

<Q>Which of the following protein structures is stabilized, only by covalent bonds?

<S>Y

<C+>Primary.

<C>Secondary.

<C>Tertiary.

<C>Quaternary.

<Q>Motifs represent:

<S>Y

<C>Primary structure of proteins.

<C+>Super-secondary structure of proteins.

<C>Secondary structure of proteins.

<C>Tertiary structure of proteins.

<Q>Approximately one third of amino acids composition of a polypeptide chain in collagen is:

<S>Y

<C+>Gly

<C>Val.

<C>Lys.

<C>Glu

<Q>Which of the following is not an example of supersecondary structure?

<S>Y

<C>Greek key.

<C+>Type I reverse turn.

<C>Beta-Alpha-Beta-unit.

<C>Beta-meander

<Q>Which of the following statements is CORRECT for fetal and maternal hemoglobins?

<S>Y

<C>fetal hemoglobin binds 2,3-bisphosphoglycerate with a similar affinity to maternal hemoglobin

<C>fetal hemoglobin binds 2,3-bisphosphoglycerate stronger than maternal hemoglobin

<C>fetal hemoglobin binds oxygen weaker than maternal hemoglobin

<C+>fetal hemoglobin binds oxygen stronger than maternal hemoglobin

<Q>A globular protein:

<S>Y

<C+>is spherical in shape.

<C>is water insoluble.

<C>is like collagen.

<C>is rod-like shape.

<Q>Which of the following statements about protein denaturation is True?

<S>Y

<C>Denaturation refers to the disruption of the primary structure of proteins.

<C>Denaturation can be performed by only one way.

<C+>Denaturation by heat is irreversible.

<C>Ribonuclease can be completely denatured only by the action of mercaptoethanol.

<Q>The major interaction responsible for the stability of myoglobin in its interior is:

<S>Y

<C>Hydrophilic interaction.

<C>Electrostatic interaction.

<C>Disulfide bonding .

<C+>Hydrophobic interaction.

<Q>Cooperative binding of oxygen by hemoglobin

<S>Y

<C>is induced by hemoglobin.

<C>is a result of different affinities for oxygen by each subunit protein.

<C+>is induced by oxygenation.

<C>is a result of interaction with myoglobin.

<Q>Which statement is NOT CORRECT about the peptide bond?

<S>Y

<C>The peptide bond has partial double-bond character.

<C+>The peptide bond is longer than the typical carbon-nitrogen bond.

<C>Rotation is restricted about the peptide bond.

<C>The carbonyl oxygen and the amide hydrogen are most often in a trans configuration with respect to one another.

<Q>Which of the following is NOT a fibrous protein?

<S>Y

<C>Hair.

<C>Wool.

<C+>myoglobin.

<C>Collagen.

<Q>Which of the following protein structures is stabilized only by hydrogen bonds?

<S>Y

<C>Primary.

<C+>Secondary.

<C>Tertiary.

<C>Quaternary

<Q>A motif is:

<S>Y

<C>a repetitive primary structure.

<C+>a repetitive supersecondary structure.

<C>a repetitive secondary structure

<C>a repetitive tertiary structure.

<Q>The amino acidsand.....can constitute up to 30% of the residues in collagen.

<S>Y

<C>Glycine & Proline.

<C>Glycine & Hydroxyproline.

<C>Hydroxylysine & Hydroxyproline.

<C+>Proline and Hydroxyproline

<Q>Which of the following amino acids disrupts the alpha-Helix?

<S>Y

<C+>Proline

<C>Phenylalanine

<C>Tyrosine

<C>Tryptophane

<Q>Which of the following marks a transition between one secondary structure and another?

<S>Y

<C>A Greek key.

<C+>A reverse turn.

<C>A motif.

<C>A Beta-bulge.

<Q>Myoglobin can bind only to:

<S>Y

<C+>Oxygen.

<C>Hydrogen.

<C>Carbon dioxide.

<C>2,3-Bisphosphoglycerate (BPG).

<Q>Which of the following statements about protein denaturation is True?

<S>Y

<C>Denaturation refers to the disruption of the primary structure of proteins.

<C>Denaturation can be performed by only one way.

<C>Denaturation by heat is reversible.

<C+>Ribonuclease can be completely denatured by the actions of urea and mercaptoethanol.

<Q>Which of the following is not a characteristic of hemoglobin?

<S>Y

<C>It contains two different types of subunits .

<C>It binds oxygen cooperatively..

<C+>It is an allosteric enzyme.

<C>It transports oxygen

<Q>Which of the following protein structures is stabilized only by non-covalent interactions?

<S>Y

<C>Primary.

