LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **PLANT BIO. & BIOTECH., ADV. ZOO.**

THIRD SEMESTER – **NOVEMBER 2014**

CH 3204 - CHEMISTRY FOR BIOLOGISTS - II

Date : 08/11/2014 Dept. No. Max. : 100 Marks
Time : 09:00-12:00

Part-A

Answer all the questions. Each question carries two marks: ***10x2=20***

1. Write any one method of preparation of glycine.
2. What is denaturation of proteins?
3. How do oils differ from fat? Mention their importance to living system?
4. Mention any two functions of androgens.
5. What is called Hoogsten base pairs?
6. Distinguish RNA and DNA.
7. What are anomers?
8. Draw the structure of α-D-fructopyranose and α-D-fructofuranose.
9. How is Bordeaux mixture prepared? Mention its uses.
10. Mention the physiological effect of nicotine.

Part-B

Answer any eight questions. Each question carries five marks: ***8x5=40***

11. Outline the synthesis of a dipeptide.
12. What is Edman's reagent? Describe its use in the determination of amino acid sequence in proteins.
13. Explain the Michaelis theory of enzyme catalysis.
14. Give the classification of lipids. Mention its biological importance.
15. Explain the types of plasma lipoproteins.
16. What are nucleic acids?Explain their constitution.
17. Explain the regulatory metabolism of DNA.
18. Write a short note on TCA cycle.
19. Explain the process of inversion of cane sugar.
20. Discuss the structure and uses of 2,4-D and 2,4,5-T.
21. What are fertilizers? How are they classified?
22. Mention the alkaloid that is derived from tobacco. How is it extracted?

Part-C

Answer any four questions. Each question carries ten marks: ***4x10=40***

23. a. How are enzymes classified? (5)

b. Discuss any two types of enzyme inhibition with examples. (5)

24. Write notes on (a)saponification (b) rancidity (c) hydrogenation of oils, and (d) Bile salts.

25. Discuss in detail the transcription and transmission of DNA.

26. Explain the following: (a) structural determination of fructose and (b) photosynthesis. (5+5)

27a Discuss the classification of terpenes. (5)

b. Describe the isolation and importance of flavones. (5)

28a. Name the terpene present in lemongrass oil. Outline its extraction and give its biological importance. (5)

b. Discuss various applications of lime-sulphur and DDT (5)

****