Chapter 5: pp. 77-85

1. List at least 4 different roles of proteins.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. How many kinds of amino acids are there?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Label the five basic parts of an amino acid.



1. Some side chains are polar and some are nonpolar. How can you tell the difference? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What kind of bond joins amino acids together in a polypeptide?

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1. Who determined the sequence of the first protein? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Explain what the primary structure of a protein is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What role do genes play in the primary structure of a protein? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Name two types of secondary structure:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Name four bonds that help determine tertiary structure: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What is the difference between tertiary and quaternary structure? \_\_\_\_\_\_\_\_\_\_\_\_

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1. Define **denaturation**: \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Name two things that can denature proteins? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Describe the role of **chaperonins**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Why haven’t scientists discovered the “rules” to protein folding by now?

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