

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-I Remedial Examination April 2010

Subject code: 910101

Subject Name: Advanced Organic Chemistry-I

Date: 06 /04 /2010

Time: 12.00 noon – 03.00 pm

Instructions:

Total Marks: 80

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

- Q.1** (a) What are the difference between resonance and hyperconjugation? Explain with suitable examples. **06**
- (b) Write short note on effect of steric-hindrance and electro negativity on reactivity. **05**
- (c) What do you mean by hybridization? How hybridization takes place? Explain why ammonia is pyramidal where as water is bent in shape. **05**
- Q.2** (a) What are the difference between SN^1 and SN^2 reaction? Add a note on factors influencing SN reaction. **06**
- (b) Write short note on participation of neighboring group in nucleophilic substitution reaction. **05**
- (c) Explain Cram's rule. **05**
- Q.3** (a) What do you mean by aromaticity? Write a note on orientation in electrophilic aromatic substitution reaction with suitable example. **06**
- (b) Write two evidence each for E1 and E2 reaction **05**
- (c) Write short note on Saytzeff's and Hofmann elimination reaction. **05**
- Q.4** (a) What will be the product form when HBr is added to 1-propene in presence of peroxide? Discuss the stereochemistry and mechanism of reaction. **06**
- (b) Write in detail about the benzyne mechanism and sight any two reactions involving this mechanism. **05**
- (c) Write a note on Wittig reaction. Explain it's mechanism and stereochemistry **05**
- Q.5** (a) What are different mechanisms involved in hydrolysis of ester? Write in brief about AAC_2 and BAC_2 mechanism in details with suitable examples. **06**
- (b) Enlist different reactions of decarboxylation. Write the factors affecting decarboxylation reaction with suitable examples. **05**
- (c) Write a note on photo reduction and photo rearrangement reaction. **05**
- Q. 6** (a) Define Y-lides. Explain the generation and reactivity of sulfur and nitrogen Y-lides. **06**
- (b) Write a note on generation and stability of free radicals. **05**
- (c) Give a brief note on E1cb mechanism. **05**
- Q.7** (a) What are the basis of rearrangement to occur in chemical reaction? Write in detail about Pinacol rearrangement. **06**
- (b) Write short note on Hofmann and Beckman rearrangement reaction. **05**
- (c) Write a note on tautomerism. **05**
