



6 **LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

B.Sc. DEGREE EXAMINATION – CHEMISTRY

FIFTH SEMESTER – NOVEMBER 2016

CH 5505 – ORGANIC FUNCTIONAL GROUPS - II

Date: 01-11-2016
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART- A

Answer **ALL** questions

(10x2 = 20marks)

1. How will you prepare methylamine by Gabriel phthalimide synthesis?
2. Convert aniline in to sulphanilamide.
3. Define racemization.
4. Write the Fischer projection formula of D- glyceraldehyde.
5. Obtain dimethylether from diazomethane.
6. What is Cope rearrangement?
7. Give an example of intermolecular rearrangement reaction.
8. State isoprene and special isoprene rule.
9. Pyridine does not undergo Friedel Crafts reaction. Why?
10. How will you estimate methoxy group in alkaloids?

PART- B

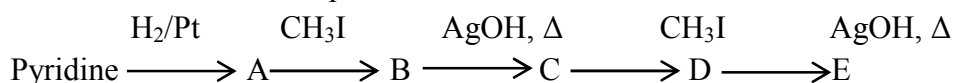
Answer any **EIGHT** questions

(8x5 = 40 marks)

11. Write notes on
 - (i) Carbylamine reaction
 - (ii) Sandmeyer reaction

(3+2)
12. Discuss the reduction of Nitrobenzene under different conditions.
13. Explain the effect of substituents on the basicity of aniline.
14. Enumerate the chemical and biochemical methods for the resolution of racemic mixture.
15. Describe the optical activity of biphenyls.
16. Discuss any five synthetic applications of diazoacetic ester.
17. Convert Malonic ester into
 - (i) Barbituric acid
 - (ii) Cinnamic acid

(3+2)
18. Explain Pinacol-Pinacolone rearrangement with mechanism.
19. Give a brief account on the classification of molecular rearrangement.
20. Elucidate the structure of Nicotine.
21. Explain the preparation of Quinoline by Skraup synthesis.
22. Give the structure of compounds A- E.



PART- C

Answer any **FOUR** questions

(4x10 = 40 marks)

23. Starting from benzenediazonium chloride how will you prepare
(i) Phenol (ii) Anisole (iii) Benzene (iv) Biphenyl (v) Phenyl hydrazine. (2 marks each)
24. Write notes on
(i) Asymmetric synthesis
(ii) Walden inversion. (5+5)
25. Enumerate the synthetic uses of cyanoacetic ester.
26. Explain the following rearrangement reactions with mechanism. (4 + 3+ 3)
(i) Beckmann (ii) Hoffmann (iii) Fries.
27. (i) Discuss the constitution of Citral. (5)
(ii) Write notes on Hoffmann exhaustive methylation reactions. (5)
28. (i) Give a brief account on the isolation of thiophene from coal tar. (5)
(ii) How will you separate 1⁰, 2⁰ and 3⁰ amines by Hinsberg test. (5)

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