<C>Secondary.

<C>Tertiary.

<C+>Quaternary.

<Q>A Beta-bulge is:

<S>Y

<C>a motif.

<C>a reverse turn.

<C+>a nonrepetitive irregularity found in antiparallel beta-sheets.

<C>a nonrepetitive irregularity found in parallel ك-sheets.

<Q>Which statement is NOT CORRECT about myoglobin?

<S>Y

<C>is an example of a protein tertiary structure.

<C>consists of a single polypeptide chain.

<C+>exhibits positive cooperativity when oxygen binds to it.

<C>has eight alpha-helical regions.

<Q>hemoglobin is an efficient system for oxygen delivery from lungs to muscles due to:

<S>Y

<C>the binding of the heme with Fe(III)

<C>similar binding affinities for oxygen at different pH values

<C>the fact that binding with 2,3-bisphosphoglycerate has no effect on oxygen binding

<C+>the positive cooperativity.

<Q>Hemoglobin differs from myoglobin because

<S>Y

<C>it does not have a heme group

<C+>it is a tetramer, whereas myoglobin is a single polypeptide chain

<C>it does not contain any helical regions

<C>it contains more beta-pleated sheet structure

<Q>Which of the following is a globular protein?

<S>Y

<C>silk

<C+>Ribonuclease.

<C>keratin

<C>Collagen.

<Q>Which of the following statements is CORRECT about polypeptides?

<S>Y

<C+>alpha-helix is stabilized by hydrogen bonds

<C>alpha-helix is stabilized by covalent bonds

<C>beta-sheet is always of parallel type

<C>an oligomeric protein is a type of supersecondary structure

<Q>A repetitive supersecondary structure is

<S>Y

<C+>a module.

<C>a reverse turn.

<C>beta-bulge

<C>an antiparallel beta-sheet

<Q>Which of the following statements about collagen is CORRECT?

<S>Y

<C>it consists of a left-handed single helix

<C>it consists of a right-handed single helix

<C+>it consists of a right-handed triple helix

<C>it is soluble in water

<Q>An enzyme in a urea solution of high concentration will:

<S>Y

<C+>lose its activity

<C>have the highest activity

<C>keep its native three-dimensional structure

<C>be hydrolyzed completely

<Q>The main difference between myoglobin and hemoglobin molecules is

<S>Y

<C+>the positive cooperativity

<C>the presence of Fe(II)

<C>that histidine coordinates with oxygen molecule

<C>oxygen molecule does not oxidize Fe(II)

<Q>The peptide bond, characterized by rigid motion in proteins, is formed between:

<S>Y

<C+>The alpha-carboxyl group of one amino acid and the alpha-amino group of the next one.

<C>The alpha-carbon of one amino acid and the alpha-amino nitrogen of the next one.

<C>The alpha-carbon and the alpha-amino nitrogen of the same amino acid.

<C>The alpha-carbon and the alpha-carboxyl carbon of the same amino acid.

<Q>Modules represent:

<S>Y

<C>Primary structure of proteins.

<C+>Repeated supersecondary structures of proteins.

<C>Secondary structure of proteins.

<C>Tertiary structure of proteins

<Q>The oxygen binding affinity of hemoglobin decreases when

<S>Y

<C>there is an increase in oxygen partial pressure

<C>2,3-bisphosphoglycerate concentration decreases

<C>carbon dioxide concentration decreases

<C+>pH decreases

<Q>Which of the following is a common non-repetitive irregularity found in antiparallel Beta-sheets?

<S>Y

<C+>a beta-bulge

<C>an alpha-helix

<C>a greek key

<C>a reverse turn

<Q>Which of the following statements is CORRECT?

<S>Y

<C>binding of O₂ to myoglobin exhibits positive cooperativity

<C>increase in [H⁺] increases the affinity of O₂ to hemoglobin

<C+>decrease in [H⁺] increases the affinity of O₂ to hemoglobin

<C>decrease in [H⁺] decreases the affinity of O₂ to hemoglobin

<Q>Actively metabolizing muscle requires large amount of O₂, therefore,

<S>Y

<C+>they produce more H⁺

<C>they produce less H⁺

<C>they produce less CO₂

<C>the level BPD in blood is lowered

<Q>Cooperative binding of oxygen by hemoglobin:

<S>Y

<C>is induced by hemoglobin.

<C>is a result of different affinities for oxygen by each subunit protein.

<C+>is induced by oxygenation.



<C>is a result of interaction with myoglobin.

<Q>To what level of structure do alpha-helix belong?

<S>Y

<C>primary

<C+>secondary

<C>tertiary

<C>quaternary