LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

U.G. DEGREE EXAMINATION – **ALLIED**

FOURTH SEMESTER – **APRIL 2025**

CH 4204 – CHEMISTRY FOR BIOLOGISTS - II

Date: 06-05-2025 Dept. No. Max. : 100 Marks

Time: 09:00 AM - 12:00 PM

SECTION A

Answer ANY FOUR of the following **4 x 10 = 40**

1. Discuss the determination of N-terminal and C-terminal analyses of proteins.
2. Write short notes on the inhibition of enzymes.
3. Discuss the classification of lipids with examples.
4. Explain the following: (5+5)

   (a) Rancidity of oils (b) Hydrogenation of oils
5. Explain the replication of DNA in detail.
6. Discuss the double helical structure of DNA.
7. Describe the steps involved in glycolysis.
8. Classify the alkaloids with examples.

SECTION B

Answer ANY THREE of the following **3 x 20 = 60**

9. a) Illustrate the primary and secondary structure of proteins.

   b) Elaborate on the mechanism of enzyme action. (14+6)
10. a) Compare and contrast the properties and functions of lecithins and cephalins.

    b) Outline the biosynthesis process of cholesterol. (10+10)
11. a) Write a note on protein synthesis.

    b) Briefly explain the effects of mutation and the role of genetic engineering. (10+10)
12. a) Differentiate between reducing and non-reducing sugars with examples.

    b) Explain the TCA cycle of energy production. (10+10)
13. Discuss the preparation of the following:

    (a) DDT (b) superphosphate of lime (c) BHC (d) Bordeaux mixture
14. a) Classify terpenes based on their structure and occurrence.

    b) Explain the types of soil in brief. (10+10)
