TB244277N

Reg. No :.....

Name :.....

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, MARCH 2024

2022 ADMISSIONS REGULAR

SEMESTER IV - COMPLEMENTARY COURSE 1

CH4C01B18 - Advanced Bio-Organic Chemistry

Time : 3 Hours **Maximum Marks : 60**

Part A

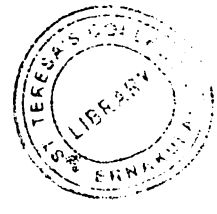
I. Answer any Ten questions. Each question carries 1 mark **(10x1=10)**

1. What are alkaloids? Give one example.
2. Recall the chemical components of soap.
3. Describe essential oils and list two examples.
4. What is Million's reagent?
5. Define isoelectric point of amino acid.
6. Explain the xanthoproteic test for proteins.
7. Define a codon.
8. What are oligosaccharides? Give one example.
9. Describe reducing sugar with an example.
10. Draw the Fischer projection and Haworth configuration of α-D-glucose.
11. Define beri beri.
12. Write the deficiency disease caused by cyanocobalamine.

Part B

II. Answer any Six questions. Each question carries 5 marks **(6x5=30)**

13. Explain the isolation methods for alkaloids.
14. Discuss briefly on the general properties of alkaloids. Explain the physiological activity of nicotine.
15. Discuss the primary and secondary structure of proteins.
16. Differentiate between fibrous and globular proteins with examples.
17. Differentiate between DNA and RNA.
18. Give an account of the industrial applications of cellulose.
19. Summarize the reactions of glucose with a) Br_2 water b) Na-Hg c) HI/P d) HCN e) NH_2OH.
20. List the functions of bile acids.
21. Explain the functions and deficiency diseases of vitamin B1 and B3.



Part C

III. Answer any Two questions. Each question carries 10 marks **(2x10=20)**

22. Explain the structure and physiological activity of coniine.
23. a) Explain different classifications of non polar amino acids and polar aminoacids. b)Explain the classification of protein based on chemical composition.
24. a)Distinguish between DNA and RNA. b)Explain the Lock and Key model of enzyme action.
25. Elucidate the structure of sucrose.