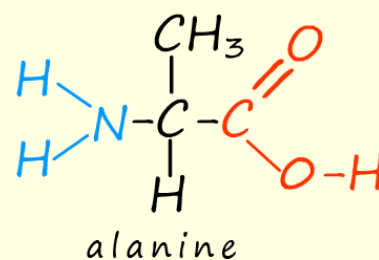


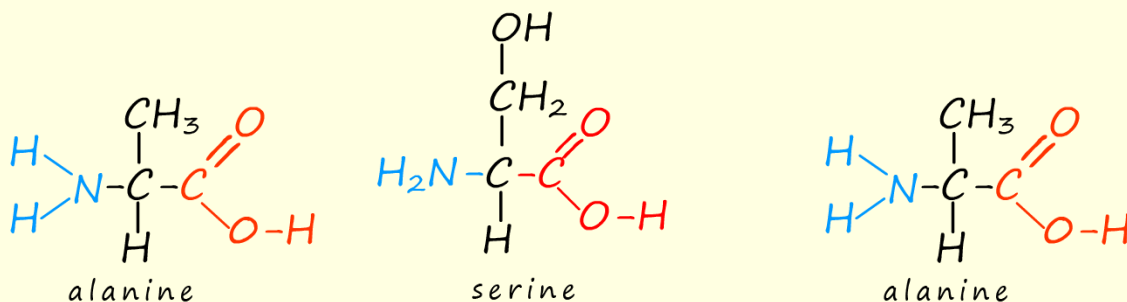
Proteins and polypeptides

Answer all the questions below as fully as you can then check your answers

1. The structure of the amino acid alanine is shown opposite
 - a. What is the correct IUPAC name for alanine?
 - b. Draw the structure of the dimer or dipeptide formed when two alanine molecules bond together.
 - c. Name the bond that holds these two amino acids together.



2. A tripeptide is formed three amino acids. Draw the structure of the tripeptide formed when the amino acid serine bonds to two alanine molecules. Place the serine molecule between the two alanine molecules.



3. What is meant by the terms primary and secondary structure when describing a protein?
- b. Describe two common arrangements for the secondary structure of a protein.

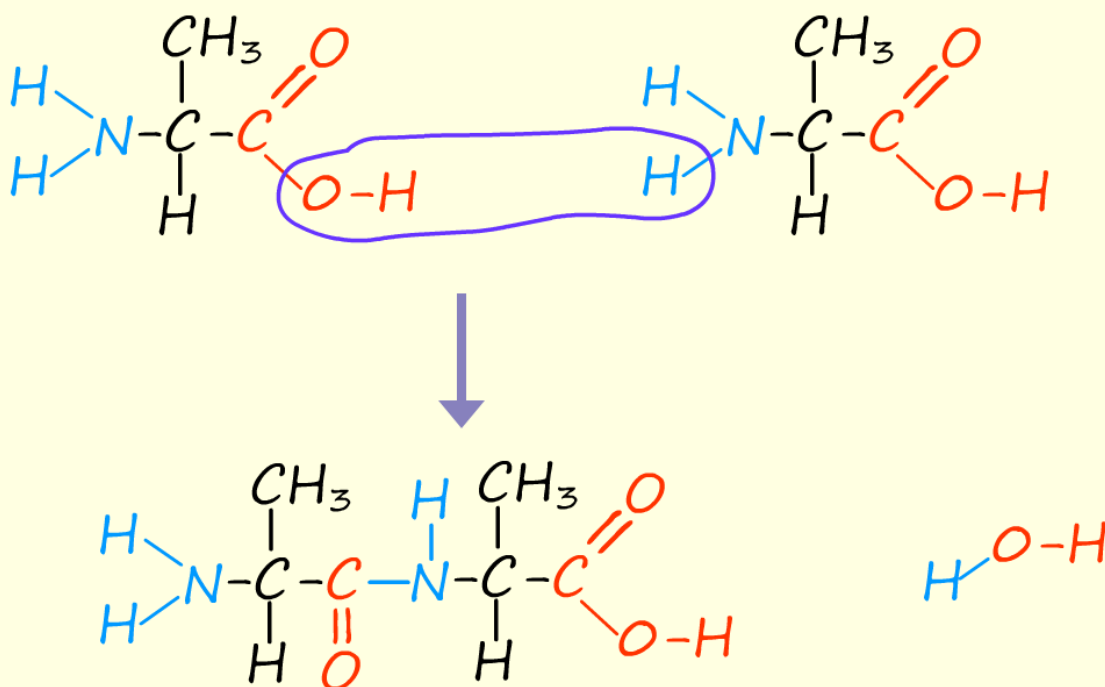
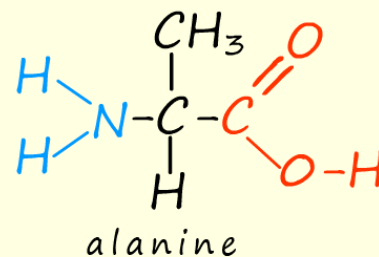
Answers

2. The structure of the amino acid alanine is shown opposite

a. What is the correct IUPAC name for alanine?

