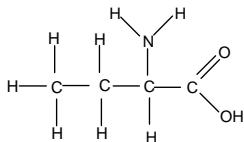


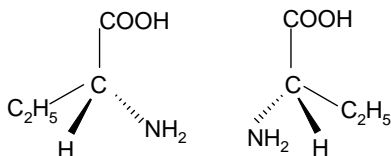
4.8 ANSWERS TO EXERCISES

4.8 Exercise 1

1. a)

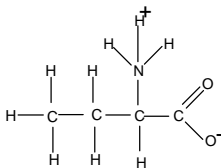


b)



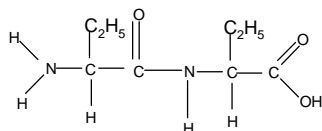
- c) i) $\text{C}_2\text{H}_5\text{CH}(\text{NH}_2)\text{COOH} + \text{HCl} \rightarrow [\text{C}_2\text{H}_5\text{CH}(\text{NH}_3^+)\text{COOH}]\text{Cl}^-$
 ii) $\text{C}_2\text{H}_5\text{CH}(\text{NH}_2)\text{COOH} + \text{NaOH} \rightarrow \text{C}_2\text{H}_5\text{CH}(\text{NH}_2)\text{COO}^-\text{Na}^+ + \text{H}_2\text{O}$

d)

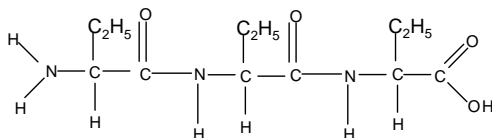


amino acids can form ionic bonds with each other in solid state
 strong electrostatic attraction leads to a high melting point

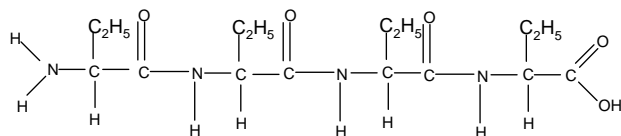
e) i)



ii)



iii)



2. a) It has a helical shape.

Attraction between the H attached to the N and the N or O atoms causes the molecule to bend, forming hydrogen bonds between different peptide links.

b)

