

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 4 EXAMINATION – WINTER -2019

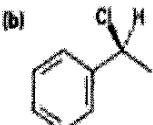
Subject Code: BP401TT**Date: 16-12-2019****Subject Name: Pharmaceutical Organic Chemistry-III****Time: 02:30 PM TO 05:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

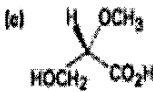
- Q.1** (a) What is racemic modification? Enlist different methods of resolution of racemic modifications and explain any one method in detail. 06
 (b) Differentiate Enantiomers & diastereomers. 05
 (c) Give general method of preparation & chemical reaction of Pyrrole. 05
- Q.2** (a) Give the structure and numbering of following: i) Furan ii) Oxazole iii) Pyridine iv) Thiazole v) Isoquinoline vi) Indole 06
 (b) Give two methods of synthesis and two reactions of any two of the following heterocycles: 1) Furan 2) Thiophene 05
 (c) Give synthesis, reactions and medicinal uses of Oxazole 05
- Q.3** (a) How will you synthesize Quinoline and Isoquinoline? Write reaction mechanism of it. 06
 (b) Give synthesis and medicinal uses of Pyrimidine and Purine, 05
 (c) Give synthesis, reactions and medicinal uses of Acridine 05
- Q.4** (a) What is configuration and conformation? Explain with suitable examples. Write in brief about Atropisomerism. 06
 (b) Assign R & S configuration for following 05
- (a)



(b)



(c)


- (c) Give synthesis, reactions and medicinal uses of Indole 05
- Q.5** (a) Add a note on Clemmensen reduction, Birch reduction 06
 (b) Define conformations. What are the different conformations of Cyclohexane? Which one is more stable? Why? 05
 (c) Answer the following (Any Two): 05
 1) Why thiophene is more stable and more aromatic than pyrrole and furan?
 2) Why pyridine undergoes electrophilic substitution at β -position?
 3) Why pyrrole is weak base than pyridine?
- Q.6** (a) Explain Oppenauer-oxidation and Dakin reaction 06
 (b) Write in brief conformational analysis of n-Butane 05
 (c) Note on Beckmanns rearrangement & Metal hydride reduction 05
- Q.7** (a) Comment: 06
 1. Electrophilic substitution takes place at 2-position in Pyrrole.
 2. Pyrrole is more aromatic than furan.
 3. Pyridine is more basic than pyrrole.
 (b) Give at least one preparation & one chemical reaction of i) Pyrazole ii) Imidazole 05
 (c) Give reaction involved in Schmidt rearrangement & Wolff Kishner reduction 05
