

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – I • EXAMINATION – SUMMER • 2015

Subject Code: 910101

Date: 21-05-2015

Subject Name: Advanced Organic Chemistry - I

Time: 02:30 pm - 05:30 pm

Total Marks: 80

Instructions:

- 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) | Explain hydride transfer reactions with examples. | 06 |
| | (b) | Differentiate between SN_1 and SN_2 mechanism. | 05 |
| | (c) | Discuss walden inversion with examples. | 05 |
| Q.2 | (a) | Explain markonikov's rule with suitable examples. | 06 |
| | (b) | Describe reactivity in electrophilic substitution in aromatic systems. | 05 |
| | (c) | Write a note on inductive effect. | 05 |
| Q.3 | (a) | Explain the terms:
i) Aromaticity ii) Polarity iii) Carbocation | 06 |
| | (b) | Discuss E_2 reaction mechanism of elimination. | 05 |
| | (c) | What is a chemical bond? Discuss various chemical bonds. | 05 |
| Q.4 | (a) | Discuss various photosensitizing agents. | 08 |
| | (b) | Discuss generation and reactions of phosphorus ylides. | 08 |
| Q.5 | (a) | Discuss hoffman and saytzeff's rule for elimination with examples. | 08 |
| | (b) | Write a note on hyperconjugation and resonance. | 08 |
| Q. 6 | (a) | Discuss cram's rule and neighbouring group effect in nucleophilic substitution reaction. | 08 |
| | (b) | Discuss various types of hybridization with suitable examples. | 08 |
| Q.7 | (a) | Discuss pinacol and beckmann rearrangement in detail with example. | 08 |
| | (b) | Discuss AAC_2 and BAC_2 mechanism for esters. | 08 |
