GUJARAT TECHNOLOGICAL UNIVERSITY

		M. Pharm. – SEMESTER – II • EXAMINATION – WINTER • 2014		
Sul	bject Code: 2920101 Date: 24-12-2014			
Sul	Subject Name: Advanced Organic Chemistry - II			
Tir	ne: 10:30 am - 01:30 pm Total Marks: 80			
Instructions:				
	1. Attempt any five questions.			
	3. Figures to the right indicate full marks.			
Q1. (a)	Write structure of the following drugs and locate the chiral centers.	6		
	Vitamin C, Nifedipine, Atenolol, Ethambutol, Ampicillin and Thalidomide.			
(b)	Write asymmetric synthesis of Vitamin C.	5		
(c)	Differentiate between optical isomerism & geometrical isomerism.	5		
0.2 (a)	Focus on 12 principles of green chemistry	6		
(b)	Define synthon approach with classification and its importance in reaction	U		
	mechanism.	5		
(c)	Focus on Reformatsky synthesis & Benzilic acid rearrangement.	5		
03 (a)	Give synthem approach of the drugs with connection & disconnection approach:	6		
Q.0 (u)	(any two):	U		
	(i) Ibuprofen (ii) Diclofenac			
	(iii) Captopril (iv) Cetrizine			
(b)	Differentiate between Sharpless Oxidation & Swern Oxidation.	5		
(c)	Write the importance of ionic liquid in green chemistry.	5		
Q.4 (a)	Write asymmetric synthesis of the the drugs (any two):	6		
	(i) Ethambutol (ii) Nifedipine (iii) Thalidomide (iv) Atenolol			
(b)	Write the reactions (any two):	5		
	(i) Bayer-Villiger Rearrangement (ii) Pinner Reaction			
	(iii) Vilsmeir Haack Reaction (iv) Heck Reaction	_		
(c)	Write the importance of supercritical liquids in green chemistry synthesis.	5		
Q.5 (a)	Define Chiral carbon, Enantiomers, Diastereomers & Asymmetric Plane.	6		
(b)	Draw your conclusion in the reaction given:	5		
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Dimethyl formamide, 4-Dimethyl amino pyridine, 80Deg C, 48hrs (14
 Dichloro ethane, 180Deg C, 10min (100%)

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 R^{2} Which one is conventional and which one is under microwave synthesis? Why acylation takes place in imino nitrogen and not in imide nitrogen?

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Br NaCN

N H

5

Q.6 (a) Write a short note on ultrasound reaction.
(b) Write the mechanism of Allylic rearrangement & Curtius Reagrangement.
(c) Write the name of heterocyclic rings present in the following drugs & their category 5 (i) Nifedipine, Losartan, Pyrimethamine, Omeprazole & Rosiglitazone
Q.7 (a) Write the importance of microwave reactions with green chemistry approach.
(b) Identify the reactions:




