

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**



**B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY & ADV. ZOOLOGY**

**FOURTH SEMESTER – APRIL 2013**

**CH 4204 - CHEMISTRY FOR BIOLOGISTS - II**

Date : 29/04/2013

Dept. No.

Max. : 100 Marks

Time : 1:00 - 4:00

**Part-A**

Answer **ALL** questions.

(10 x 2 = 20 marks)

1. What is meant by denaturation of protein?
2. Mention any three important properties of an enzyme.
3. What are unsaturated fatty acids? Give an example.
4. What are lipids?
5. Define mutation.
6. Draw the structure of cytosine and adenine.
7. Draw the Haworth and Fischer structure of fructose.
8. What is hydrogenation of oil?
9. How will you prepare DDT?
10. What are terpenes?

**Part-B**

Answer any **EIGHT** questions.

(8 x 5 = 40 marks)

11. Describe the classification of protein based on its structure.
12. Discuss the lock and key hypothesis of enzymes action
13. Explain the Sanger's method for the identification of N – terminal amino acid.
14. Write a note on the following i) lecithins ii) cephalins iii) plasmalogens
15. What are the differences between plant and animal fats?
16. Explain the structure of RNA.
17. What are nucleic acids? Give their components.
18. Explain the first five steps involved in glycolysis process.
19. Write a note on a) Mutarotation b) Inversion of sugar (2½ + 2½)
20. What are terpenes? How are they classified? Give any two examples.
21. Explain the analysis of soil by colorimetric method.
22. Discuss the role of macro nutrients.

### Part-C

Answer any **FOUR** questions.

(4 x 10 = 40 marks)

23. What are enzyme inhibitors? Explain competitive and non-competitive inhibition.
24. Explain the steps involved in Cholesterol biosynthesis.
25. Differentiate between DNA & RNA.
26. Explain the complete changes that occur during one complete turn of the citric acid cycle.
27. What are alkaloids? How are they classified? Discuss the structures and occurrence of any three alkaloids.
28. Describe in detail the electron transport mechanism.

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