Reg. No ..... Name **24U441**

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2024

SEMESTER 4 - CHEMISTRY (COMPLEMENTARY FOR BOTANY AND ZOOLOGY)

COURSE : **19U4CPCHE4.2 - ADVANCED BIO-ORGANIC CHEMISTRY**

(For Regular - 2022 Admission and Improvement / Supplementary - 2021/2020/2019 Admissions)

Time : Three Hours Max. Marks: 60

PART A

Answer All (1 mark each)

1. Give any two examples for fibrous protein.
2. Give two important uses of ion exchange chromatography.
3. Give the structure of fundamental unit of natural rubber.
4. Give an example of a sex hormone.
5. Draw the structure of chloramphenicol.
6. Give any two examples for the carrier gases in gas chromatography.
7. Which polysaccharide is the building unit of plant cell wall?
8. What is ninhydrin? Give its structure.

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. How is nicotine extracted from tobacco leaves?
10. Saponification value.
11. Explain the principle involved in thin layer chromatography.
12. What does iodine number express?
13. What are the functions of proteins?
14. Name the alkaloid present in pepper?
15. What are narcotic drugs? Give examples.
16. Distinguish between polysaccharides and Oligosaccharides.

(2 x 6 = 12)

PART C

Answer any 4 (5 marks each)

17. Write briefly on gas chromatography.
18. Describe the manufacture of viscose rayon and its industrial applications.
19. What are the important methods used for the determination of N-terminal and C-terminal amino acid residues present in protein.
20. Elaborate the application of isoprene rule to citral?
21. Mention the physiological importance of cholesterol.
22. Write a note on drug addiction.

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. Give an account of primary and secondary structure of proteins.
24. Which are the members of Vitamin B group? Briefly discuss their sources, structures and functions. Indicate the diseases caused by their deficiency.

25. Discuss the Haworth ring structure of D-glucose. Also give the reactions of glucose with
(a) bromine water (b) phenyl hydrazine

26. Describe the following with an example each.
(a) Antibiotics (b) Antipyretics and Analgesics
(c) Antimalarials (d) Anticancer drugs

(10 x 2 = 20)