

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc.Chemistry - END SEMESTER EXAMINATIONS - APRIL 2025
SEMESTER - VI

22UCHCT6014 - Chemistry of Biomolecules and Natural Products

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Describe the classification of amino acids along with their structures.
2. How can fructose be converted into glucose and glucose into fructose.
3. How do alkaloids occur in nature? Give the methods of extracting them from plants.
4. What are terpenes? How are terpenes classified?
5. Describe clinical manifestations of Vitamin E deficiency.
6. How will you determine the presence of methylene group in papaverine?
7. How is geraniol extracted from oil of roses? Give its physical, chemical properties and commercial uses.
8. Clinical Significance of Vitamin D deficiency.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. a) Write an account of the following:
 - (i) Zwitter ion and isoelectric point. (3)
 - (ii) Determine the structure of polypeptides. (3)
 - (iii) Give an account of the determination of primary structure of protein. (4)
10. a) Discuss the evidences on which the structure of sucrose is based. (6)
b) Compare and contrast the properties of glucose and fructose. (4)
11. How is nicotine obtained from tobacco leaves? Suggest a method for its synthesis and explain its structure.
12. Give the analytical and synthetic evidence on the basis of which the constitution of citral was arrived at.
13. Elucidate the structural of Vitamin C and gives its applications.
