

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm-Semester-III May-2012 Examination

Subject code: 230003

Subject Name: Pharmaceutical Chemistry- III

Time: 2:30pm to 5:30pm

Date: 10-05-2012

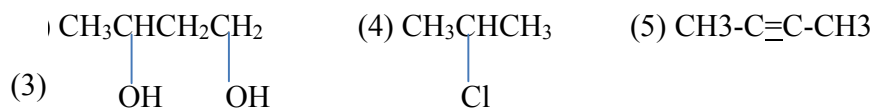
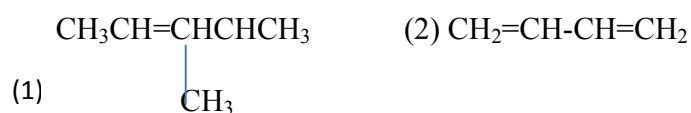
Total Marks: 80

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) | Method of preparation of Alkanes | 06 |
| | (b) | Classify Intramolecular Forces and Explain Bond dissociation Energy | 05 |
| | (c) | What is bonding and Antibonding orbitals? | 05 |
| Q.2 | (a) | Give the methods for preparation of Epoxide | 06 |
| | (b) | Write a note on Diels Alder reaction. | 05 |
| | (c) | Write a note on Williamson's synthesis of ether. | 05 |
| Q.3 | (a) | Give preparation and reaction of alkyl halide | 06 |
| | (b) | Explain the Following | 05 |
| | | 1. Nitrenes and Nitrinium Ions | |
| | | 2. Carbocations with mechanism | |
| | (C) | Outline Difference between SN1 and SN2 reactions | 05 |
| Q.4 | (a) | Write a note on Markonikov's rule and Ozonolysis | 06 |
| | (b) | Write a note on the following | 05 |
| | | 1. Uses of Glycerol | |
| | | 2. Neighbouring group effects | |
| | (c) | Classify alcohol and write a note on dehydration of alcohol | 05 |
| Q.5 | (a) | Give general methods for the preparation of Alkyne and Alkene | 06 |
| | (b) | Explain Hyperconjugation and resonance | 05 |
| | (c) | Give structural formula for the following | 05 |
| | | 1. Isobutane | |
| | | 2. Acetylene | |
| | | 3. Ethyl bromide | |
| | | 4. Ethylene glycol | |
| | | 5. Propene | |
| Q. 6 | (a) | Discuss the mechanism of E2 and E1 reactions of alkyl halide | 06 |
| | (b) | Carbenes as reaction intermediate | 05 |

(c) Give IUPAC name of the following 05



- Q.7** (a) Method of preparation of cycloalkanes. 06
(b) Write a note on the Sigmatropic reactions 05
(c) The empirical formula of the dibasic organic acid is CHO_2 . If its molecular weight is 90, what is its molecular formula? 05
