Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – II • EXAMINATION – WINTER • 2015

Subject Code: 2920101 **Date: 07-12-2015**

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		Write Short Notes (With Mechanism) on: (a) Suzuki coupling reaction (b) Curtius Rearrangement (c) Reformatsky Reaction (d) Sharpless oxidation	**16**
Q.2	**(a)**	What are conformational isomers? Give conformers of n-Butane with its energy diagram.	**06**
	(b)	Write a note on solvent free reaction.	**05**
	(c)	Give stereoselective synthesis of Atenolol and Ethambutol	**05**
Q.3	**(a)**	Give short note on Reterosynthetic analysis with its basic guidelines.	**06**
	(b)	Write a note on Sonogashira reaction.	**05**
	(c)	Give the methods to resolve recemic mixture.	**05**
Q.4	**(a)**	What is Asymmetric Synthesis? Give methods for it. Outline the asymmetric synthesis of Omeprazole.	**08**
	(b)	What are the general rules for disconnection? Give synthon approach for i) Rosiglitazone (iii) Diclofenac ii) Losartan	**08**
Q.5	**(a)**	What do you mean by Green Chemistry? Give different methods of organic synthesis using Green chemistry approach.	**06**
	(b)	How Vilsmeir Hack reaction helpful in organic synthesis.	**05**
	(c)	What is Synthon approach? Give merits, demerits and application of this approach.	**05**
Q. 6	**(a)**	Give the reaction (i) Iodobenzene + Styrene --- Give product using Heck reaction (ii) Benzil + sodium hydroxide --- Give product using Benzilic acid rearrangement (iii) Isoproyl alchohol to 2-propenone –Give reagents using Swern Oxidation.	**06**
	(b)	Write in detail Bayer-Villiger rearrangement with its drawbacks.	**05**
	(c)	Write a note on Ionic liquids with suitable examples.	**05**
Q.7	**(a)**	Give difference between microwave and conventional methods of Synthesis with examples.	**06**
	(b)	Give principle and application of ultrasound reaction.	**05**
	(c)	Give Stereochemistry of compounds without chiral carbon.	**05**

****