



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND ADV.ZOOLOGY

FOURTHSEMESTER – APRIL 2018

16UCH4AL03- GENERAL CHEMISTRY FOR BIOLOGY-II

Date: 25-04-2018
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

Part-A

Answer ALL questions.

(10 × 2= 20)

1. What are zwitter ions? Cite an example
2. Write the Biuret test for proteins.
3. What is rancidity?
4. Draw the molecular structure of a steroid hormone.
5. Write the types of RNA.
6. What is meant by replication of DNA?
7. Mention the relationship between glycolysis and respiration briefly.
8. Write a chemical test to identify glucose.
9. Distinguish between flavone and isoflavone.
10. Write the various physical and chemical parameters in soil analysis.

Part-B

Answer any EIGHT questions.

(8 × 5= 40)

11. How is glycine prepared by Gabriel-phthalimide synthesis? Give any two chemical reactions of it.
12. Explain the secondary structure of proteins.
13. What are enzymes? Discuss the lock and key mechanism of enzyme action.
14. What are lipids? How are they classified?
15. Write a note on functions of Cholesterol.
16. Draw the structure of purine and pyrimidine bases in DNA.
17. Bring out the differences between DNA and RNA
18. Write a note on fermentation.
19. Explain photosynthesis.
20. Describe the procedure for any two tests for carbohydrate.
21. Write an explanatory note on the classification of Alkaloids.
22. How is flavonoid isolated? Explain with an example.

Part-C

Answer any FOUR questions.

(4 × 10= 40)

- 23a. How is N-terminal sequence of amino acid determined by Sanger's method?
- b. Describe the classification of enzymes with suitable examples. **(5+5)**

- 24a. Explain the following i) saponification of oils ii) hydrogenation of oils (2.5+2.5)
b. Discuss the functions of Albumin a plasma protein (5)
- 25a. Describe the Waston and Crick's model of DNA.
b. Give an account of transcription of DNA. (5+5)
- 26a. Discuss the inversion of cane sugar.
b. Explain the differences between reducing sugar and non-reducing sugar. (5+5)
- 27a. Write a description on the types of flavanoids. (5)
b. Discuss the biological importance of terpenoids and steroids. (2.5 + 2.5)
- 28a. Explain the basis of the method of classifying insecticides.
b. Discuss any two types of enzyme inhibition with suitable examples (5+5)
