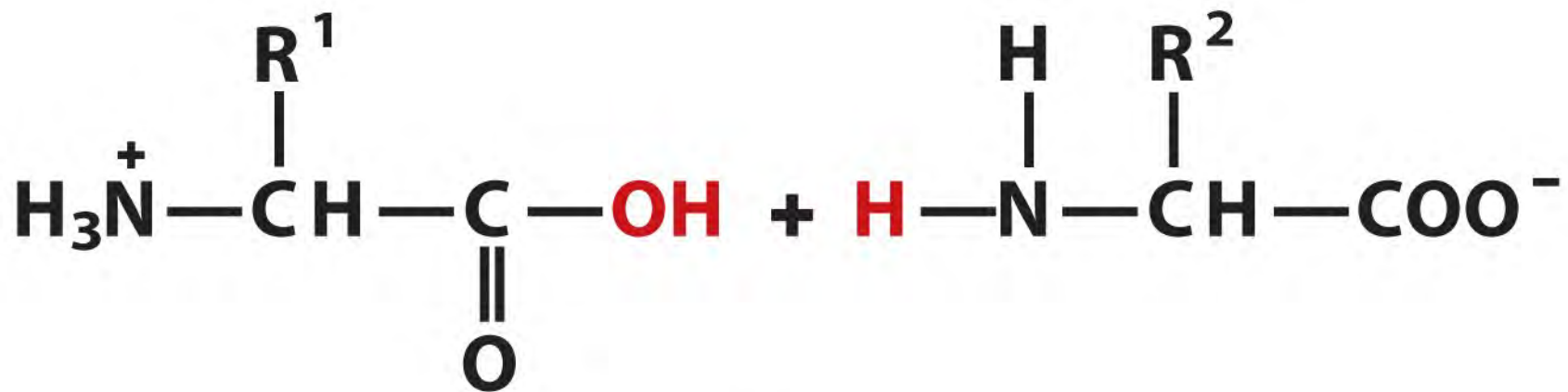
BIOCHEMISTRY REVIEW

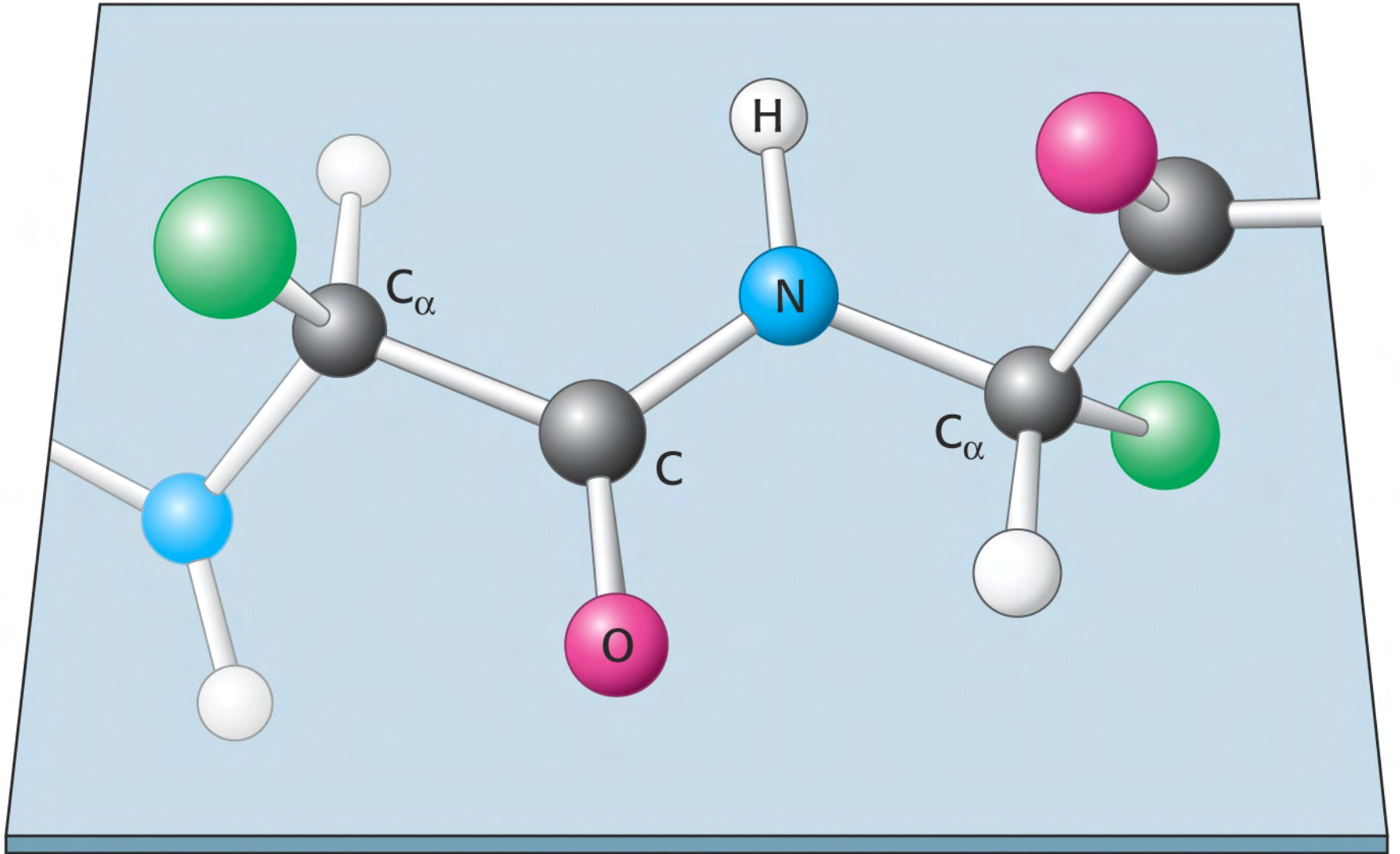
Overview of Biomolecules

