Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – V • EXAMINATION – WINTER 2013

Subject Code: 250004 **Date: 04-12-2013**

Subject Name: Pharmaceutical Chemistry-VI (Medicinal Chemistry)

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	(a)	Enlist various physicochemical parameters. How partition coefficient and ionization affects biological activity of drug.	**06**
	(b)	What is bioisosterism? Explain in detail with examples.	**05**
	(c)	Write a note on geometric & optical isomerism.	**05**
Q.2	(a)	What is asthma? Explain antiasthmatics in detail.	**06**
	(b)	Write a note on antitussive agents.	**05**
	(c)	Define expectorants and mucolytics. Explain expectorants in detail.	**05**
Q.3	(a)	Explain Skraup synthesis and Fischer-Indole synthesis with reaction mechanism.	**06**
	(b)	Comment on the following (i) Pyridine is less basic than aliphatic amines. (ii) Electrophilic substitution reaction in indole occurs at 3rd position rather than 2nd position.	**05**
	(c)	Give the synthesis and reactions of thiophene and pyridazine.	**05**
Q.4	(a)	Enlist various histaminic receptors. Discuss neurochemistry of histamine.	**06**
	(b)	Discuss SAR of antihistamines.	**05**
	(c)	Give synthesis of chlorpheniramine and cyproheptadiene.	**05**
Q.5	(a)	What are eicosanoids? Discuss its chemistry and SAR.	**06**
	(b)	Write a note on eicosanoid biosynthesis.	**05**
	(c)	Explain eicosanoids approved for human clinical use.	**05**
Q. 6	(a)	Give any two preparations and reactions of imidazole and isoquinoline.	**06**
	(b)	What are diagnostic agents? Write a note on radiopharmaceuticals.	**05**
	(c)	Explain SAR of H_2-receptor antagonist.	**05**
Q.7	(a)	Write a note on antiemetics and laxatives.	**06**
	(b)	Explain proton pump inhibitors with its MOA.	**05**
	(c)	Give synthesis of ranitidine and omeprazole.	**05**

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