LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FOURTH SEMESTER – **APRIL 2016**

CH 4204 - CHEMISTRY FOR BIOLOGISTS - II

Date: 27-04-2016 Dept. No. Max. : 100 Marks
Time: 09:00-12:00

Part-A

Answer ALL questions. **(10 x 2= 20)**

1. Write down the acidic and basic properties of an amino acid.
2. What is peptide bond? How is it formed?
3. Mention any two properties of lipids.
4. What is hydrogenation of oils?
5. Draw the structures of Adenine and Guanine.
6. What is mutation?
7. What are glycosides? Indicate the glycosidic linkage.
8. Write the differences between aerobic and anaerobic respirations.
9. What is ADP? Draw its structure.
10. Draw the structure of DDT. Mention its uses.

Part-B

Answer any EIGHT questions. **(8 x 5= 40)**

11. How are enzymes classified? Give an example for each.
12. Discuss the different chemical bonds involved in protein structure.
13. What are the salient features of coenzymes?
14. What are phosphatides? Explain their types.
15. What are lipids? How are they classified?
16. Write a brief note on genetic engineering.
17. Discuss the classification of carbohydrates.
18. Write a note on catabolism and metabolism.
19. What are anomers? Draw the anomeric structures of glucose and fructose.
20. Write down the importance and uses of anthocynines, flavones and flavonoids.
21. How is urea manufactured?
22. Write a note on the following herbicides: a) 2,4-D b) 2,4,5-T

Part-C

Answer any FOUR questions. **(4 x 10= 40)**

23. Discuss Edman and Sanger's methods to determine the N-terminal sequence of amino acid.
24. Explain the steps involved in cholesterol biosynthesis.
25. Draw and explain the double helical structure of DNA.
26. Explain the overall process of TCA cycle.
27. How are terpenes classified? Discuss the structures and occurrence of any three terpenes.
28. Discuss the significance of the following alkaloids with structure
    a) Papaverine b) Nicotine c) Coniine

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