Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm-Semester-V May-2012 Examination
Subject code:250004
Subject Name: Pharmaceutical Chemistry-VI (Medicinal)

Time: 02:30pm to 5:30pm **Date: 19-05-2012**
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 the following	**06**
	1	Pyridine is more basic than pyrrole.	
	2	Impurity of thiophene in benzene can be removed by cold sulphuric acid.	
	3	Electrophilic substitution reaction in furan occurs at 2nd and 5th position.	
	(b)	Write short note on complex formation or chelation.	**05**
	(c)	Give TWO reactions of the following: (1)Thiophene (2)Quinoline (3)Imidazole (4)Pyridine	**05**
Q.2	(a)	Explain the following with reaction mechanism:	**06**
	1	Skraup synthesis	
	2	Paal-Knorr synthesis	
	(b)	Explain proton pump inhibitors with its mechanism of action.	**05**
	(c)	Give the structure of: (1) Pyran (2) Triazole (3) Isoquinoline (4) Pyrazine (5) Piperidine	**05**
Q.3	(a)	Give and account of SAR of first generation H_1 receptor antagonist.	**06**
	(b)	Write short on antiemetic agents.	**05**
	(c)	Give the synthesis and use of the following:	**05**
	1	Chlorpheniramine	
	2	Piperazine citrate	
Q.4	(a)	Answer the following:	**06**
	1	Explain Fischer's Indole synthesis with reaction mechanism.	
	2	Explain Proton Transfer (Hantzsch) synthesis for Pyridine with reaction mechanism.	
	(b)	What are anthelmintic agents? Classify them with suitable examples.	**05**
	(c)	Classify H_1 receptor antagonist with suitable examples.	**05**
Q.5	(a)	Answer the following:	**06**
	1	Explain Bischler-Napieralski reaction for Isoquinoline with reaction mechanism.	
	2	Discuss chemical properties of pyridine.	
	(b)	Define and classify antiasthmatic agents	**05**
	(c)	Define the following terms: (1) Emetic (2) Expectorant (3)Decongestant (4)Demulcent (5) Antacid	**05**

Q. 6	(a)	Give any TWO methods of preparation of the following: (1)Indole (2) Pyrazole (3) Furan (4) Oxazole	**06**
	(b)	Antispasmodic agents	**05**
	(c)	Write details on Bioisosterism	**05**
Q.7	(a)	Discuss the relationship between biological action and physicochemical properties for ANY TWO of the following with suitable example	**06**
	1	Partition Coefficient	
	2	Hydrogen bonding	
	3	Protein binding	
	(b)	Write a short note on Eicosanoids	**05**
	(c)	Write a short note on Diagnostic agents	**05**

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