D 140104 **(Pages : 2)** **Name.....**

Reg. No.....

SIXTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2026

Chemistry/Polymer Chemistry

CHE 6B 10—ORGANIC CHEMISTRY—III

(2020 Admission onwards)

Time : Two Hours Maximum : 60 Marks

Section A (Short Answers)

Answer questions up to 20 *marks.*
Each question carries 2 *marks.*

1. What are chromophores and auxochromes ?
2. What is spin-spin splitting ?
3. What is Ruff degradation ?
4. Define saponification value and iodine value.
5. State isoprene rule.
6. What are Epimers ? Give eg.
7. Give the structure and uses of citral.
8. What are Vitamins ? How is it classified ?
9. What are the physiological actions of nicotine ?
10. What is Vulcanisation ?
11. Sketch the structure of cholesterol.
12. What is cope rearrangement ?

(Ceiling of marks : 20)

Turn over

Section B (Paragraph)

Answer questions up to 30 *marks.*
Each question carries 5 *marks.*

13. What are the different type of electronic transitions occurred in UV-V is spectroscopy ?

14. What is chemical shift ? What are the factors affecting it ?

15. Write a note on DNA finger printing and its applications.

16. Discuss Edmann degradation method for the structure determination of peptides.

17. Write a short note on paper chromatography ?

18. What are HDL and LDL ? Explain.

19. What is meant by sigmatropic rearrangements ? Discuss[1, 5] sigmatropic rearrangement.

(Ceiling of marks: 30)

Section C (Essay)

Answer any **one** *question.*
The question carries 10 *marks.*

20. (i). The IR spectrum of an organic compound has bands at 3090 cm^{-1}, 2850 cm^{-1}, 2785 cm^{-1}, 1700 cm^{-1}, 1590 cm^{-1},745 cm^{-1} and 680 cm^{-1} Molecular formula of the compound is C_7H_6O. Deduce the structure of the compound.

    (ii) Explain the structure of DNA.

21. (i) Write down the mechanism of the following reactions.

        (a) Diels Alder reaction.

        (b) Claisen rearrangement.

    (ii) Discuss the cyclic structure of glucose.

(1 × 10 = 10 marks)