

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharmacy Semester- IV Examination June 2010

Subject code: 240003

Subject Name: Pharmaceutical Chemistry-IV

Date: 15 / 06 / 2010

Time: 10.30 am – 01.30 pm

Instructions:

Total Marks: 80

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|-----|--|-----------|
| Q.1 | (a) | What is aromaticity? Enlist the Electrophilic aromatic substitution reaction with example. | 06 |
| | (b) | What are phenols? How they differ from alcohols? Write a note on Reimer-Tiemann reaction. | 05 |
| | (c) | What is resolution? Explain the methods for racemic modification in to enantiomers. | 05 |
| Q.2 | (a) | Discuss the preparation and reaction of Diazonium salt. | 06 |
| | (b) | How cannizzaro reaction is differ from aldol condensation? Write a mechanism for aldol condensation. | 05 |
| | (c) | Define Nucleophilic aromatic substitution reaction. Explain the Benzyne Mechanism. | 05 |
| Q.3 | (a) | Write various reactions involved in oxidation and reduction of aldehydes and ketones. | 06 |
| | (b) | Write a note on Biphenyls and Allens. | 05 |
| | (c) | Explain Hell Wolhard Zelinsky reaction with mechanism. | 05 |
| Q.4 | (a) | Discuss various preparation of carboxylic acid. | 06 |
| | (b) | Write a note on stereoselective and stereospecific reaction with example. | 05 |
| | (c) | What is conjugated system? Explain the michael addition reaction | 05 |
| Q.5 | (a) | Define conformation. Discuss the stability and potential energy changes of all conformation for n-Butane. | 06 |
| | (b) | Discuss the conversion of carboxylic acid to their corresponding chloride, esters and amide derivative. | 05 |
| | (c) | What is polynuclear aromatic compound? Discuss the reaction of naphthalene. | 05 |
| Q. 6 | (a) | What are arenes? Write a note on Friedel craft alkylation. Discuss the limitation of it. | 06 |
| | (b) | Write a note on Hoffmann degradation of amide with mechanism. | 05 |
| | (c) | Write a note on Green Chemistry. | 05 |
| Q.7 | (a) | Explain the sequences rule to assign conformation. Draw the possible stereoisomer of 2,3-dichlorohexane. | 06 |
| | (b) | Write a short note on Microwave synthesis. | 05 |
| | (c) | Write the reaction steps for conversion of
i) Benzoic acid to aniline ii) Nitrobenzene to P-nitro aniline. | 05 |
