Reg. No ..... Name **21U432**

B. Sc. DEGREE END SEMESTER EXAMINATION - JULY 2021

SEMESTER 4 : CHEMISTRY

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

(For Regular - 2019 Admission)

Time : Three Hours Max. Marks: 60

PART A

Answer All (1 mark each)

1. In mammal, secretion of hormones is controlled by .....
2. Mention one use of Quinine and morphine
3. What is Sanger's reagent? Mention its use.
4. Write the name of the N-terminal and C-terminal amino acid residues in the given tripeptide.
   Ala – Gly – Phe
5. Define R_f value in chromatography.
6. Give any two examples for the carrier gases in gas chromatography.
7. What are disaccharides?
8. What are tranquilizers? Give one example.

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. What are fats and oils? How do they differ from each other?
10. What are waxes chemically?
11. Draw the structure of piperine?
12. How is nicotine extracted from tobacco leaves?
13. Write down the equations and name the products formed when glycine is heated.
14. What are the applications of HPLC?
15. Give the method of preparation of mercerised cotton.
16. Write a note on the mode of action of sulpha drugs in antibacterial activity.

(2 x 6 = 12)

PART C

Answer any 4 (5 marks each)

17. What is Diels' hydrocarbon? What is its relationship to steroids?
18. Mention two general characteristics of alkaloids
19. Explain, how electrophoresis is used for the separation of amino acids?
20. Write briefly on ion exchange chromatography.
21. Draw Fisher projection and Haworth configuration of α-D-glucose and β-D-glucose.
22. What are antibiotics? Explain its applications. Describe the structure of ampicillin.

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. Which are the members of Vitamin B group? Briefly discuss their sources, structures and functions. Indicate the diseases caused by their deficiency.
24. Write a note on
    a) Isoelectric point b) Zwitter ion property c) Denaturation of proteins
25. Discuss the structure and preparation of Sucrose.
26. Explain the biological effects of metal deficiency in human body.

(10 x 2 = 20)