

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 5- EXAMINATION –WINTER - 2018

Subject Code: 250004**Date: 29/11/2018****Subject Name: Pharmaceutical Chemistry - VI (Medicinal)****Time: 10:30 AM TO 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.

- Q.1** (a) Explain the following with reaction mechanism: **06**
a) Skraup synthesis b) Paal-Knorr synthesis
- (b) Give the structure of: **05**
(1) Pyran (2) Triazole (3) Isoquinoline (4) Pyrazine (5) Piperidine
- (c) Give TWO reactions of the following: **05**
a) Imidazole b) Pyridine
- Q.2** (a) Comments on the following **06**
a) Thiophene is more aromatic than furan
b) Pyridine is more basic than Pyrrole
c) Unionized drug is absorbed better than ionized drug
- (b) Give synthesis of : a) Ranitidine b) Chlorpheniramine **05**
- (c) Define expectorants and mucolytics. Explain expectorants in detail **05**
- Q.3** (a) Discuss various Proton Pump Inhibitors **06**
(b) Describe various drugs used in irritable bowel syndrome **05**
(c) Classify antihistaminic agents and write a note on SAR of H₁ receptor blockers **05**
- Q.4** (a) Explain the effect of following parameter on biological activity. **06**
a) Complexation
b) Hydrogen bonding
- (b) Write a note on Antitussive agents. **05**
- (c) What are antiemetic agents? Classify them with examples **05**
- Q.5** (a) Comment on following statements **06**
a) Imidazole is less basic than pyrazole.
b) Indole is aromatic
c) Thiophene is more reactive for electrophilic substitution than furan
- (b) Explain Radiological contrast media. **05**
- (c) What are eicosanoids? Write in brief about eicosanoid biosynthesis. **05**
- Q. 6** (a) What is Bioisosterism? Classify and Explain in brief with examples. **06**
(b) Give synthesis and use of Promethazine and Chlorcyclizine. **05**
(c) Write a note on Diagnostic agents. **05**
- Q.7** (a) Discuss Stereo chemical features of drug molecules influencing biological activity. **06**
(b) Write a note on geometric & optical isomerism. **05**
(c) Explain Fischer-Indole synthesis with reaction mechanism. **05**