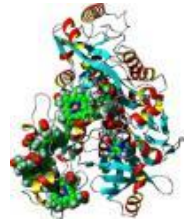


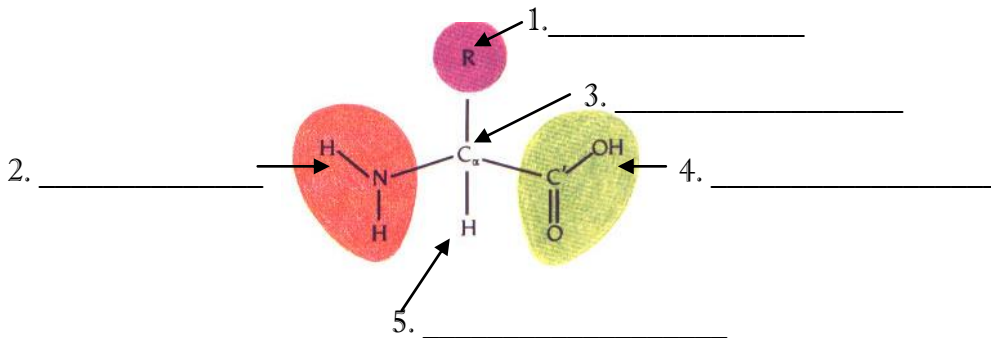
The #1 job of every living cell is making _____.
Cells define and distinguish themselves by way of the _____ that they synthesize.
Describe 7 jobs performed by proteins in living cells:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____



Proteins are polymers constructed of monomers named _____.
Polymers of amino acids are called _____.

Identify each of the five parts of the amino acid pictured below:

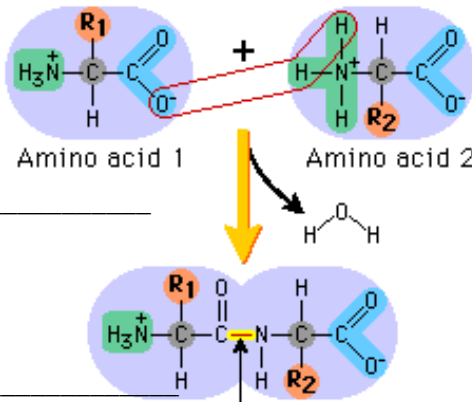


Become familiar with the names of the amino acids by naming them all below, in alphabetical order of course. (just kidding on the order)

- | | | |
|-----------|-----------|-----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | 11. _____ | 12. _____ |
| 13. _____ | 14. _____ | 15. _____ |
| 16. _____ | 17. _____ | 18. _____ |
| 19. _____ | 20. _____ | |

True (+) or False (0)

- _____ All living things (including bacteria) utilize the same 20 amino acids during protein construction.
- _____ Every protein has at least one of each of the 20 amino acids in it.
- _____ The "simplest" amino acid is glycine.
- _____ All amino acids are hydrophilic.
- _____ All amino acids have carboxyl and amino functional groups.

