

II B.Tech I Semester Supplementary Examinations, November 2006

ORGANIC CHEMISTRY

(Chemical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain hyperconjugation.
(b) Explain why chloroacetic acid is stronger than acetic acid? [8+8]
2. (a) Write the mechanism of Wolf-Kishner reduction.
(b) Describe the applications of Wolf-Kishner reduction with reference to
 - i. Reduction of camphor to camphane.
 - ii. Synthesis of pyrroles. [6+5+5]
3. Show the reaction mechanisms of the following reactions
 - (a) Gatterman reaction.
 - (b) Fittig reaction.
 - (c) Kolbes reaction. [5+5+6]
4. Write short note on optical isomerism and explain it with reference to tartaric Acid. How does it give two optically active forms? [5+5+6]
5. (a) How maleic acid and fumaric acid react with acetyl chloride? What inference you get from this reaction? [6+2]
(b) Write a note on E and Z configurations of geometrical isomers. [8]
6. (a) How will you confirm the presence of the following groups in Glucose?
 - i. Aldehydic group.
 - ii. Hydroxyl group. [4+4]
(b) Give the Haworth structure for β D fructo furanose. [8]
7. (a) How will you prepare pyridine? Indicate how does it react with electrophilic reagents. [4+4]
(b) With suitable chemical equations, indicate the products for the following reactions.
 - i. Quinoline with LiAlH_4 .
 - ii. Quinoline with alkaline KMnO_4 .
 - iii. Isoquinoline with fuming H_2SO_4 .
 - iv. Isoquinoline with sodamide. [2+2+2+2]
8. (a) What are dyes?

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- (b) How are they classified?
- (c) Discuss briefly the classification of dye based on their application? [5+5+6]

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