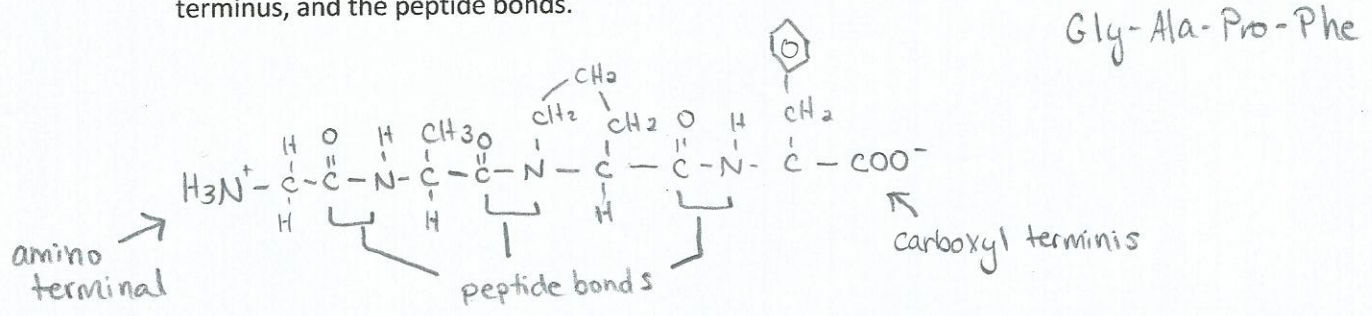


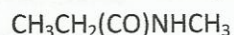
1. The _____ structure is the amino acid sequence. b
 - a. Tertiary
 - b. Primary
 - c. Alpha helix
 - d. Beta sheet
2. The _____ structure is how proteins are related to one another. a
 - a. Quaternary
 - b. Protein
 - c. Secondary
 - d. Antiparallel
3. _____ bonds are between strands while _____ bonds are within the strand. d
 - a. Peptide hydrogen
 - b. Hydrogen hydrogen
 - c. Disulfide peptide
 - d. Hydrogen peptide
4. _____ bonds are categorical of the secondary structure of proteins. d
 - a. Peptide
 - b. Nonpolar
 - c. Salt bridge
 - d. Hydrogen
5. The _____ structure is defined as the overall protein structure or the spatial arrangement of secondary structures. c
 - a. Quaternary
 - b. Beta sheet
 - c. Tertiary
 - d. Peptide backbone
6. Which amino acid sidechain has a positive one charge? c
 - a. Valine
 - b. Glutamic acid
 - c. Histidine
 - d. Serine
7. The third residue in the following peptide sequence is _____ and has _____ peptide bonds. d
 Ala-Trp-Ile-Asp-Tyr-Pro
 - a. Aspartic acid five
 - b. Isoleucine four
 - c. Aspartic acid four
 - d. Isoleucine five

8. Draw a tetrapeptide containing only nonpolar residues. Label the amino terminis, carboxyl terminus, and the peptide bonds.



REVIEW MULTIPLE CHOICE

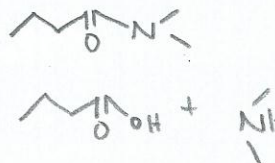
1. What is the name of the following molecule? c



- N-propyl methanoic acid
- Methyl propyl amide
- N-methyl propanamide
- Methyl acetamide

2. _____ and _____ will react to form N,N-dimethyl butanamide. b

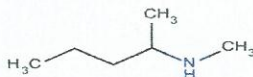
- $\text{CH}_3\text{-NH-CH}_2\text{CH}_3$ and $\text{CH}_3\text{CH}_2\text{COOH}$
- $\text{CH}_3\text{-NH-CH}_3$ and $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$
- NH_3 and $\text{CH}_3\text{C}(\text{CH}_3)_2\text{CH}_2\text{COOH}$
- CH_3NCH_3 and $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$



3. The ammonium cation has what type of charge? d

- +2
- 2
- Neutral
- +1

4. What the IUPAC name for the following molecule? c



N-methyl-2-pentanamine

- N-methyl-hexanamine
- Methyl 2-pentanamine
- N-methyl-2-pentanamine
- Methyl pentyl amine

5. A diacid and a diamine react to form a _____. b

- Amino acid
- Polyamide
- Heterocyclic amine
- Quaternary ammonium salt

6. Two examples of polyamides are a

- Kevlar and nylon
- Kevlar and pumiliotoxins
- Quinine and caffeine
- Nylon and decongestants

I. Label each as either being a globular protein or fibrous protein description.

1. globular consists of various secondary structures
2. fibrous long fibers or strands
3. fibrous consists of a single secondary structure
4. globular functional proteins
5. globular compact
6. fibrous few residues that repeat
7. globular most or all 20 residues
8. fibrous structural proteins
9. fibrous insoluble in water
10. globular can be water soluble

II. Answer the Following Questions.

11. What are two examples of fibrous proteins? Describe them.
 - 1) keratins - 2 or 3 strands of α helix; disulfide bonds hold them together; hair
 - 2) collagen - 3 braided strands of a left-handed helix - held together by hydrogen bonds - connective tissue
12. Describe the process of getting your hair chemically straightened or curled.
 - 1) break the current disulfides
 - 2) reoxidize the now free cysteines to new disulfides

*changes how one fiber to the next is oriented
13. Name the globular protein responsible for oxygen transport protein in muscles.

Myoglobin
14. What is the name of the protein coat that surrounds a virus (DNA or RNA core)? What is this made of?

capsid - made of many identical protein subunits
15. denaturation is the disruption of some part of the secondary, tertiary, or quaternary structure.

III. Since ions and polar compounds cannot pass through the lipid bilayer, transmembrane channels are required for transport across cell membranes. Match each type of transport with its description.

- | | |
|---|---|
| 16. Uses protein channels to increase the rate of diffusion | a. Diffusion (passive transport) |
| 17. Moves particles from a higher to lower concentration | b. Facilitated transport |
| 18. Moves ions against a concentration gradient | c. Active transport |