Seat No.: _____ Enrolment No._____

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 reterosynthesis	**04**
	(b)	Give synthon approach for following drugs. a) Diclofenac b) Cetrizine c) Losartan	**12**
Q.3	**(a)**	How stereochemistry can be useful for improvement of pharmacokinetic and pharmacodynamic of the drugs	**04**
	(b)	Give asymmetric synthesis of a) Ampicillin b) Omeprazole c) Nifedipine d) Ethambutol	**12**
Q.4	**(a)**	Write a note on the following a) Swern oxidation b) Reformastsky reaction c) Curtius rearrangement d) Heck reaction	**4x4**
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; a) Solvent free reaction b) Nanochemistry c) Conformational isomers of dimethyl cyclohexane d) Racemic switches	**4x4**

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