

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.**

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| 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 H ₁ receptor antagonist. | 05 |
| | (c) What are antitussive agents? Write a short note on it. | 05 |
