

COURSE CODE - 2030207

PG DEGREE EXAMINATION - JAN 2009

M.SC (CHEMISTRY)

ORGANIC CHEMISTRY - II

(For the Candidates Admitted from Calendar Year 2007)

Time: 3 hours

Max. Marks 75

Section-A

Answer All the Questions:

15X1=15

1. Give an example of electrophile.
2. What are carbenes?
3. Give one example for 1,3 dipolar addition reaction.
4. Name the rearrangement involving the formation of cycloalkane giving an example.
5. What is Lossen rearrangement?
6. What is Clemmensen reduction?
7. Write the structure of DMSO
8. What is ozonolysis?
9. Write the product of perkin reaction.
10. State Saytzeff rule.
11. Give one example of Wagner-Meerwein rearrangement.
12. Structure of cyclohexanone is _____
13. Give one example for E¹ reaction.
14. What is electrophilic substitution?
15. Give example of electron donating group.

Section – B

Answer any Five Questions:

5X6=30

16. a. Explain the mechanism of Michael addition.
(Or)
b. Explain pinacol-pinacolone rearrangement.
17. a. What is Mannich reaction? Discuss its synthetic importance.
(Or)
b. Explain hydroboration reaction with example.
18. a. Discuss the mechanism of cope elimination.
(Or)
b. Explain the Strecker synthesis with mechanism.
19. a. Write the mechanism of Darzen glycidic ester condensation.
(Or)
b. Explain the mechanism of Baeyer-Villiger rearrangement.
20. a. Discuss in detail the salient aspects of wolf rearrangement.
(Or)
b. Explain the oxidation of alcohols by CrO₃

Section – C

Answer any Two Questions

2X15=30

21. Discuss the rearrangements involving nitrenes with examples.
22. Explain the reduction of carbonyl compounds by hydrides with mechanism.
23. Discuss the mechanism of the following reactions:
 - a. Birch reduction.
 - b. MPV reduction.
24. Describe the addition reactions of halogen and nitrosyl chloride to olefins.
25. Write short note on
 - a. Clemmensen and wolff kishner reductions
 - b. Birch reduction
 - c. MPV reduction.