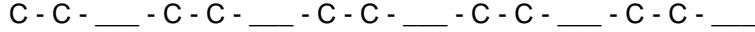


What is the name of this bond? _____

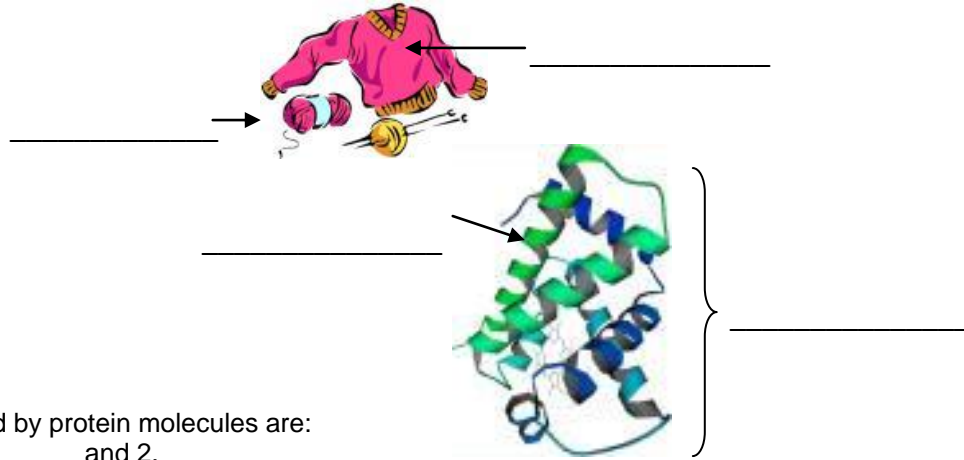
Is this bond ionic or covalent? _____

A polymer of amino acids linked by these bonds is called a _____.

The "backbone" of a polypeptide has the repetitive elemental sequence:



Using the analogy of yarn and sweaters in your textbook, yarn is to _____ as a sweater is to _____.



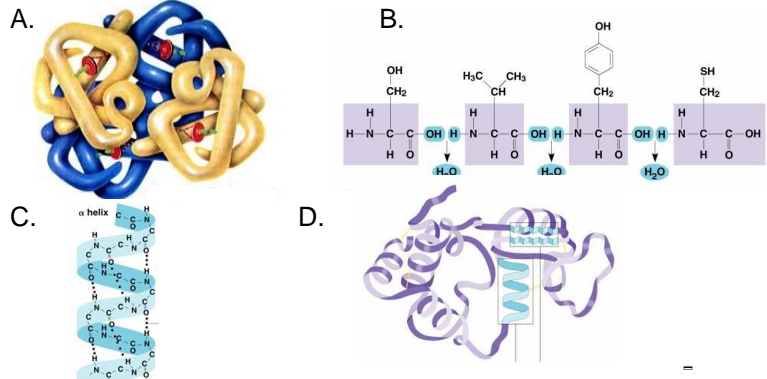
The two forms assumed by protein molecules are:

1. _____ and
2. _____

After polypeptide assembly occurs, the molecule "folds" into a form or shape. Is this a *regulated* or *spontaneous* activity? _____

Four Levels of Protein Structure Matching

- _____ Primary structure
- _____ Secondary structure
- _____ Tertiary structure
- _____ Quaternary structure

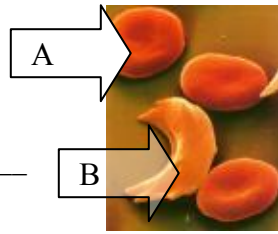


What determines the sequence of amino acids during primary protein assembly?

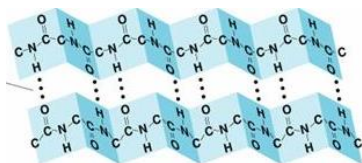
What type of cell is "A"? _____

What is wrong with cell "B"?

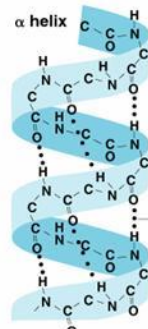
How did it get that way? _____
 What two forms can the *Secondary structure* of protein assume?



1. _____



2. _____



Proteins are held in their secondary structures by _____ bonds.

Are pleated sheets more likely to be utilized in *fibrous* or *globular* proteins? _____

The conformation of a Tertiary structure protein is maintained by _____ bridges (or linkages).

Which is stronger, a *bridge* or a *hydrogen* bond? _____

Collagen is the most common human protein. It consists of _____ (#) _____-shaped strands twisted around one another for incredible _____.

What is the protein of human hair? _____

If a protein changes shape as a result of environmental influence, the protein is said to be _____.

Name three different *denaturing agents*:

1. _____
2. _____
3. _____



Why is this fried egg pictured to the left? _____



Why is this bowling ball pictured to the left? _____

Prote-ins (Get It?)

_____ The oxygen-binding protein of red blood cells.

_____ Is denaturization reversible?

_____ What happens when a protein in an aqueous solution is placed in an organic solvent?

_____ Protein molecules that assist in the folding of other protein molecules are called _____.