

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. – SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject Code: 2920101**Date: 29-05-2014****Subject Name: Advanced Organic Chemistry - II****Time: 02:30 pm - 05:30 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) Explain in detail about the principle and reaction mechanism of Bayer-villiger rearrangement. **08**
(b) What is the importance of stereochemistry in Drug Discovery? Explain in context to geometrical and optical isomerism with suitable examples. **08**
- Q.2** (a) Give the rules and guidelines used in retrosynthesis **04**
(b) Give synthon approach for following drugs. **12**
a) Diclofenac
b) Cetirizine
c) Losartan
- Q.3** (a) How stereochemistry can be useful for improvement of pharmacokinetic and pharmacodynamic of the drugs **04**
(b) Give asymmetric synthesis of **12**
a) Ampicillin
b) Omeprazole
c) Nifedipine
d) Ethambutol
- Q.4** (a) Write a note on the following **4x4**
a) Swern oxidation
b) Reformatsky reaction
c) Curtius rearrangement
d) Heck reaction
- Q.5** (a) What is green chemistry approach? Give its principle with examples. **08**
(b) Write a note on ionic liquids and supercritical fluid. **08**
- Q.6** (a) What is difference between conventional and microwave heating? Explain in detail about principle and solvent selection criteria in microwave. **08**
(b) Write a detailed note on stereochemistry of compound having asymmetric planes. **08**
- Q.7** (a) Write a note on the following; **4x4**
a) Solvent free reaction
b) Nanochemistry
c) Conformational isomers of dimethyl cyclohexane
d) Racemic switches
