

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. PHARM (SEMESTER-5) (Old Syllabus) SUMMER-2015**

Subject code: 250004

Date: 04/05/2015

Subject Name: Pharmaceutical Chemistry-VI (Medicinal)

Time: 2:30 pm to 5:30 pm

Total Marks: 80

**Instructions:**

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

<b>Q.1</b>	(a) What are heterocyclic compounds? Explain nomenclature and give any one method of preparation and reaction of Quinoline.	<b>06</b>
	(b) Explain Skraup's synthesis with mechanism.	<b>05</b>
	(c) Discuss the preparations of Pyrazole, Oxazole and Thiophen.	<b>05</b>
<b>Q.2</b>	(a) Discuss the Drug-Receptor interactions and role of binding forces with suitable example for the importance of stereochemistry.	<b>06</b>
	(b) Write note on Isosteric replacement and Steric hinderance.	<b>05</b>
	(c) Discuss SAR of H1 antagonist.	<b>05</b>
<b>Q.3</b>	(a) Describe second generation antihistamine agents. What advantage do they have over first generation compounds?	<b>06</b>
	(b) Discuss relation between biological action and physicochemical properties for Partition-coefficients with suitable examples.	<b>05</b>
	(c) Short note on Proton pump inhibitors.	<b>05</b>
<b>Q.4</b>	(a) Explain Radiological contrast media.	<b>06</b>
	(b) Short note on Mucolytic agents.	<b>05</b>
	(c) Synthesis of Diphenhyramine and Trimeprazine.	<b>05</b>
<b>Q.5</b>	(a) Classify the drugs acting on respiratory tract.	<b>06</b>
	(b) Define and classify antiasthmatic agents.	<b>05</b>
	(c) What are eicosanoids? Write in brief about eicosanoid biosynthesis.	<b>05</b>
<b>Q.6</b>	(a) Explain Drugs for irritable bowel syndrome.	<b>06</b>
	(b) Short note on Antidiarrheals.	<b>05</b>
	(c) Discuss comments -	<b>05</b>
	1) Pyridine is weaker base then alkyl amine and stronger then aniline	
	2) Electrophilic substitution reaction take place at 2 <sup>nd</sup> position in thiophen	
<b>Q.7</b>	(a) What are Prokinetics? Classify them with suitable examples.	<b>06</b>
	(b) Define the following terms:	<b>05</b>
	(1) Emetic (2) Expectorant (3) Decongestant (4) Demulcent (5) Antacid.	
(c) Give the structure of:	<b>05</b>	
(1) Indole (2) Isoxazole (3) Isoquinoline (4) Pyrazine (5) Piperidine.		