LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FOURTH SEMESTER – **APRIL 2012**

# CH 4204 - CHEMISTRY FOR BIOLOGISTS - II

Date : 19-04-2012 Dept. No. Max. : 100 Marks

Time : 1:00 - 4:00

# Part- A

*Answer* ***ALL*** *questions*: (10 × 2 = 20 marks)

1. What is a dipeptide? Give an example.
2. Define isoelectric point of an amino acid
3. Draw the structure of fructose.
4. What are fungicides? Give any two examples.
5. Give the compositions of NPK fertilizers.
6. What are isomerases? Give an example.
7. Give an example for the optical specificity of an enzyme.
8. Define iodine value of a fat.
9. What are PUFA? Give any two examples.
10. Draw the structure of papavarine and citral.

## Part – B

*Answer any* ***EIGHT*** *questions*: (8 × 5 = 40 marks)

1. Discuss in detail the primary structure of proteins.
2. Give any two methods of synthesis of amino acids.
3. How will you convert a hexose into pentose?
4. Give a brief over view of Citric acid cycle.
5. What are fertilizers? List the importance of the fertilizers.
6. How are the following synthesized?

(a) 2,4-D (b) 2,4,5-T

1. Explain the process of transcription in brief.
2. What are coenzymes? Explain the significance of coenzymes in enzyme action.
3. Mention the difference between plant and animal fats.
4. Define rancidity of a fat? What are the two types of rancidity? Explain.
5. What are lecithins and cephalins? Explain.
6. Explain the factors affecting the enzymatic activity.

**Part-C**

*Answer any* ***FOUR*** *questions*: (4 × 10 = 40 marks)

23. Discuss the classification of proteins based on their function.

24. Describe in detail the different types of soil

25. List the uses of insecticides. Give the method of synthesis of the following

a) DDT b) BHC c) Organophosphates (3+4+3)

26. What is enzyme inhibition? Discuss competitive and non-competitive inhibitions with examples.

27. a.) Explain the classification of lipids with examples.

b.) Discuss the classification of alkaloids.

28. Draw and explain the double helical structure of DNA.

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