

GUJARAT TECHNOLOGICAL UNIVERSITY**B.Pharm – SEMESTER-III– EXAMINATION – SUMMER-2016****Subject Code:230003****Date: 15/06/2016****Subject Name: Pharmaceutical chemistry-III****Time: 2:30 PM to 5:30 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 Hybridization and Hybrid orbitals. | 06 |
| | (b) Discuss in detail the Carbocation & Carbanion. | 05 |
| | (c) Give methods of preparation for alkenes. | 05 |
| Q.2 | (a) Discuss in detail about Grignard reaction for the synthesis of alkane and Alcohols. | 06 |
| | (b) Give methods of preparation for Alcohol. | 05 |
| | (c) Write a note on halogenation. | 05 |
| Q.3 | (a) Give methods of preparation for Epoxide. | 06 |
| | (b) Write a note on Diels Alder reaction. | 05 |
| | (c) Write a note on Williamson's synthesis of ether. | 05 |
| Q.4 | (a) Outline Difference between SN1 and SN2 reactions. | 06 |
| | (b) Write a note on Markonikov's rule. | 05 |
| | (c) Give structural formula for the following | 05 |
| | 1. Salicylic acid | |
| | 2. Acetylene | |
| | 3. Thiourea | |
| | 4. Benzamide | |
| | 5. Propene | |
| Q.5 | (a) Give methods of preparation for alkane. | 06 |
| | (b) Write a note on Sigmatropic reactions. | 05 |
| | (c) Write a note on Peroxide effect. | 05 |
| Q.6 | (a) What is an orbital? Give some account on Atomic orbital & Molecular orbital theory. | 06 |
| | (b) Give the properties & reactions of Nitrium ions. | 05 |
| | (c) Write note on free radical. | 05 |
| Q.7 | (a) Explain the Intermolecular & Intramolecular forces. | 06 |
| | (b) Write a note on Ozonolysis. | 05 |
| | (c) Give methods of preparation for alkynes. | 05 |
