



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – NOVEMBER 2017

CH 3204 - CHEMISTRY FOR BIOLOGISTS - II

Date: 15-11-2017
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

Part-A

Answer ALL questions.

(10 x 2= 20)

1. Write any one method of preparation of glycine.
2. What is denaturation of protein?
3. What are lyases? Give an example.
4. How do oils differ from fats?
5. What are steroids? Give an example.
6. What are purines? Draw the structure of any one purine.
7. What is mutation?
8. Give any four functions of carbohydrates.
9. What are alkaloids? Give their classification.
10. How is Bordeaux mixture prepared? Mention its uses.

Part-B

Answer any EIGHT questions.

(8 x 5= 40)

11. What is Edman's reagent? Explain its use in the determination of amino acid sequence in proteins.
12. How are enzymes classified? Give an example for each.
13. Explain the Michael-Menton theory of enzyme catalysis.
14. Write short notes on the following: a) rancidity b) saponification
15. Give the classification of lipids. Mention their biological importance.
16. What are phospholipids? Briefly explain the functions of lecithin.
17. Write short notes on replication of DNA.
18. List out the applications of genetic engineering.
19. How do you differentiate reducing sugars from non-reducing sugars?
20. Mention the alkaloid present in tobacco. How is it extracted?
21. Describe the Watson-Crick's model of DNA.
22. What are fertilizers? How are they classified?

Part-C

Answer any FOUR questions.

(4 x 10= 40)

- 23a. What are proteins? (2)
- b. Discuss the primary and secondary structures of protein. (8)
24. Discuss in detail the differences between DNA and RNA.
- 25a. What are hormones ? (3)
- b Distinguish glucocorticoids from mineralocorticoids. (7)
- 26a. What is transcription? (3)
- b Explain the different types of RNA. (7)
- 27a. Write the classification of terpenes. (5)
- b Describe the isolation and importance of flavones. (5)
28. Name the terpene present in lemon grassoil. Outline its extraction and give its biological importance.
