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Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2023

First Degree Programme Under CBCSS

Chemistry

Core Course XI

CH 1642 : ORGANIC CHEMISTRY – III

(2013-2016 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions. **Each** question carries 1 mark.

1. What are crown ethers?

2. Which is more reactive, aldehyde or ketone? Justify.

3. Give the structure of picric acid.

4. What is benzoin condensation?

5. Explain Beckmann rearrangement with an example.

6. Mention the two uses of anthranilinic acid.

7. What are epimers?

P.T.O.

8. Give the structure of morphine

9. What is isoelectric point?

10. What is the chemical name of Vitamin-C?

(10 × 1 = 10 Marks)

SECTION – B

Answer **any eight** questions. **Each** question carries **2** marks.

11. What is Fries rearrangement?

12. Give the mechanism of Pinacol-pinacolone rearrangement.

13. Describe the mechanism of Perkin condensation.

14. Explain Reimer-Tiemann reaction with one example

15. Which is more acidic, acetic acid or chloroacetic acid? Give reason.

16. Give one method of preparation of salicylic acid.

17. What is the synthetic method of preparation of glucose?

18. Explain mutarotation with an example.

19. What is meant by replication of DNA?

20. Explain isoprene rule with one example.

21. Define saponification value? Mention its significance

22. What are zwitter ions? Give one example.

(8 × 2 = 16 Marks)

SECTION – C

Answer **any six** questions. **Each** question carries **4** marks.

23. Discuss the oxidative cleavage of dihydric alcohols by Lead tetra acetate.

24. Explain why phenol is acidic?

25. What is Wittig reaction? Explain its mechanism with an example.

26. Differentiate Clemmensen's and Wolff-Kishner reductions.

27. What is benzidine rearrangement?

28. Give one method of preparation of Coumarin. Mention its uses.

29. Discuss the preparation and structure of starch.

30. What are nuclic acids? Discuss its classification and biological importance.

31. What are terpenes? Give the general method of isolation of citral.

(6 × 4 = 24 Marks)

SECTION – D

Answer **any two** questions. **Each** question carries **15** marks.

32. (a) Discuss any two methods of peptide synthesis. **8**

    (b) Write short note on vitamins and its deficiency deceases. **7**

33. How will you distinguish primary, secondary and tertiary alcohols?

34. Give the mechanism of the following reactions.

(a) Aldol condensation.

(b) Cannizzaros reaction

(c) Meerwein-Pondorof Verley reduction

35. (a) Discuss the ascent and descent series in aliphatic carboxylic acids. 8

(b) How will you convert glucose into fructose and fructose into glucose? 7

(2 × 15 = 30 Marks)
