

SIXTH SEMESTER U.G. (CBCSS—UG) DEGREE EXAMINATION
MARCH 2024

Chemistry/Polymer Chemistry
CHE 6B 10—ORGANIC CHEMISTRY—III
 (2019 Admission onwards)

Time : Two Hours

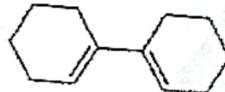
Maximum : 60 Marks

Section A (Short answers)

Answer questions up to 20 marks.

Each question carries 2 marks.

1. What are red shift and blue shift ?
2. Calculate the λ_{max} of:



3. Write a short note on spin-spin splitting observed in NMR spectroscopy ?
4. What is mutarotation ?
5. What is Biuret test ?
6. What are nucleosides and nucleotides ?
7. Draw the structure of vitamin C.
8. What is denaturation of proteins ?
9. Define Saponification value and iodine value.
10. What are the physiological actions of nicotine ?
11. What are HDL and LDL ?
12. What are electrocyclic reactions ?

(Ceiling of marks : 20)

Turn over

Section B (Paragraph)

Answer questions up to 30 marks.

Each question carries 5 marks.

13. Discuss the UV-Vis spectra shown by polyatomic molecules.
14. Write a short note on paper chromatography.
15. Convert glucose to fructose and fructose to glucose.
16. Differentiate DNA and RNA.
17. What are lipids? How are they classified ? Explain.
18. Write a short note on Sanger's method for the structure elucidation of peptides.
19. Discuss the mechanism of Cope and Claisen rearrangements.

(Ceiling)

Section C (Essay)

Answer any one questions.

Each question carries 10 marks.

20. (i) Discuss with mechanism of the solid phase synthesis of peptides.
(ii) What is meant by DNA fingerprinting ? What are its applications ?
21. (i) Write a short note on the cyclic structure of glucose.
(ii) What is Chemical shift ? What are the factors affecting it ?

(1 x 10)