Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharmacy Sem- Vth Examination December 2010

Subject code: 250004

Subject Name: Pharmaceutical chemistry-VI (Medicinal)

Date: 13 /12 /2010 **Time: 02.30 pm – 05.30 pm**

Instructions: **Total Marks: 80**

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	Enlist various physicochemical parameters. What is importance of geometrical and optical isomers for biological action of drug?	**06**
	(b)	What is isosterism and bioisosterism? Classify them and give their recent application.	**05**
	(c)	Write a note on (i) Protein binding of drug (ii) Partition coefficient	**05**
Q.2	(a)	What are heterocyclic compounds? Give the preparations and properties of Furan.	**06**
	(b)	Explain the following statements **(Any three)** (i) Pyridine is stronger base than aniline (ii) Furan is less aromatic than Thiophene (iii) Electrophilic substitution takes place at 2-position in Pyrrole (iv) Pyrrole cannot be titrated using conc. nitric acid	**05**
	(c)	Give the synthesis and reactions of pyrimidine and isoquinoline	**05**
Q.3	(a)	Classify the drug acting on respiratory tract with chemical structure from each class	**06**
	(b)	Write a note on (i) Antiasthmetics (ii) Mucolytic agents	**05**
	(c)	Write a note on radio contrast media	**05**
Q.4	(a)	What are gastrointestinal agents. Classify them with examples.	**06**
	(b)	Write a note on (i) Proton pump inhibitors (ii) Prokinetic agents	**05**
	(c)	Give synthesis of Ranitidine and Diphenoxylate	**05**
Q.5	(a)	What are autocoids? Enlist various histaminic receptors. Classify H_1-antagonist with examples.	**06**
	(b)	Discuss SAR of antihistamines	**05**
	(c)	Give the synthesis of Chlorpheniramine and Citrizine.	**05**
Q. 6	(a)	Give following synthesis with reaction mechanism **(Any two)** (i) Skraup synthesis (ii) Hantzsch pyridine synthesis (iii) Fischer-Indole synthesis	**06**
	(b)	What is difference between antacids & antisecretary agents? Write a note on antisecretary agents.	**05**
	(c)	What are eicossanoids? Give examples of various eicossanoids. Write a note on prostaglandines.	**05**
Q.7	(a)	Write a note on Ferguson's principle	**06**
	(b)	Give any two synthesis and any two reactions of Imidazole & Thiazole.	**05**
	(c)	Write a note on expectorants & antitussive agents	**05**

****