LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **CHEMISTRY**

FIFTH SEMESTER – **APRIL 2023**

CH 5404 – BIO CHEMISTRY

Date: 12-05-2023 Dept. No. Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

Part-A

Answer ALL questions. **(10 × 2 = 20 Marks)**

1. What are amino acids?
2. Define catabolism.
3. What are co-enzymes?
4. Give an example for enzyme specificity.
5. Define the term: iodine value of an oil.
6. What are EFA? Give examples.
7. Define oxidative phosphorylation.
8. What are reducing sugars? Give an example.
9. Mention any two differences between DNA and RNA.
10. Define the term: Genetic Code.

Part-B

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

11. Explain the differences between plant and animal cells.
12. Discuss the separation and purification of proteins by dialysis.
13. Describe the models used to explain the enzyme activity.
14. What are oxidoreductases and ligases? Explain with examples.
15. Discuss the factors affecting the enzyme activity.
16. Explain b-oxidation theory of lipids.
17. What are lipids? Explain their classification.
18. Discuss the structural features of starch and cellulose.
19. What are carbohydrates? Discuss the classification of carbohydrates.
20. Write a note on recombinant DNA technology.
21 What is DNA replication? Explain.
22. Explain the steps involved in transcription.

Part-C

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

23. How is N- and C-terminal of an amino acid determined? Explain any one method for Each.
24. Write a detailed note on the competitive and non-competitive inhibition with examples.
25. What are phospholipids? Explain the classification of phospholipids.
26. Explain the steps and significance of enzymes involved in Glycolysis.
27. Draw and explain the steps involved in TCA cycle.
28. Explain the double helical structure of DNA.

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