

GUJARAT TECHNOLOGICAL UNIVERSITY**B.PHARM – SEMESTER – V • EXAMINATION – WINTER – 2015****Subject Code: 250004****Date: 17/12/2015****Subject Name: Pharmaceutical Chemistry – VI (Medicinal)****Time: 10.30 AM to 1.30 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) Which are physicochemical properties of drug molecules that influencing biological activity? Explain hydrogen bonding? **06**
(b) Explain in detail about Bioisosterism. **05**
(c) What are geometric isomers? Explain with examples of drugs which are influencing the biological activity. **05**
- Q.2** (a) Give chemistry and preparation of furan. **06**
(b) Write detail mechanism of Hantzsch pyridine synthesis. **05**
(c) Enlist various methods for synthesis of imidazole. **05**
- Q.3** (a) What is asthma? Explain various classes of anti-asthmatic drugs. **06**
(b) What are Prokinetic agents? Give its structure and mechanism. **05**
(c) Write a short note on proton pump inhibitors. **05**
- Q.4** (a) Outline the synthesis of Omeprazole and Ranitidine. **06**
(b) Discuss the SAR of classical anti-histaminic. **05**
(c) Write a short note on diagnostic agent. **05**
- Q.5** (a) Give preparation of quinoline. **06**
(b) Explain the importance of protein binding and biological activity. **05**
(c) Give the structure of following; pyrazole, indole, isoquinoline, thiazole and pyridine. **05**
- Q. 6** (a) What are eicosanoids? Give the clinical uses of various eicosanoids. **06**
(b) Give the synthesis of chlorpheniramine and cetirizine. **05**
(c) Explain in detail about partition coefficient and its importance for crossing the biological membrane. **05**
- Q.7** (a) Write explanatory note on antiemetic and IBD. **06**
(b) Explain non-sedative H₁ receptor antagonist. **05**
(c) What are antitussive agents? Write a short note on it. **05**
