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

Time : 3 Hours **Max.marks :75**

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

Answer any **TEN** questions

1. What are electrocyclic reactions? Give an example.
2. Give an example of Cope reaction.
3. How Merrifield synthesis is useful in peptide synthesis?
4. What is meant by primary structure of protein?
5. Define the term synthon.
6. What is reversal of carbonyl polarity?
7. What is meant by deprotection?
8. What are phase transfer catalyst?
9. Mention the synthetic applications of n-butyl lithium?
10. What are metathesis reactions?
11. Give an example for Robinson annulations.
12. Mention the uses of crown ethers in organic synthesis.

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

Answer any **FIVE** questions

13. Draw the correlation diagram of hexatriene to cyclohexadiene interconversion.
14. Discuss the synthesis of ala-gly-Lys tripeptide.
15. Outline the synthesis of cubene.
16. Explain the reterosynthesis and synthesis of 1,6-dicarbonyl compound.
17. Discuss the twelve principles of green chemistry?
18. What are various organo copper reagent used in synthesis? Mention their applications.
19. Discuss Baldwin's rules.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. (a). What is FMO theory? Discuss the cycloaddition transformation of Butadiene and ethylene into cyclohexene conversion by FMO method. (6)
    (b).Write Woodword Hoffmann rule. (4)
21. Outline the total synthesis of morphine.
22. Write the synthesis of onocerin.
23. What is the need for the protection of functional groups in organic synthesis? How the following functional groups are protected?
    (i)-COOH (ii)-OH (iii)-NH_2 (iv)aldehyde.
24. Discuss the synthetic applications of the following reactions

    (a).Heck reaction (b).Mc-Murray olefination. (2x5)

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