

GUJARAT TECHNOLOGICAL UNIVERSITY
M. PHARM. - SEMESTER – II • EXAMINATION – WINTER 2012

Subject code: 2920101**Date: 10-01-2013****Subject Name: Advanced Organic Chemistry-II****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) Describe the principle and applications of Microwave synthesis. Distinguish between microwave and conventional methods of Synthesis with examples. **08**
- (b) Outline the asymmetric synthesis of
i) Thalidomide ii) Nefedipine. **08**
- Q.2** (a) Discuss the role of stereochemistry in pharmacokinetics and pharmacodynamics **08**
- (b) Write Short Notes (With Mechanism) on:
(1) Reformatsky Reaction (2) Bayer-Villiger rearrangement **08**
- Q.3** (a) What is nanochemistry? Discuss the application of nanochemistry. **06**
- (b) Give synthon approach for Cetirizine and Losartan. **10**
- Q.4** (a) Define relative and absolute configuration. Discuss in detail about various methods for resolving racemic mixture. **06**
- (b) Stereochemistry of Allenes and Biphenyls. **05**
- (c) Write note on Sharpless oxidation. **05**
- Q.5** (a) What is conformational isomerism and write the conformation of n-butane. **06**
- (b) Write a note on racemic switches. **05**
- (c) Give the mechanism and application of Suzuki coupling reaction. **05**
- Q. 6** (a) Discuss in detail principle, mechanism and application of green chemistry. **06**
- (b) Give principle and application of ultrasound reaction. **05**
- (c) Write the asymmetric synthesis of Omeprazole. **05**
- Q.7** (a) Explain the following terms with examples. **09**
- (i) Geometric isomerism
- (ii) Optical isomerism
- (iii) Conformational isomerism
- (b) Give the asymmetric synthesis of Vit.C and synthon approach for Ibuprofen. **07**
