

23U613

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Name:

Reg.No:

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2026

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19UCHE6B10 - ORGANIC CHEMISTRY - III

(Chemistry - Core Course)

(2019 Admission onwards)

Time : 2.00 Hours

Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. What is chromophores? Give two examples.
2. What is meant by spin spin splitting in NMR spectroscopy?
3. How many NMR signal will be obtained from the compound $\text{CH}_3\text{-O-CH}_2\text{-CH}_3$
4. What are monosaccharides? Give two examples.
5. Draw the cyclic structure of maltose.
6. Define isoelectric point.
7. What is a zwitter ion?
8. Give the structure of progesterone.
9. Name an important sources and disease caused by the deficiency of vitamin B2.
10. Draw the geometrical isomers of citral.
11. Formulate the reaction between buta-1,3-diene and CHO-CH=CH-CHO . To which type of pericyclic reactions does it belong?
12. Formulate the reaction between buta-1,3-diene and acrolein. Name the product.

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

Answer *all* questions. Each question carries 5 marks.

13. How can you distinguish between benzaldehyde and acetophenone using IR spectroscopy?
14. Explain with equation how D-glucose can be converted to D-arabinose.
15. Give two test for testing the presence of sugar in urine and explain the chemistry of the reactions involved.

16. Discuss the Strecker synthesis of amino acids with the help of an example.
17. Name an important sources, chemical name and disease caused by the deficiency of vitamin B12.
18. Explain the source, structure, and uses of citral.
19. Discuss, with equation, the rearrangement occurring when allyl phenyl ether is heated.

(Ceiling: 30 Marks)

Part C (Essay questions)

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

20. What is TLC? Explain its principle and how it is carried out?
21. (a) What are terpenoids? How are they classified?
(b) Explain the structure of natural rubber.

(1 × 10 = 10 Marks)
