

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. Pharm. – SEMESTER – V • EXAMINATION – WINTER • 2016**

**Subject Code: 2250004****Date: 30-11-2016****Subject Name: Pharmaceutical Chemistry-VII (Medicinal Chemistry – I)****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) Discuss in detail how solubility and ionization affects biological activity of drug molecules. **06**  
(b) Define drug therapy. Write a note on history of medicinal chemistry. **05**  
(c) Give a brief account on Bioisosterism. **05**
- Q.2** (a) Enlist various histamine receptors. Discuss neurochemistry of histamine. **06**  
(b) What are antihistamines? Give SAR of ethylenediamines as antihistamines. **05**  
(c) Give the synthesis of cetirizine and diphenhydramine. **05**
- Q.3** (a) Discuss in detail about proton pump inhibitors along with its mechanism of action. **06**  
(b) What are antisecretory agents? Discuss SAR of H<sub>2</sub> receptor antagonist. **05**  
(c) Outline the synthesis of ranitidine and omeprazole. **05**
- Q.4** (a) Explain the following term with examples: **06**  
(1) Antiemetics (2) Mucolytics (3) Laxatives  
(b) What is asthma? Write in detail about antiasthmatic agents. **05**  
(c) Write a note on expectorants and antitussive agents. **05**
- Q.5** (a) Classify sympathomimetic agents. Discuss SAR of adrenergic agonist. **06**  
(b) What are eicosanoids? Explain the chemistry of prostaglandins. **05**  
(c) Give the synthesis of albuterol and propanolol. **05**
- Q. 6** (a) Enlist various cholinergic receptors. Discuss SAR of acetyl choline. **06**  
(b) Write in detail about neurochemistry of catecholamines. **05**  
(c) Eicosanoids approved for human clinical use. **05**
- Q.7** (a) Write in brief about eicosanoid biosynthesis. **06**  
(b) Explain neuromuscular blocking agent in detail. **05**  
(c) What are diagnostic agents? Write a note on radiopharmaceuticals. **05**

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