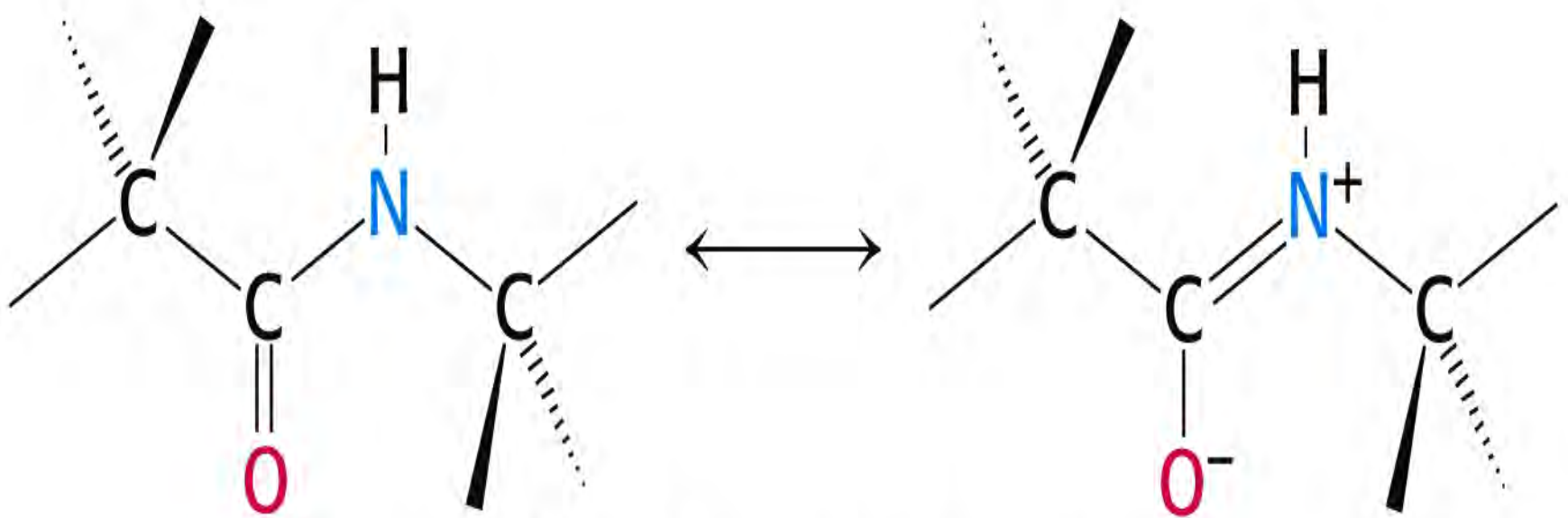
Chapter 3

Peptides

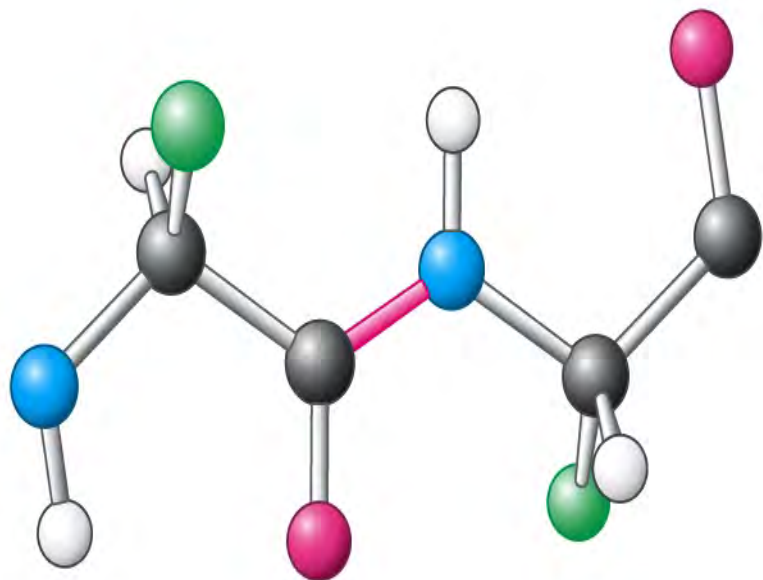




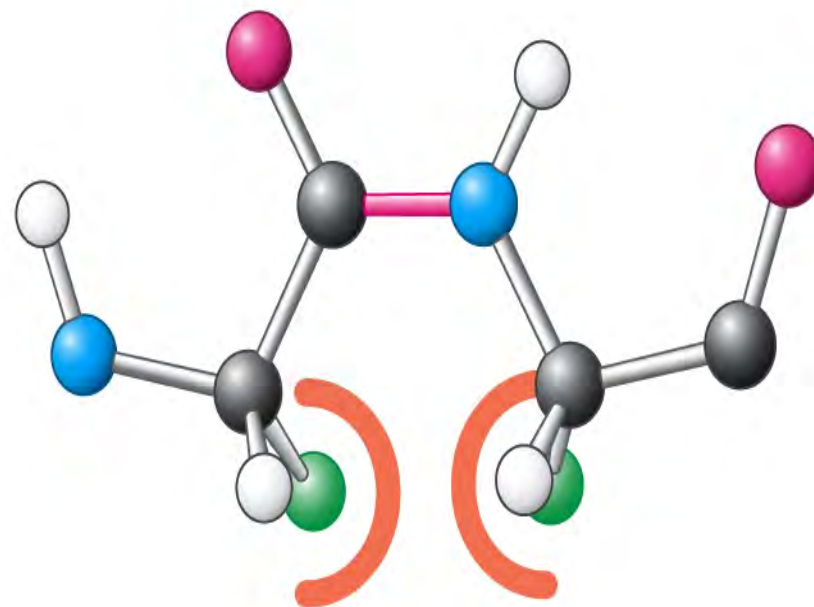




