

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Ph. SEM -IV • EXAMINATION – SUMMER - 2022

Subject Code: BP401TT**Date: 14/07/2022****Subject Name: Pharmaceutical Organic Chemistry-III****Time: 10:30AM TO 1:30PM****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) Define and explain the following 1. Enantiomers 2. Chirality 3. Conformations	06
	(b) Describe sequence rules for the RS system of nomenclature	05
	(c) Discuss Geometrical isomerism with examples	05
Q.2	(a) What is racemic mixture? Describe various methods for resolution of racemic mixture	06
	(b) Discuss synthesis, reactions and medicinal uses of oxazole	05
	(c) Explain stereo selective reaction by giving examples	05
Q.3	(a) Explain Dakin reaction and Schmidt rearrangement with mechanism	06
	(b) Describe conformational isomers of n-Butane	05
	(c) Write structure of the following 1. 2-Methyl thiophene 4. 4-Chloro Pyrazole 2. Cis 2-Butene 5. 3-Nitro Pyridine 3. Furfural	05
Q.4	(a) Comment on the following 1. Thiophene is more aromatic than furan and pyrrole 2. Pyridine is stronger base than pyrrole 3. Pyridine undergoes electrophilic substitution at C ₃ Position	06
	(b) Write in detail about conformations of cyclohexane	05
	(c) Discuss the various methods of synthesis for quinoline	05
Q.5	(a) Write synthesis and medicinal uses of pyrimidines	06
	(b) Discuss the atropisomerism in details	05
	(c) Write the possible stereoisomers of the 2,3- Dichloro Butane with R and S configuration	05
Q.6	(a) Write any three methods of synthesis for pyrrole	06
	(b) Write various reactions of pyridines	05
	(c) Discuss the methods of synthesis for indole	05
Q.7	(a) Write a note on Clemmensen and Wolff kishner reduction with mechanism	06
	(b) Discuss the any three reactions of thiazole	05
	(c) Write synthesis, reactions and medicinal uses of acridine	05