

Biochemistry 1st Quiz
1429-1430H (First Semester)

Q1. Elastin is:

- a) The most abundant protein in human body.
- b) A globular protein.
- c) A rigid protein.
- d) Present in bones.
- e) Contains no hydroxylysine.

Q2. Which of the following statements regarding proteins is incorrect:

- a) Chaperones are important for protein folding.
- b) Denaturation of proteins does not result in hydrolysis of peptide bonds.
- c) In aqueous solutions the surface of proteins is rich in non polar amino acids.
- d) Cysteine is important for disulfide bond formation.
- e) Domains are small compact structures present in globular proteins.

Q3. In Alzheimer disease:

- a) It is a heritable disease.
- b) It is due to accumulation of denatured proteins.
- c) The accumulated proteins are infectious.
- d) There is aggregates of fibrils of β -pleated sheets conformation.
- e) The abnormal proteins act as a template for converting the normal protein.

Q4. As regards homotropic effectors:

- a) The effectors are different from the substrate.
- b) They bind by covalent bond to the enzyme.
- c) They cause feed back inhibition.
- d) Binding of the effectors exhibit cooperativity.
- e) They change the specificity of the enzyme to the substrate.

Q5. Which one of the following amino acid is sulfur containing:

- a) Glycine
- b) Serine
- c) Cystine
- d) Aspartic acid
- e) Arginine

Q6. What is the pH range at which a weak acid with a $pK_a = 5$, will act as a buffer:

- a) 2-4.
- b) 4-6.
- c) 6-8.
- d) 8-10.
- e) 10-12.

Q7. In competitive inhibition:

- a) Inhibitors bind to enzyme-substrate (ES) complex.
- b) Inhibitors are irreversibly bound to the active site of the enzyme.

- c) V_{max} is decreased.
- d) K_m is increased.
- e) There is increased affinity to the substrate.

Q8. All of the following statements regarding a prosthetic group are true, EXCEPT:

- a) They return to their original form, unchanged, at the end of the reaction.
- b) They are non protein part of the holoenzymes.
- c) They may be derived from vitamins.
- d) They are organic molecules.
- e) They are loosely bound to the enzyme.

Q9. C4 epimer of glucose is:

- a) Fructose.
- b) Mannose.
- c) Erythrose.
- d) Galactose.
- e) Ribose.

Q10. The glycosidic linkage in glycogen are:

- a) α -1,4 and α -1,6.
- b) β -1,4 and β -1,6.
- c) β -1,4 and α -1,6.
- d) α -1,4 and β -1,2.
- e) β -1,4 and α -1,2.

Q11-15. True or False:

- a. The peptide bond is a cis bond. [F]
- b. Alanine aminotransferase (ALT) is a specific marker for possible damage of the liver. [T]
- c. Extreme temperature causes denaturation of enzymes. [F]
- d. At pH less than 2, tryptophan will carry a net zero charge. [F]
- e. In humans, dietary cellulose is digested by β -endoglucosidase. [F]