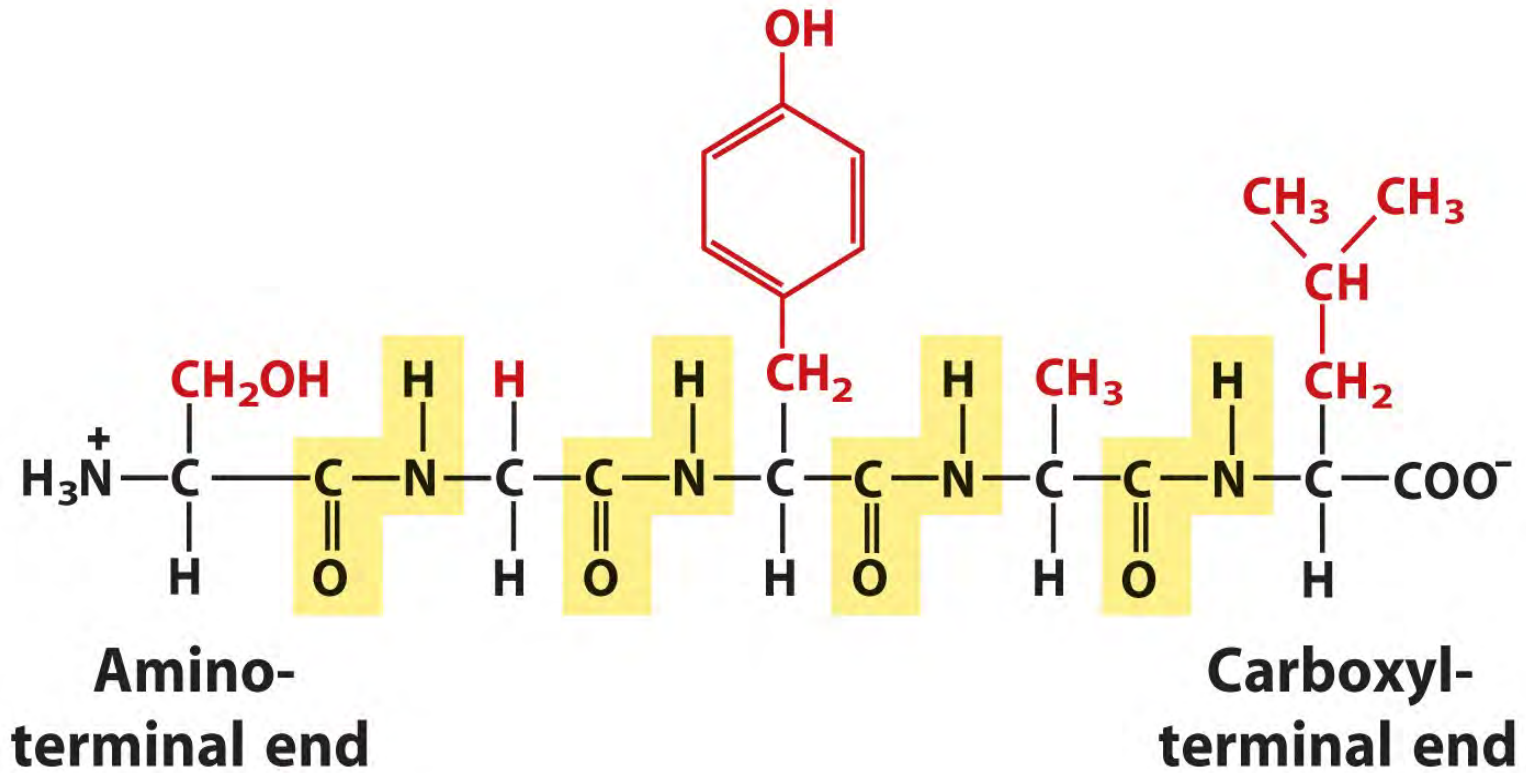
Peptide bond resonance structures



Trans



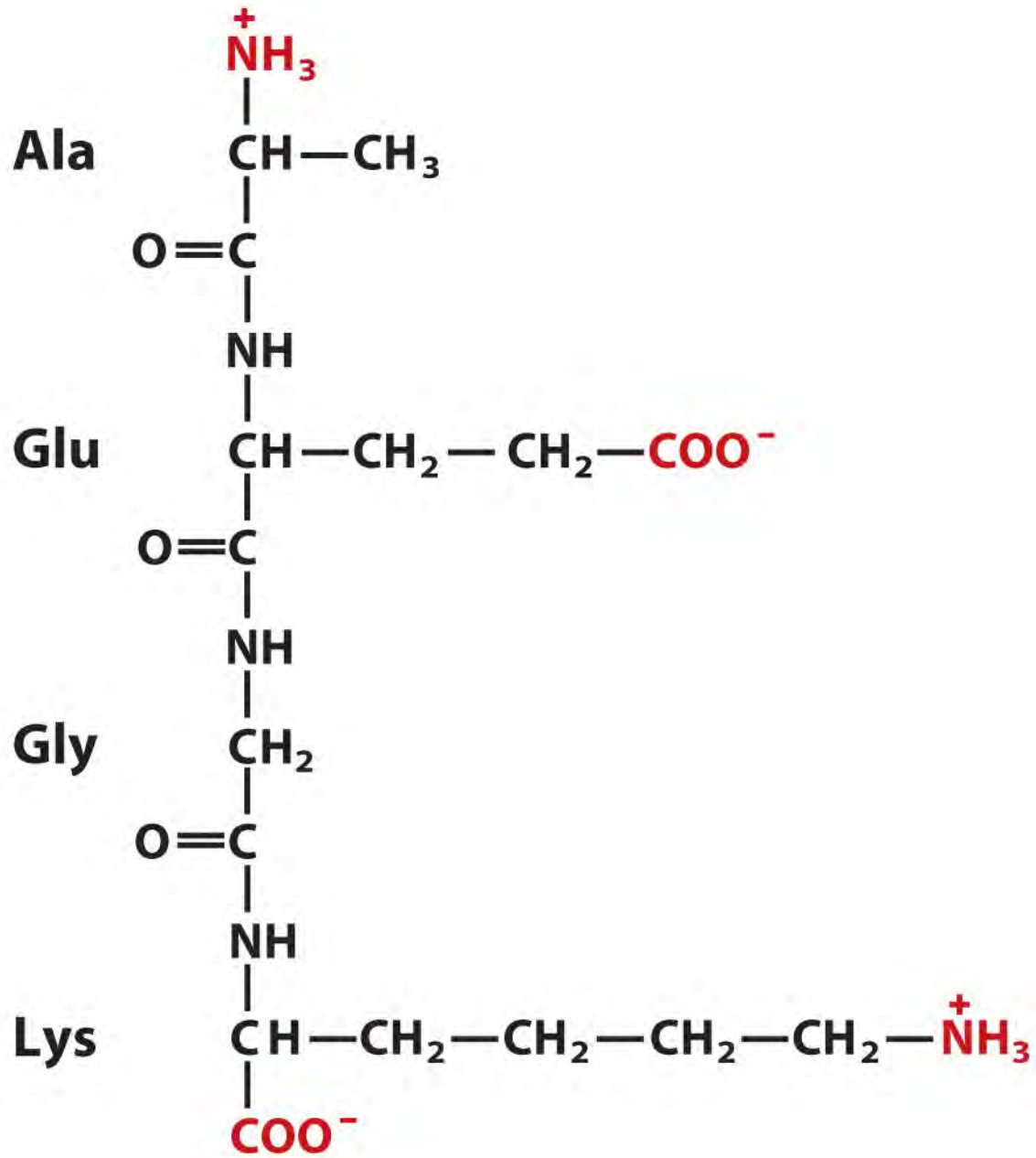
