

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – V • EXAMINATION – WINTER 2013

Subject Code: 250004

Date: 04-12-2013

Subject Name: Pharmaceutical Chemistry-VI (Medicinal Chemistry)

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) Enlist various physicochemical parameters. How partition coefficient and ionization affects biological activity of drug. | 06 |
| | (b) What is bioisosterism? Explain in detail with examples. | 05 |
| | (c) Write a note on geometric & optical isomerism. | 05 |
| Q.2 | (a) What is asthma? Explain antiasthmatics in detail. | 06 |
| | (b) Write a note on antitussive agents. | 05 |
| | (c) Define expectorants and mucolytics. Explain expectorants in detail. | 05 |
| Q.3 | (a) Explain Skraup synthesis and Fischer-Indole synthesis with reaction mechanism. | 06 |
| | (b) Comment on the following | 05 |
| | (i) Pyridine is less basic than aliphatic amines. | |
| | (ii) Electrophilic substitution reaction in indole occurs at 3 rd position rather than 2 nd position. | |
| | (c) Give the synthesis and reactions of thiophene and pyridazine. | 05 |
| Q.4 | (a) Enlist various histaminic receptors. Discuss neurochemistry of histamine. | 06 |
| | (b) Discuss SAR of antihistamines. | 05 |
| | (c) Give synthesis of chlorpheniramine and cyproheptadiene. | 05 |
| Q.5 | (a) What are eicosanoids? Discuss its chemistry and SAR. | 06 |
| | (b) Write a note on eicosanoid biosynthesis. | 05 |
| | (c) Explain eicosanoids approved for human clinical use. | 05 |
| Q. 6 | (a) Give any two preparations and reactions of imidazole and isoquinoline. | 06 |
| | (b) What are diagnostic agents? Write a note on radiopharmaceuticals. | 05 |
| | (c) Explain SAR of H ₂ -receptor antagonist. | 05 |
| Q.7 | (a) Write a note on antiemetics and laxatives. | 06 |
| | (b) Explain proton pump inhibitors with its MOA. | 05 |
| | (c) Give synthesis of ranitidine and omeprazole. | 05 |
