Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. SEMESTER– I • EXAMINATION – SUMMER - 2018

Subject Code: MPC102T **Date: 05/05/2018**

Subject Name: Advanced Organic Chemistry-I

Time: 02:30PM TO 05:30PM **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 generation of carbenes	**06**
	(b)	Write a note on E2 reactions	**05**
	(c)	Explain Hoffman and Saytzeff's rules for elimination reactions with examples	**05**
Q.2	(a)	Define free radical. Explain formation of free radicals	**06**
	(b)	Differentiate between SN1 and SN2 reactions	**04**
	(c)	Discuss steps of synthesis of (i) Metronidazole (ii) Theophylline	**06**
Q.3		Explain mechanism and applications of following synthetic reagents with exemplary reactions	**16**
	(a)	Aluminium isopropoxide	
	(b)	N-Bromo succinimide	
	(c)	Azodicarboxylate	
	(d)	Wilkinson reagent	
Q.4		Explain mechanism and applications of following named reactions	**16**
	(a)	Sandmeyer reaction	
	(b)	Mannich reaction	
	(c)	Baeyer- Villiger oxidation	
	(d)	Dieckmann reaction	
Q.5		Write a note on	**16**
	(a)	Knorr Pyrazole synthesis	
	(b)	Kombes Quinoline synthesis	
	(c)	Bernthsen Acridine synthesis	
	(d)	Pinner Pyrimidine synthesis	
Q. 6	(a)	Discuss principles of protection of alcoholic and carboxylic groups and explain protection for hydroxyl and carboxylic groups	**06**
	(b)	Write a note on Sharpless asymmetric epoxidation	**04**
	(c)	Explain strategies for synthesis of five and six membered rings	**06**
Q.7	(a)	Define synthon and Reterosynthesis. Write general guide lines for choosing disconnection	**04**
	(b)	Derive synthetic route by synthon approach for (i) Diclofenac (ii) Ciprofloxacin (iii) Losartan	**12**

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