Cis



Ala-Gly-Tyr-Gln-Ser-Phe-Lys

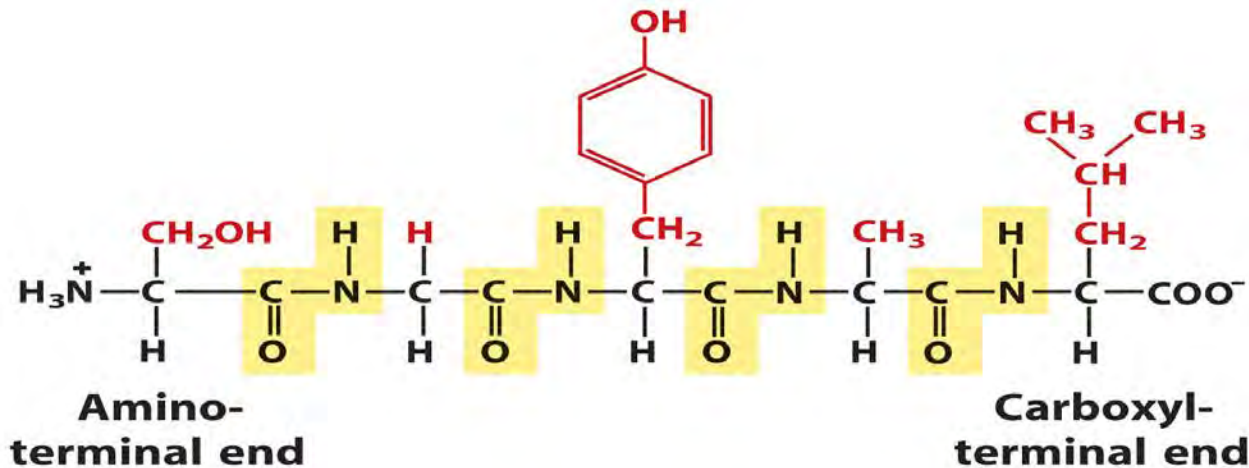
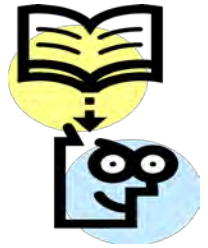
N-terminal

