

GUJARAT TECHNOLOGICAL UNIVERSITY
BPHARM - SEMESTER- V • EXAMINATION – WINTER 2012

Subject code: 250004**Date: 25-01-2013****Subject Name: Pharmaceutical Chemistry – VI (Medicinal)****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.

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| Q.1 | (a) Enumerate and define physicochemical properties of drug molecules. Explain solubility and partition co-efficient in detail. | 06 |
| | (b) Discuss stereochemical features of drug molecules influencing biological activity. | 05 |
| | (c) Define Bioisosterism and classify with examples. | 05 |
| Q.2 | (a) Justify following sentences.
1. Pyridine has higher basicity than pyrrole.
2. Pyrrole is more aromatic than furan.
3. In indole, electrophilic attack takes place at 3-position rather than 2-position. | 06 |
| | (b) Explain preparation and reactions of Quinolines. | 05 |
| | (c) Explain preparation and reactions of imidazole. | 05 |
| Q.3 | (a) What is asthma? Classify antiasthmatic drugs with examples. | 06 |
| | (b) Write a note on antitussive agents. | 05 |
| | (c) Define expectorants, mucolytics and decongestants. Explain expectorants in detail. | 05 |
| Q.4 | (a) Classify and discuss antacids in detail. | 06 |
| | (b) What are antiemetics and laxatives? Discuss antiemetics in detail. | 05 |
| | (c) Give synthesis for Ranitidine and Omeprazole. | 05 |
| Q.5 | (a) Discuss chemistry and biosynthesis of histamine. | 06 |
| | (b) Classify antihistamines with examples. | 05 |
| | (c) Discuss SAR of first generation H ₁ antagonists. | 05 |
| Q. 6 | (a) Write synthesis for Diphenhydramine, Trimeprazine and Chlorpheniramine. | 06 |
| | (b) Discuss Cyclooxygenase pathway. | 05 |
| | (c) Explain eicosanoids approved for human clinical use with structures. | 05 |
| Q. 7 | (a) Classify antiulcer agents with examples and discuss their mode of action. | 06 |
| | (b) Give preparation of indole and isoquinoline. | 05 |
| | (c) Write a note on Diagnostic agents. | 05 |
