Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM - SEMESTER– IV EXAMINATION – WINTER -2020

Subject Code: BP401TT **Date: 09/02/2021**

Subject Name: PHARMACEUTICAL ORGANIC CHEMISTRY III

Time: 02:30PM TO 04:30PM **Total Marks: 54**

Instructions:

1. **Attempt any THREE questions from Q-1 to Q-6.**
2. **Q.7 is compulsory to attempt.**
3. **Make suitable assumptions wherever necessary.**
4. **Figures to the right indicate full marks.**

Q.1 **(a)** State and expalin Recemic mixure and write note on different methods of resolution. **06**

(b) Give the Preparation, Properties and Chemical reaction of Pyrrole. **05**

(c) Give Difference between Enantiomers and Diesteriomers. **05**

Q.2 **(a)** Give brief note on Conformation of Cyclohexane. **06**

(b) State and Explain **05**

a) Enantiomers b) Diesteriomers c) Specific rotation

d) Mesomers e) Geometric Isomer

(c) Write short note on preparation and chemical properties of Thiazole. **05**

Q.3 **(a)** Give Brief note with mechanism on **06**

a) Dakin Reaction b) Schmidt rearrangement

(b) Comment on following statements **05**

i) Furan has high boiling point than Pyrrole.

ii) Furan is aromatic in nature although it containing two lone pair electron.

iii) Thiophene is more aromatic than pyrrole.

iv) Electrophilic substitution on pyridine favour at C_3 position.

v) Pyrrole is more basic than pyridine and aliphatic amine.

(c) Write a Short Note on Geometric Isomerism. **05**

Q.4 **(a)** Write the Structure, Reaction, and Medicinal use of Imidazole, Oxazole. **06**

(b) Give any three preparation of i) Indole ii) Quinoline **05**

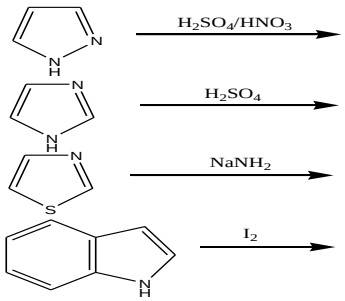
(c) Give Structure of following ring system **05**

i) Pyrimidine ii) Isoquinoline iii) Purine iv) Acridine v) Thiazole

Q.5 **(a)** Give Brief note with Mechanism on **06**

a) Clemmensen Reduction b) Beckmanns rearrangement

(b) Complete the reaction **05**



(c) Explain Hantzsch Synthesis in detail with structural mechanism **05**

Q. 6	**(a)**	State and Explain and give brief note on Atropisomers with suitable examples.	**06**
	(b)	Write short note on preparation and chemical properties of Pyridine.	**05**
	(c)	State and explain with structural mechanism - Electrophilic substitution reaction favour C_2 position in Furan.	**05**
Q.7	**(a)**	Give brief note on Claisen-Schmidt Condensation and Wolff Kishner Reduction.	**06**
		OR	
	(a)	Explain in brief with suitable example - Stereospecific and Stereoselective reactions.	**06**
		OR	
	(a)	Give brief note on reaction involve in $LiAlH_4$ and $NaBH_4$.	**06**

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