C-terminal





Are You Getting It??



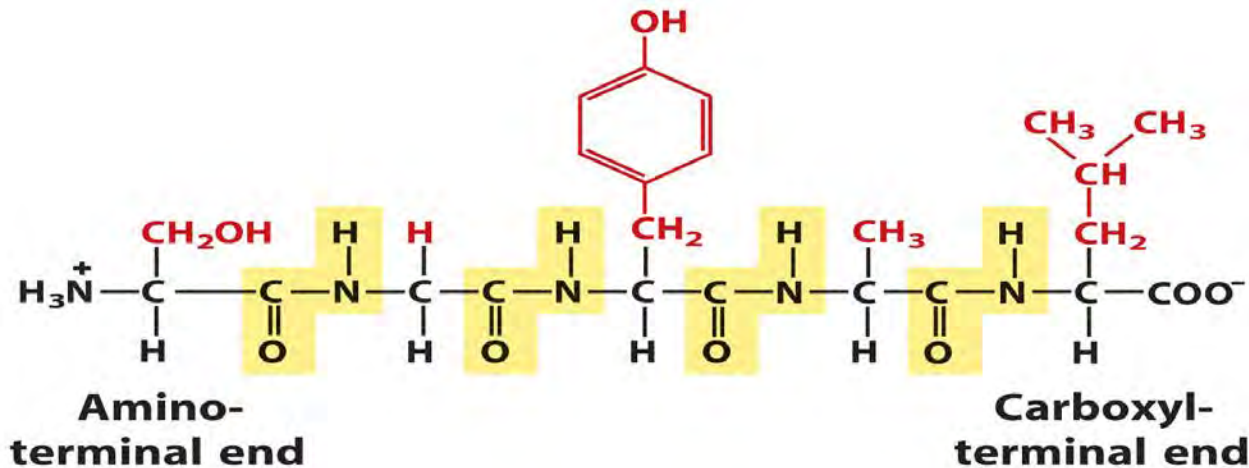
- How many amino acids are in this peptide?
- How many pKa values does this peptide have? (include serine)
- What is the charge at pH = 1?
- What is the charge at pH = 14?



Are You Getting It??



