

Biomedical Engineering

Biochemistry
Course Code : BME 291
Level : 200
Allowed Time : 30 min
16/11/ 2017
Second Semester 2017 /2018
Mid-term exam



Faculty Of Engineering

Student Name:

Student ID:

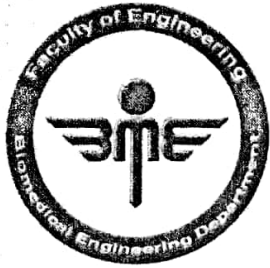
Answer all the following questions:

(total 15 marks)

Question (1): Complete all the following sentences:

(9 marks, 0,5 mark/each)

- 1- Examples of reducing disaccharides are lactose and maltose while raffinose is considered an example of trisaccharides.
- 2- The linear part of starch is known as amylose that is composed of glucose units linked together by 1,4 glycosidic linkage.
- 3- The storage form of carbohydrates in human is known as glycogen
- 4- The amino acid that is optically inactive is glycine
- 5- The two sulfur containing amino acids are cysteine and methionine while the two acidic amino acids are aspartic and glutamic acids
- 6- Tyrosine is classified as glucogenic and ketogenic while valine is classified as glucogenic regarding their biological value.
- 7- Collagen is composed of hydroxyproline and hydroxylysine as examples of post-translational modifications of amino acids.
- 8- The two examples of secondary protein structure are α -helix and β -pleated sheets
- 9- The unfolding of the protein structure without affecting peptide bonds is known as denaturation



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Question (2): Give the name for each of the following:

(6 marks, 1 mark/each)

Sentence	Answer
1- Isomers that are mirror image to each others.	<u>enantiomers</u>
2- The partial hydrolytic product of starch.	<u>dextrin</u>
3- The sugar acid obtained from galactose after oxidizing both the aldehydic and the last hydroxyl group.	<u>Mucic acid</u>
4- Amino acids that cannot be synthesized in the body and so they must be taken in diet.	<u>Essential amino acids</u>
5- The tripeptide chemically named γ -Glutamyl-cysteinylglycine	<u>Glutathione</u>
6- The overall three-dimensional shape of an entire protein molecule	<u>Tertiary protein structure</u>

**End of questions
Examination committee**

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