

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. - SEMESTER-5 • EXAMINATION – SUMMER -2018

Subject Code: 2250004**Date: 21/05/2018****Subject Name: Pharmaceutical Chemistry - VII (Medicinal Chemistry - I)****Time: 02:30 PM TO 05:30 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) Classify the antiasthmatic agents with chemical structures. **06**
(b) What is autocooids? Write the chemistry, biosynthesis and metabolism of histamine. **05**
(c) Define neuromuscular blockers. Classify them with only names. Write the therapeutic uses of them. **05**
- Q.2** (a) Describe optical and geometric isomerism of drugs. How do they affect the drug's biological activity? **06**
(b) Write the synthesis of i) any one H₁-antihistamine containing phenothiazine nucleus and ii) any one H₁-antihistamine containing piperazine ring. **05**
(c) Write a short note on indirectly acting sympathomimetics. **05**
- Q.3** (a) Define expectorants and mucolytics. Give two examples of expectorants and two examples of mucolytics with chemical structures. **06**
(b) Classify the muscarinic agonists with chemical structures. **05**
(c) Write the synthesis of i) any one H⁺/K⁺-ATPase inhibitor and ii) any one β-blocker. **05**
- Q.4** (a) Define medicinal chemistry. Discuss the history of it. **06**
(b) Write the synthesis of neostigmine and salbutamol. **05**
(c) Discuss the development of H₂-antihistamines. Write the therapeutic uses of H₂-antihistamines. **05**
- Q.5** (a) Write the neurochemistry of acetylcholine. **06**
(b) Classify the antiemetics with chemical structures. **05**
(c) Explain the SAR of parasympatholytics. **05**
- Q. 6** (a) Differentiate antacids and antisecretory agents. Write the mechanism of action and examples with structures of proton pump inhibitors. **06**
(b) Write a note on prokinetics. **05**
(c) What is the measure of drug's lipophilicity? How does it affect the drug's biological activity? **05**
- Q.7** (a) What is eicosanoids? Describe the biosynthesis of prostaglandins. **06**
(b) Discuss various metabolic routes for norepinephrine. **05**
(c) Write a short note on analeptics. **05**
