

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

FOURTH SEMESTER – NOVEMBER 2016

CH 4204 – CHEMISTRY FOR BIOLOGISTS - II

Date: 11-11-2016

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

Part-A

Answer ALL questions.

(10 × 2= 20)

1. What are coenzymes?
2. How is glycine synthesized from serine?
3. What are lipoproteins? Mention its types.
4. How are steroids classified?
5. Draw the structure of Cytosine and Thymine.
6. Write any two differences between DNA and RNA.
7. What is glycosidic bond? Give an example.
8. Write down the biological importance and functions of carbohydrate.
9. What are insecticides? Give an example.
10. What is bordeaux mixture?

Part-B

Answer any EIGHT questions.

(8 × 5= 40)

11. Discuss the secondary structure of proteins.
12. Explain the mechanism for formation of enzyme-substrate complex.
13. What are phosphatides? Explain the types of phosphatides.
14. Define the following a) Rancidity b) Hydrogenation of oils.
15. Explain Watson and Crick model of DNA.
16. Write a brief note on genetic engineering.
17. How are carbohydrates classified?
18. Write a note on a) Mutarotation b) Inversion of cane sugar.
19. Explain the first five steps in the process of conversion of glucose to pyruvic acid.
20. Write a short note on a) 2,4-D b) 2,4,5-T.
21. Describe the manufacturing process of urea.
22. How is BHC prepared? Mention its uses.

Part-C

Answer any FOUR questions.

(4 × 10= 40)

23. Discuss any two methods to determine the N-terminal amino acid of a protein.
24. Write the steps involved in Cholesterol biosynthesis.
25. Draw and explain the structure of RNA.
26. Explain the overall process of citric acid cycle.
27. How are terpenes classified? Discuss the structure and occurrence of any three terpenes.
28. Discuss the significance of the following alkaloids with structure
a) Papaverine b) Nicotine c) Coniine.
