



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

**B.Sc. DEGREE EXAMINATION – PLANT BIO. AND PLANT BIOTE. & ADV. ZOO.**

THIRD SEMESTER – NOVEMBER 2015

**CH 3204 - CHEMISTRY FOR BIOLOGISTS - II**

Date : 12/11/2015  
Time : 09:00-12:00

Dept. No.

Max. : 100 Marks

**Part-A**

*Answer ALL questions.*

**(10 × 2 = 20)**

1. What is denaturation of protein?
2. Mention the modification of Michaelis-Menton equation when (i)  $K_m \gg [S]$  (ii)  $[S] \gg K_m$ .
3. What are steroids? Give an example.
4. What are bile salts? Write their important uses.
5. Draw the structures of cytosine and thymine.
6. What is mutation?
7. Compare aerobic and anaerobic respiration.
8. Draw the Fisher and Haworth structure of D-fructose.
9. What are insecticides? Give an example.
10. What are NPK fertilizers?

**Part-B**

*Answer any EIGHT questions.*

**(8 × 5 = 40)**

11. How is the sequence of N-terminal amino acid of a peptide determined by Edman method?
12. How are enzymes classified? Give an example for each.
13. Discuss the effect of non-competitive inhibitors on enzyme reaction.
14. Write a note on the following (i) lecithins (ii) cephalins.
15. Discuss the functions of plasma lipids and lipoproteins.
16. What are the different types of RNA? Mention their functions.
17. What are the purine bases present in nucleic acids? Draw their structures.
18. What are anomers? Draw the anomeric structures of glucose and fructose.
19. What is glycoside linkage? Give an example with formation of disaccharide.
20. Discuss the structures of following alkaloids (i) Nicotine (ii) Conine.
21. Write the importance of anthocyanins and flavonoids.
22. Write briefly about the following herbicides (a) 2,4-D (b) 2,4,5-T

**Part-C**

*Answer any FOUR questions.*

**(4 × 10 = 40)**

23. Discuss the primary,  $\alpha$ -helix and the  $\beta$ -sheet structure of protein
24. Explain the various steps involved in Cholesterol biosynthesis.
- 25a. Write any five differences between DNA and RNA. **(5)**
  - b. Draw and explain the structure of t-RNA. **(5)**
26. What is TCA cycle? Describe the steps involved in the cycle.
- 27a. Discuss the various types of soil. **(5)**
  - b. What are alkaloids? How are they classified? **(5)**
28. How are terpenes classified? Explain them with suitable examples.

\*\*\*\*\*