

Biomedical Engineering

Biochemistry
Course Code : BME 291
Level : 200
Allowed Time : 30 min
06/04/ 2017
Second Semester 2016 /2017
Mid-term exam (A)



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Model Answer

Answer all the following questions:

Question (1): Complete all the following sentences:

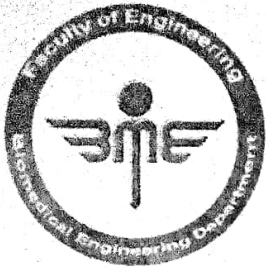
(5 marks, 0,5 mark/each)

- 1- Hydrogenation of unsaturated fatty acids can be used for manufacture of **margarine** that has disadvantages such as **deficiency of fat soluble vitamins, essential fatty acids**
- 2- The type of bonds stabilizing the α -helix structure of protein is **hydrogen bond**
- 3- The first lipoprotein produced in the body **is chylomicron** that is synthesized mainly from **diatery triglycerides**
- 4- The optically inactive amino acid is **glycine** while the amino acid having its amino group in ring structure is **proline**
- 5- An example of branched amino acid **is vlaine, leucine, isoleucine** while an example of sulfur containing amino acid is **cysteine and methionine**
- 6- Exposure of fats containing unsaturated fatty acids to direct light and moisture leads to **rancidity**

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

(6 marks, 1 mark/each)

Sentence	Answer
1- Two phospholipids containing no nitrogen bases.	Phosphatidic acid
	cardiolipin
2- The biologically active oligopeptide acts as antioxidant.	glutathione
3- The two amino acid post-translational modified in collagen.	proline



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	lysine
4- The overall three-dimensional shape of an entire protein molecule.	Tertiary structure
5- A lipoprotein its high concentration is associated with increasing severity of cardiovascular disease.	LDL
6- Unsaturated fatty acid 18:3(9,12,15).	Linolenic acid

Question (3): Determine whether the following sentences are true or false and correct the underlined words in case of wrong statements: (4 marks, 1mark/each)

1- Arachidonic acid is unsaturated fatty acid containing 20 C and 4 double bonds.

Answer: correct

2- Breakdown of the 1ry protein structure is known as protein denaturation.

Answer: wrong- hydrolysis

3- Cardiolipin is a phospholipid attached at carbon atom number one with α - β unsaturated fatty alcohol.

Answer: wrong- plsmalogen

4- Tyrosine amino acid is classified as nonessential amino acid according to its nutritional value.

Answer: correct

End of questions
Examination committee
Dr. Mohamed El-Mesery