

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-I Regular / Remedial Examination January/February 2011

Subject code: 910101

Subject Name: Advanced Organic Chemistry- I

Date: 31 /01 /2011

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 beta elimination reaction? Explain the mechanism and orientation for E1-mechanism. | 06 |
| | (b) What is the difference between Zaitsev rule and Hofmann rule of elimination? Give its evidence with suitable examples. | 05 |
| | (c) Discuss the factors influences the reactivity of elimination reaction. | 05 |
| Q.2 | (a) Give the classification of mechanism for ester hydrolysis and formation. | 06 |
| | (b) Write a note on decarboxylation of aromatic acids | 05 |
| | (c) Define tautomerisms. Classify various tautomers and explain keto-enol tautomerisms. | 05 |
| Q.3 | (a) Explain the role of participation of neighboring group in substitution reaction. | 06 |
| | (b) Discuss the mechanism and orientation for nucleophilic aromatic substitution reaction. | 05 |
| | (c) Write a note on Cram's rule and hydride transfer reaction. | 05 |
| Q.4 | (a) Give the methods for generation of phosphorus Y-lides. | 06 |
| | (b) Write a note on Claisen condensation reaction. | 05 |
| | (c) Explain the characteristics of photoreaction. | 05 |
| Q.5 | Write a note on | |
| | (a) Beckman rearrangement | 06 |
| | (b) Pinacol rearrangement | 05 |
| | (c) Hofmann rearrangement | 05 |
| Q. 6 | (a) Explain the following terms with examples | 06 |
| | i) Carbonium ions and carbanion | |
| | ii) Electrophiles and nucleophiles | |
| | iii) Lewis acid and lewis base | |
| | (b) Write a note on aliphatic nucleophilic substitution reaction. | 05 |
| | (c) Write a note on free radical reaction. | 05 |
| Q.7 | (a) Give the importance of hyperconjugation and resonance for the stability of the organic compounds. | 06 |
| | (b) Discuss the importance of inductive effect. | 05 |
| | (c) Write a note on Markonikov's rule. | 05 |
