LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**B.Sc.** DEGREE EXAMINATION – **CHEMISTRY**

FIFTH SEMESTER – **APRIL 2012**

# CH 5404 - BIO CHEMISTRY

Date : 30-04-2012 Dept. No. Max. : 100 Marks

Time : 1:00 - 4:00

**Part A**

**Answer ALL questions. (10 x 2 = 20 Marks)**

1. What is a peptide bond?
2. Define denaturation of a protein.
3. Give an example for the geometric specificity of an enzyme.
4. Mention the significance of enzymes in the kinetics of the reaction.
5. Define RM value of a fat.
6. Draw the structure of cholesterol.
7. Mention the differences between amylose and amylopectin.
8. What are disaccharides? Give an example.
9. Mention any two differences between DNA and RNA.
10. Define genetic code.

**Part B**

**Answer any EIGHT questions (8 x 5 = 40 Marks)**

1. How is Sanger’s method useful for the determination of amino acid sequence?
2. Mention the differences between plant and animal fats.
3. Briefly discuss the primary structure of proteins.
4. What are the factors affecting the enzyme activity? Explain.
5. What are phospholipids? Explain the types of phospholipids.
6. Explain the mechanism of electron transport chain.
7. What is payoff phase? Explain the steps involved.
8. Discuss briefly the translation process.
9. Mention any five salient features of biological oxidation.
10. Draw and explain the replication of DNA.
11. Define rancidity? Explain the types of rancidity.
12. Draw and explain the structure of t-RNA.

**Part C**

**Answer any FOUR questions (4 x 10 = 40 Marks)**

1. Explain the secondary structure of proteins.
2. What is enzyme inhibition? Explain any two types of enzyme inhibition.
3. a.) Discuss the β-oxidation theory of fatty acids.

b.) Explain the coenzyme action in brief. (5 + 5)

1. Draw and explain the steps involved in TCA cycle.
2. Explain in detail the characteristics of enzymes.
3. Draw and explain the double helical structure of DNA.

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