

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – CHEMISTRY

FIFTH SEMESTER – November 2009

CH 5505 - ORGANIC FUNCTIONAL GROUPS - II

Date & Time: 3/11/2009 / 9:00 - 12:00 Dept. No.

Max. : 100 Marks

PART – A

Answer ALL the questions.

(10 x 2 = 20 marks)

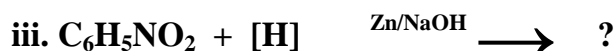
1. Explain why nitration of nitrobenzene is more difficult than that of benzene.
2. Give the IUPAC name of (i) $\text{CH}_3\text{-NH-C}_2\text{H}_5$ (ii) $\text{CH}_3\text{-N(CH}_3\text{)-CH}_3$.
3. What is meant by plane polarised light.
4. Assign E and Z configurations to the following compounds
5. What are enantiomers? Give any two properties of enantiomers.
6. How is diazomethane prepared?
7. Give the products of the following transformation and name the reaction involved.
8. Give the products obtained when pyridine reacts with sodamide and phenyl lithium.
9. Write the molecular formula and structure of nicotine.
10. What is isoprene rule? Indicate the isoprene units in the structure of citral.

PART – B

Answer any EIGHT questions

(8 x 5 = 40 marks)

11. Predict the products of the following reactions.



12. Describe Hofmann method for separating a mixture of primary, secondary and tertiary amines.
13. What is diazotisation? How is benzene diazonium chloride prepared in the laboratory?
14. What is asymmetric synthesis? Illustrate with an example.
15. Distinguish meso and racemic forms using tartaric acid.
16. How will you synthesise propionic acid from acetic acid using Arndt-Eistert reaction.

