

M.Sc DEGREE EXAMINATION, APRIL 2019
I Year I Semester
Organic Chemistry - I

Time : 3 Hours

Max.marks :75

Section A ($10 \times 2 = 20$) Marks

Answer any **TEN** questions

1. What is absolute configuration?
2. What are the conditions for a compound to be optically active?
3. Define the terms Erythro & threo
4. Give the preferred conformation of 1, 2 dimethyl cyclohexane.
5. Draw the structures of cis and trans decalins.
6. How NO_2 behaves as an ambident nucleophile?
7. What is meant by halogen exchange reactions?
8. What is Ziegler alkylation?
9. How will you convert aniline to sym-tribromo benzene?
10. What are the reagents used in Gatterman reaction?
11. What are Flavones?
12. How will you synthesis anthocyanine?

Section B ($5 \times 5 = 25$) Marks

Answer any **FIVE** questions

13. Differentiate stereo selective and stereo specific reactions.
14. Explain enantiotopic, diastereotopic and homotopic hydrogens.
15. Explain the conformational analysis of disubstituted cyclohexanes.
16. Discuss the conformation and stereochemistry of 9-methyl decalins.
17. Narrate the benzyne mechanism with an example.
18. Explain Rimer-Tieman reaction with mechanism.
19. Discuss the synthesis of Vitamin A1.

Section C ($3 \times 10 = 30$) MarksAnswer any **THREE** questions

20. Illustrate with suitable examples the stereochemistry of allenes, spiranes and biphenyls.
21. Discuss effect of conformation on reactivity using the reactions
(a) Oxidation of cyclohexanols (5)
(b) Esterification of cyclohexane-carboxylic acids (5)
22. (a) Explain the mechanism of SN^1 and SN^2 reactions. (5)
(b) Discuss Von-Brawn reaction and Claisen condensation. (5)
23. Explain the following reaction. (a) Nitration (b) Alkylation
(c) Diazonium coupling (d) Gatterman-Koch (e) Vismeyer-Hack
24. (a) Discuss the structural Elucidation of cholesterol. (6)
(b) Give the synthesis of Progesterone. (4)

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