2005 JAWAHARLAL NEHRU TECHNOLOGY UNIVERSITY

II B.TECH I SEMESTER SUPPLYMENTARY EXAMINATIONS

ORGANIC CHEMISTRY

(CHEMICAL ENGINEERING)

MAY 2005

TIME: 3 HOUR
MARK: 80

ANSWER ANY FIVE QUESTIONS ALL QUESTIONS CARRY EQUAL MARKS

MARK [5*16=80]

1. Discuss about Electrometric effect.

2. (a) Discuss about hydroboration with reaction mechanism.

(b) Describe the Clemenson's reduction.

3. Show the reaction mechanisms of the following reactions

(a) Gatterman reaction.

(b) Fittig reaction.

(c) Kolbes reaction.

4. (a) Draw the R and S configurations of the following:-

i. Bromochloroiodomethane.

ii. sec- Butyl chloride.

(b) Describe a method to determine the optical activity of organic molecules.

5. (a) How maleic acid and fumaric acid react with acetyl chloride? What inference you get from this reaction?

(b) Write a note on E and Z configurations of geometrical isomens.

6. How will you determine the configuration of glucose with the help of Fischer's method?

7. (a) What are Heterocyclic compounds? How are they classified?

(b) What happens when

i. Furan is treated with SO3 in pyridine.

ii. Pyridine is treated with sodamide.

iii. Quinoline is treated with alkaline KMnO4. Give the above answers with suitable chemical equations.

8. Explain the theory of colour and constitution?