



K20U 0091

Reg. No. : .....

Name : .....

**VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination, April 2020  
(2014 Admission Onwards)  
CORE COURSE IN CHEMISTRY  
6B14CHE : Organic Chemistry – III**

Time : 3 Hours

Total Marks : 40

**Instruction :** Answer the questions in **English only**.

**SECTION – A**

**(Objective type – Each carries 1 mark – Answer all questions)**

1. What is isoprene rule ?
2. Give example for an azo dye.
3. What is the product obtained when acetone is reduced with  $\text{KOH}/\text{N}_2\text{H}_4$  at  $180^\circ\text{C}$  ?
4. Which product of commercial importance is obtained when cyclohexanone oxime is treated with acid ? **(4×1=4)**

**SECTION – B**

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

5. Explain the pericyclic reaction involved in the dimerization of cyclopentadiene.
6. Explain isoelectric point of an amino acid.
7. How is vanillin synthesized ?
8. How is acetaldehyde differentiated from acetone ?
9. Give the structure of Eosin.
10. What are the advantages of mw assisted Hoffmann elimination and Diels Alder reactions compared to usual conditions ?
11. Represent the structure of cholesterol.
12. What is meant by antibiotic misuse ?
13. Give the mechanism of benzdine rearrangement.
14. Outline the steps involved in converting propionic acid to acetic acid. **(7×2=14)**

P.T.O.



## SECTION – C

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

15. Give two reactions in which cyanides and isocyanides show significant difference.
16. Elucidate the structure of citral.
17. Discuss the self replication in DNA.
18. Write a short note on sulpha drugs.
19. Give one method to differentiate  $1^\circ$ ,  $2^\circ$  and  $3^\circ$  nitroalkanes.
20. How is ethyl cyanoacetate prepared ? Mention one of its synthetic applications. (4×3=12)

## SECTION – D

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

21. Describe the structure of proteins.
22. Explain the twelve principles of green chemistry.
23. Give the mechanism of the following reactions. (a) Aldol condensation  
(b) Cannizzaro's reaction and (c) Benzoin condensation. (1½+1½+2)
24. Discuss the effect of heat on hydroxy acids. (2×5=10)