

Reg. No. :

Name :

VI Semester B.Sc. Degree (CBCSS – OBE – Regular)
Examination, April 2022
(2019 Admission)
CORE COURSE IN CHEMISTRY/POLYMER CHEMISTRY
6B14CHE/PCH : Organic Chemistry – III

Max. Marks : 40

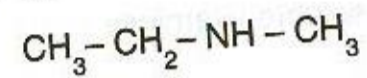
Time : 3 Hours

Instruction : Answer the questions in English only.

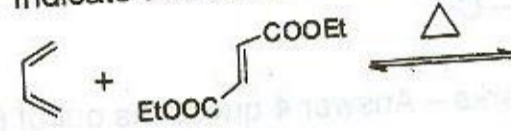
SECTION – A

(Very short answer type – Each carries 1 mark – Answer all 4 questions.)

1. Draw the Fisher projection formula of open chain form of D-Glucose.
2. Write the IUPAC name of the following compound :



3. Name an aromatic amino acid found among proteins.
4. Indicate the stereochemistry of the following reaction :



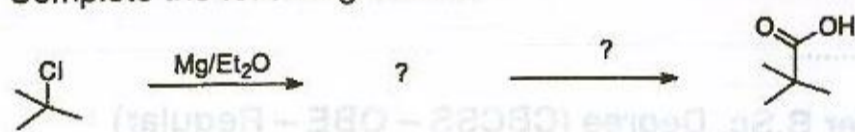
SECTION – B

(Short answer type – Each carries 2 marks – Answer 7 questions out of 10.)

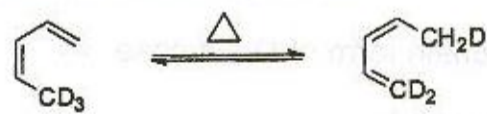
5. What will be the product obtained when glucose reacts with excess of phenyl hydrazine ?
6. What is meant by inversion of cane sugar ?

P.T.O.

7. Complete the following reaction.



8. Explain Phthalimidomalonate synthesis of amino acid with suitable example.
9. Explain (a) reaction of primary amine with HNO_2 (b) reaction of aromatic amine with HNO_2 .
10. Explain the stereochemistry of Hofmann elimination reaction.
11. Give one method for N-terminal residue analysis of peptide.
12. Explain the following reaction :



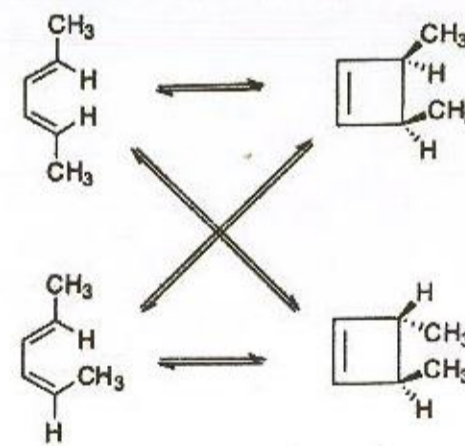
13. Write a short note on water soluble vitamins and fat-soluble vitamins.
14. What are the general properties of alkaloids ?

SECTION – C

(Short essay/problem type – Each carries 3 marks – Answer 4 questions out of 6.)

15. Explain the reactions involved in Kiliani-Fischer synthesis with an illustrative example – chain elongation among aldoses.
16. Explain the Watson-Crick model of DNA.
17. Explain the preferred orientation of the substituent in electrophilic substitution of pyridine.
18. Explain the synthesis of sulphanilamide.

19. Complete the following reaction with suitable reaction conditions. Explain.



20. Explain the following terms : (a) Saponification value (b) Iodine value.

SECTION – D

(Long essay type – Each carries 5 marks – Answer 2 questions out of 4.)

21. How do you convert aldose into ketose ?
22. Write twelve principles of green chemistry.
23. Explain Merrifield solid-phase synthesis of protein.
24. Explain the reactions of (a) pyrrol (b) indole.