| Seat No.: | Enrolment No |
|-----------|---------------|
| Deat 110 | Lindinent 140 |

| | | GUJARAT TECHNOLOGICAL UNIVERSITY | |
|------------|------------|--|-----------|
| | N | M. Pharm. – SEMESTER – I • EXAMINATION – WINTER • 2014 | |
| Subje | ect Co | de: 910101 Date: 07-01-2015 | |
| Subje | ect Na | me: Advance Organic Chemistry - I | |
| _ | | 0 am - 01:30 pm Total Marks: 80 | |
| | ctions: | - | |
| | 1. At | ttempt any five questions. | |
| | 2. M | ake suitable assumptions wherever necessary. | |
| | 3. Fig. | gures to the right indicate full marks. | |
| Ο 1 | (0) | Write a short note on hyperconjugation and resonance | 06 |
| Q.1 | (a) (b) | Write a short note on hyperconjugation and resonance. Explain the effect of inductive effect and steric effect on reactivity. | 05 |
| | (c) | Write a note on photochemical reactions. | 05 |
| | (0) | write a note on photoenemical reactions. | 03 |
| Q.2 | (a) | What is hybridization? Explain the hybridization of carbon in | 06 |
| • | () | chloroform and ethene. | |
| | (b) | Write a note on hydride transfer reaction. | 05 |
| | (c) | What is nucleophilic aliphatic substitution reactions? Explain the | 05 |
| | | Walden inversion. | |
| 0.2 | (0) | What is alimination reaction? Explain the different types of | 06 |
| Q.3 | (a) | What is elimination reaction? Explain the different types of elimination reaction with suitable examples | 06 |
| | (b) | Write a short note on Hofmann rearrangement | 05 |
| | (c) | What is aromaticity? Explain in Brief. | 05 |
| | (0) | That is dromaticity. Explain in Stor. | ••• |
| Q.4 | (a) | Explain the markonikov's rule with suitable examples and | 06 |
| | | mechanism. | |
| | (b) | What are ylides. Write a note on the generation and reaction | 05 |
| | | involving phosphorous ylide. | |
| | (c) | Write a short note on claisen condensation. | 05 |
| 0.5 | (-) | | 0.0 |
| Q.5 | (a) | Enumerate the different mechanisms for the hydrolysis of esters. | 06 |
| | (b) | Explain the BAC2 mechanism with suitable examples. Explain the role of participation of neighboring group in substitution | 05 |
| | (0) | reaction | 03 |
| | (c) | Write a note on Beckman rearrangement | 05 |
| | (0) | The a note on Bookman rourrangements | ••• |
| Q. 6 | (a) | What is homolysis? Write in detail about the generation and | 06 |
| | | reactions of free radicals. | |
| | (b) | Write a short note on transannular rearrangement | 05 |
| | (c) | What is nucleophilic aromatic substitution? Enumerate the type of | 05 |
| | | mechanism involved in nucleophilic aromatic substitution and | |
| | | explain any one of them. | |
| | | | |
| Q.7 | (a) | What are addition reactions? Explain the nucleophilic addition to | 06 |
| ٧٠, | (u) | unsaturated compounds | 50 |
| | (b) | Write a note on Cram's rule. | 05 |

elimination? Give its evidence with suitable examples. ******

05

What is the difference between Saytzef's rule and Hofmann rule of

(c)