2-aminopropanoic acid

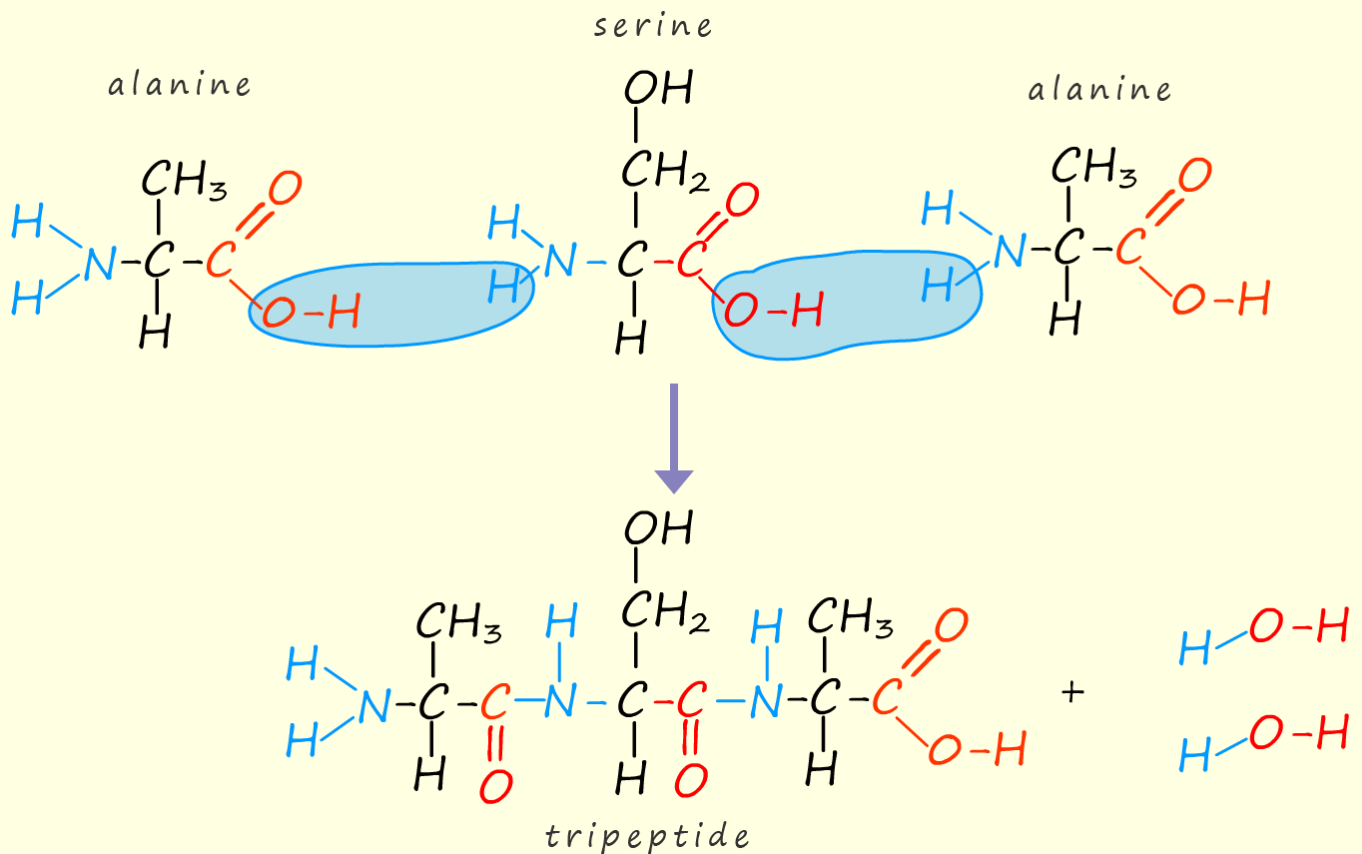
b. Draw the structure of the dimer or dipeptide formed when two alanine molecules bond together.



c. Name the bond that holds these two amino acids together.

Peptide link or amide bond

2. A tripeptide is formed from three amino acids. Draw the structure of the tripeptide formed when the amino acid serine bonds to two alanine molecules. Place the serine molecule between the two alanine molecules.



3. What is meant by the terms primary and secondary structure when describing a protein?

The primary structure of a protein simply lists the order of the amino acid residues in the long polypeptide chain.

The secondary structure gives details on how parts of the protein structure are folded and arranged.

- b. Describe two common arrangements for the secondary structure of a protein.

α -coil and β -pleated sheet are two arrangements