

QUIZIZZ

## Protein Structure & Function

36 Questions

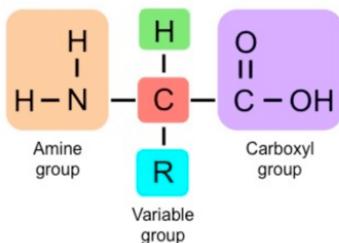
**NAME :**

## **CLASS :**

**DATE :**

1

What is the monomer of a protein?



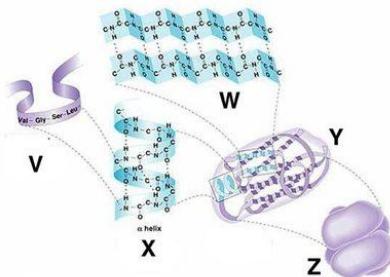
- a) amino acid       b) monosaccharide  
 c) fatty acid       d) nucleic acid

2. How many structures or stages are there in proteins?



3.

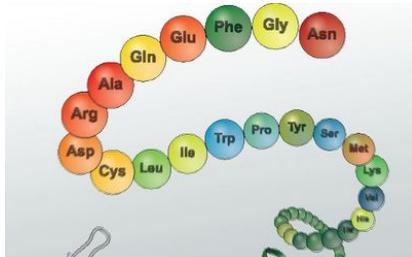
What is the function of a protein?



- a) cell energy
  - b) enzymes and body tissue
  - c) long term energy storage
  - d) contain genetic information

4.

The name of the initial chain of monomers in a protein is called.....



5. The two types of folding in the secondary structure are.....

- a) alpha-helix & beta-pleated sheets
- b) polypeptide & nucleotide
- c) globular & fibrous

6. The main bonding in the secondary structure of a protein is due to.....

- a) covalent bonding
- b) ionic bonding
- c) hydrogen bonding
- d) polar bonding

7. The tertiary structure folding in proteins is primarily due to the interactions of....

- a) the 'R' groups
- b) the 'P' groups
- c) the 'A' groups
- d) the 'S'

8. A specific class of proteins that regulate metabolism are known as

- a) Carbohydrates
- b) Monomers
- c) Catalysts
- d) Cholesterol

9. Hydrophobic or Nonpolar Side Chains tend to

- a) form barriers along the outside of the protein
- b) fold inward during folding when placed in aqueous environments
- c) be involved in forming active sites

10. The primary structure of a protein is a \_\_\_\_\_ linked together by \_\_\_\_\_ bonds.

- a) Polypeptide, Peptide
- b) Dipeptide, Hydrogen
- c) Polygon, Covalent
- d) Peptidoglycan, Ionic

11. Tertiary protein structures are mainly stabilized by

- a) Hydrogen Bonds
- b) DiSulfide Bridges
- c) Covalent Bonds
- d) All of the Above

12. There are a total of

- a) 12 Amino Acids
- b) 64 Amino Acids
- c) 24 Amino Acids
- d) 20 Amino Acids

13. The bonding of two amino acid molecules to form a larger molecule requires which of the following?

- a) Addition of a water molecule
- b) Removal of a water molecule
- c) Addition of a glycosidic bond
- d) Formation of a hydrogen bond

14. The tertiary structure of a protein is the

- a) bonding together of several polypeptide chains by weak bonds.
- b) order in which amino acids are joined in a polypeptide chain.
- c) unique three-dimensional shape of the fully folded polypeptide.
- d) organization of a polypeptide chain into an  $\alpha$  helix or  $\beta$  pleated sheet.

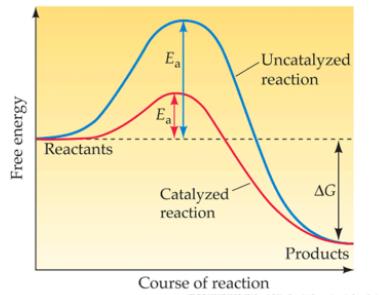
15. Which protein structures are stabilized and functional? (Check all those that apply)

- a) Primary
- b) Secondary
- c) Tertiary
- d) Quaternary

16. The term used to describe any case in which a protein's function at one site is affected by the binding of a regulatory molecule to a separate site. This may result in inhibition or stimulation of activity.

- a) Allosteric Regulation
- b) Chaperonin
- c) Feedback Inhibition only
- d) Cooperativity only

17.



In the graph, the energy level needs to increase before it goes back down. The increase is called the:

- a) enzyme energy
- b) substrate
- c) activation energy
- d) active site

18. A substrate in an enzyme catalyzed reaction is also called

- a) an active site.
- b) activation energy.
- c) the reactant.
- d) the product.