Answer



- How many amino acids are in this peptide? **5**
- How many pKa values does this peptide have? (include serine) **4**
- What is the charge at pH = 1? **+1**
- What is the charge at pH = 14? **-3**



Are You Getting It??



Ala-Gly-Lys-Gln-Arg-Phe-Asp

- a) How many peptide bonds are in this peptide?
- b) How many pKa values does this peptide have?
- c) What is the charge at pH = 1?
- d) What is the charge at pH = 14?



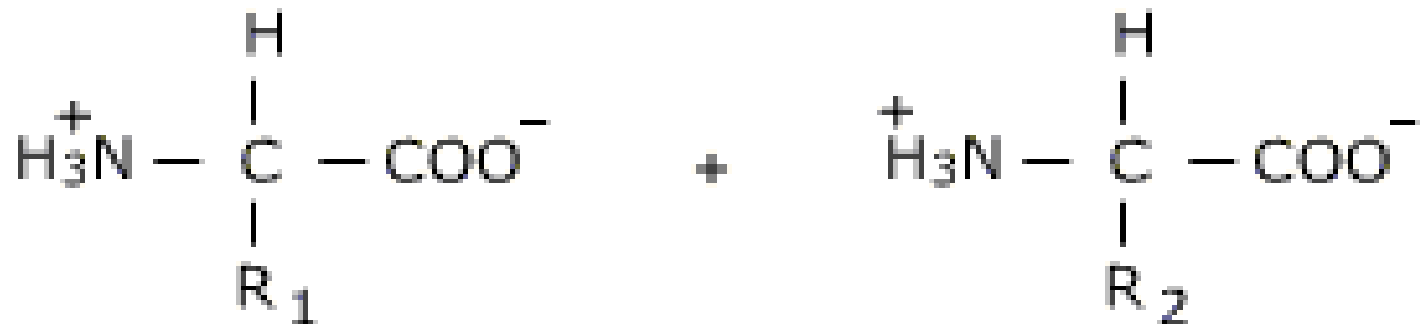
Are You Getting It??



Answer

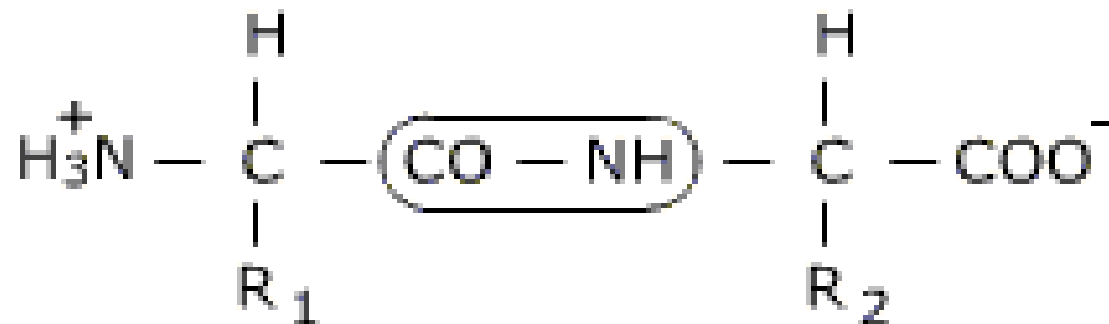
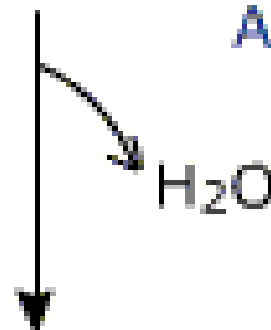
Ala-Gly-Lys-Gln-Arg-Phe-Asp

- a) How many peptide bonds are in this peptide? **6**
- b) How many pKa values does this peptide have? **5**
- c) What is the charge at pH = 1? **+3**
- d) What is the charge at pH = 14? **-2**



