

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm – SEMESTER – III • EXAMINATION – WINTER • 2015

Subject Code: 2230004

Date: 06-01-2016

Subject Name: Pharmaceutical Chemistry – IV (Organic Chemistry-I)

Time: 10:30 am - 01:30 pm

Total Marks: 80

Instructions:

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

- | | | |
|-------------|---|-----------|
| Q.1 | (a) Write detail notes on Molecular Orbital theory | 06 |
| | (b) Write short notes on Kjeldahl's method for nitrogen estimation | 05 |
| | (c) Define and explain following: | 05 |
| | i) Inductive effect | |
| | ii) Electrophile | |
| | iii) Alkynes | |
| | iv) Carbanion | |
| | v) Saytzeff's rule | |
| Q.2 | (a) Write short notes on Hyperconjugation reaction in detail. | 06 |
| | (b) Write short notes on Resonance. | 05 |
| | (c) Discuss bonding and antibonding orbital in detail. | 05 |
| Q.3 | (a) Write short notes on free radical chain reaction in alkane. | 06 |
| | (b) Write detail notes on Elimination unimolecular (E1) reaction. | 05 |
| | (c) Write short notes on Markonikov's rule in detail. | 05 |
| Q.4 | (a) Write short notes on Diels Alder reaction in detail. | 06 |
| | (b) Write preparation and reaction of alkyl halide. | 05 |
| | (c) Write short notes on S _N 2 reaction in detail. | 05 |
| Q.5 | (a) Write short notes on Haworth synthesis of naphthalene in details. | 06 |
| | (b) Write Reactions of naphthalene and anthracene. | 05 |
| | (c) How Grignard reagent prepared? Write synthetic utility of Grignard reagent. | 05 |
| Q. 6 | (a) Write detail short notes on Huckel Rule for aromaticity. | 06 |
| | (b) Write detail short notes on Friedel-crafts alkylation reaction in detail. | 05 |
| | (c) Give detail notes on Electrophilic aromatic substitution reaction of Benzene with reference to nitration reaction. | 05 |
| Q.7 | (a) Write detail notes on Carbocation. | 06 |
| | (b) Write short notes on Williamson ether synthesis in detail. | 05 |
| | (c) Give detailed notes on Aldol condensation reaction with reaction mechanism. | 05 |