19. Which of the following is true for enzyme reactions?

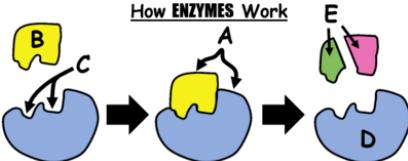
- a) The increase in temperature causes molecules to move faster, increasing a chance for substrate to bind in the active site.
- b) An increase in the amount of substrate will increase the rate of reaction by increasing the chance of substrate binding to the active site.
- c) At higher temperatures, the protein may be denatured or lose its shape, thus eliminating the active site and stopping the reaction.
- d) All of the answers are correct.

20. Which is not a function of proteins?

- a) defense
- b) speed up reactions
- c) movement
- d) all answers are correct

21. The monomer of a protein is called...

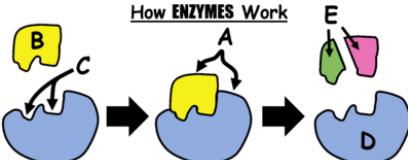
- a) an amino acid
- b) a monosaccharide
- c) a fatty acid
- d) a nucleotide

22.  Letter D...

- a) active site
- b) enzyme
- c) substrate
- d) products

23. What suffix is used in the names of most enzymes?

- a) -ase
- b) -nic
- c) -ose
- d) -yme

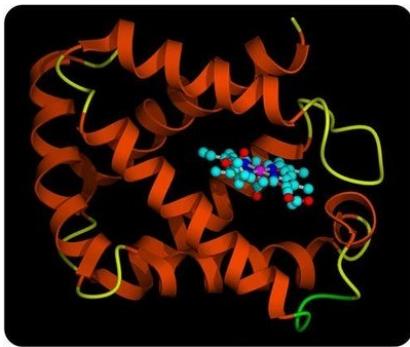
24.  Letter C...

- a) active site
- b) enzyme
- c) substrate
- d) products

25. Which is FALSE?

- a) simple sugars are monosaccharides.
- b) DNA is made up of nucleotides.
- c) Proteins are made of amino acids.
- d) Monomers are made of polymers.

26.



The quaternary structure of a protein is

- a) the simplest structure
- b) the most complex level
- c) is less complex than tertiary structure
- d) is less complex than primary structure

27. A protein denatures when

- a) a. temperature rises above functional level
- b) b. its 3D structure is compromised, but its primary structure remains
- c) c. it increases in function
- d) d. A and B

28. The chain of amino acids folds and coils on itself

- a) Primary
- b) Secondary
- c) Tertiary
- d) Quaternary

29. Two or more polypeptides attached together and work as one unit

- a) Primary
- b) Secondary
- c) Tertiary
- d) Quaternary

30. What is a peptide bond?

- a) Bond that holds two amino acids together.
- b) A bond that holds hydrogen and oxygen molecules together.
- c) A bond that holds the phosphate group of one nucleotide and a sugar of a neighboring nucleotide.
- d) A bond that is formed by the sharing of electrons.

31. **Each amino acid is different from the other due to....**

- a) The central carbon
- b) The R group
- c) The carboxyl group
- d) The amino group

**32. What elements make up amino acids?**

- a) Carbon, hydrogen, nitrogen and oxygen; and  b) Carbon, hydrogen and phosphorus only sometimes also sulfur
- c) Carbon, hydrogen and oxygen only  d) Carbon, hydrogen and nitrogen

**33. If you change the shape of a protein, will it work the same/properly**

- a) YES  b) NO

**34. Which type of protein is found in cartilage or tendons?**

- a) Storage Protein  b) Signal Protein
- c) Hormonal Protein  d) Structural Protein

**35. Proteins cannot be denatured by**

- a) heat  b) high pH
- c) low pH  d) Freezing

**36. What is the term for a chain of amino acids containing 6 to 30 residues**

- a) Essential Amino Acids  b) Peptide bond
- c) Oligopeptide  d) Polypeptide

**Answer Key**

- |      |       |       |       |
|------|-------|-------|-------|
| 1. a | 10. a | 19. d | 28. b |
| 2. d | 11. d | 20. d | 29. d |
| 3. b | 12. d | 21. a | 30. a |
| 4. a | 13. b | 22. b | 31. b |
| 5. a | 14. c | 23. a | 32. a |
| 6. c | 15.   | 24. a | 33. b |
| 7. a | 16. a | 25. d | 34. d |
| 8. c | 17. c | 26. b | 35. d |
| 9. b | 18. c | 27. d | 36. c |