Amino acid - 1

Amino acid - 2



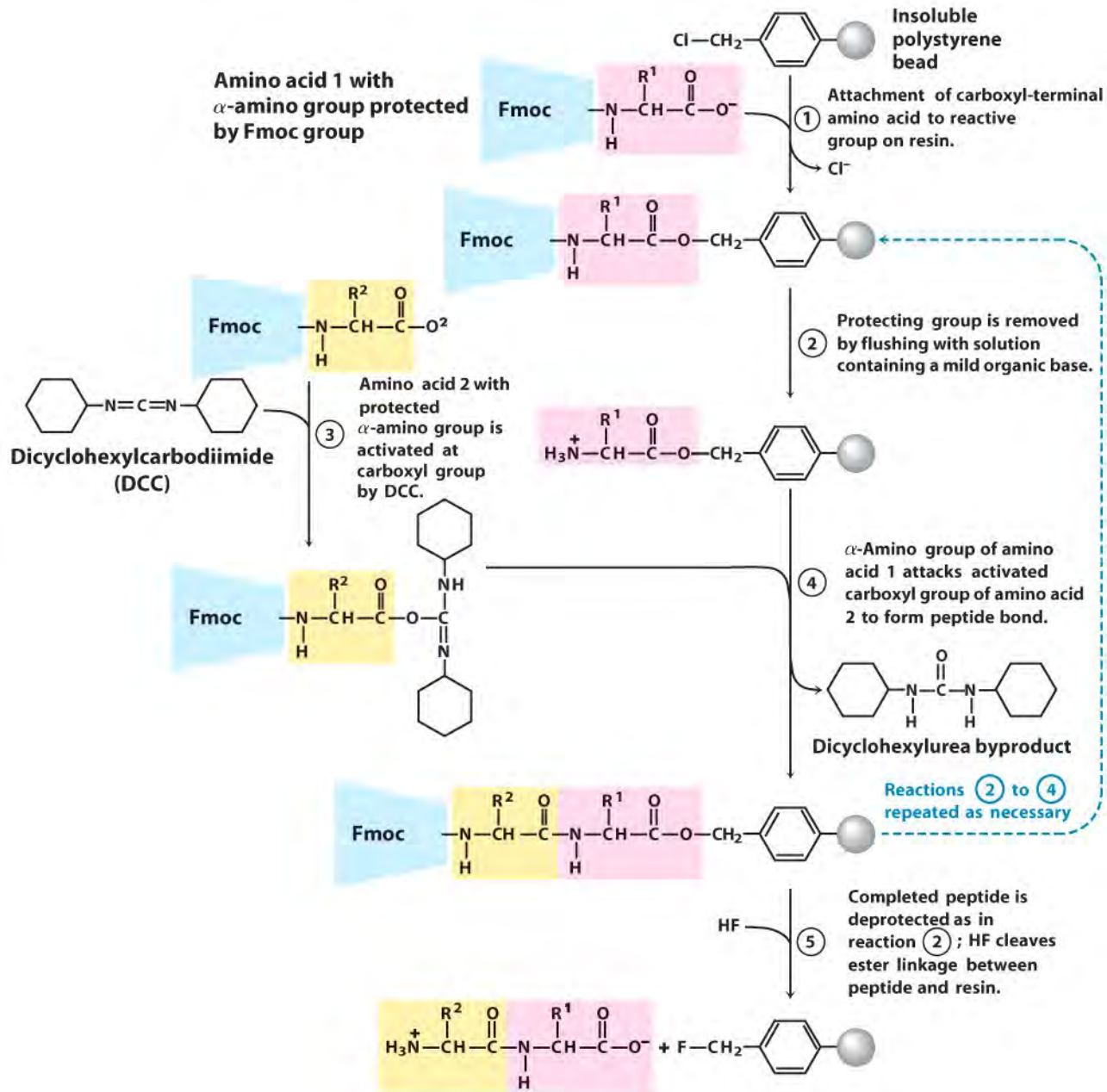


TABLE 3-8 Effect of Stepwise Yield on Overall Yield in Peptide Synthesis

<i>Number of residues in the final polypeptide</i>	<i>Overall yield of final peptide (%) when the yield of each step is:</i>	
	96.0%	99.8%
11	66	98
21	44	96
31	29	94
51	13	90
100	1.7	82