



Select the true statements about protein secondary structure.

- A. In a β -pleated sheet, the side chains extend above and below the sheet.
- B. Peptide bonds stabilize secondary structure.
- C. The β -pleated sheet is held together by hydrogen bonds between adjacent segments.
- D. In an α -helix, the side chains are located inside the helix.
- E. The secondary level of protein structure refers to the spatial arrangements of short segments of the protein.

The correct answer is C. The β -pleated sheet is held together by hydrogen bonds between adjacent segments.

Proteins are made up of a long chain of amino acids that can fold into various structures. Two of the most common secondary structures are the α -helix and β -sheet. These structures are formed through regular hydrogen bonding between the N-H and C=O groups of the amino acids in the protein chain.

The α -helix and β -sheet structures are considered intermediate structures that occur within a segment of the protein before it folds into its final 3D tertiary structure. The formation of these secondary structures plays a critical role in the stabilization of the protein, contributing to its overall function. Understanding the formation of these secondary structures is essential in predicting protein function and behavior.