Enrollment No: Ex	xam Seat No:
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## C. U. SHAH UNIVERSITY

## **Summer Examination-2022**

**Subject Name: Heterocyclic Chemistry** 

Subject Code: 5SC03HTC1 Branch: M.Sc. (Chemistry)

Semester: 3 Date: 25/04/2022 Time: 02:30 To 05:30 Marks: 70

## **Instructions:**

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Ο 1			SECTION – I	(07)
Q-1			Attempt the Following questions	( <b>07</b> ) 01
		a.	What are Heterocyclic compounds?	01
		b.	Draw the structure of uracil and cytocine.	02
		c.	Write down the prefix name used for S and O.	01
		d.	Draw any two structures of three membered saturated heterocylic compounds.	01
		e.	What the suffix suggests in heterocyclic compounds.	01
		f.	What is the suffix for unsaturated five membered compound having nitrogen.	01
Q-2			Attempt all questions	(14)
	a.		Write a note on Azirine.	07
	b.		Write synthesis methods and chemical properties of Azitidines.	07
			OR	
Q-2			Attempt all questions	<b>(14)</b>
	a.		Give the chemical properties of Thietanes.	05
	b.		Explain the paalknorr synthesis for Thiophene.	04
	c.		Write a note on $\beta$ -lactum.	05
Q-3			Attempt the following question	<b>(14)</b>
	a.		Discuss the pyrazole heterocycle.	07
	b.		What is oxazole? How it can be synthesized?	07
			OR	
Q-3			Attempt all questions	(14)
	a.		Write a note on Benzofuran.	05
	b.		Discuss the electrophilic substitution reactions of Furan.	05
	c.		Write a note on synthesis methods of Imidazole.	04



## SECTION – II

Q-4		Draw the structures of following heterocycles.	<b>(07</b> )
_		a. Indole	01
	]	<b>b.</b> Piperidine	01
		e. Oxete	01
		<b>1.</b> Furan	01
		e. Benzo[b]pyridine	01
	f	Pyrilium salt	01
		g. Isoquinoline	01
Q-5		Attempt all questions	(14)
	a.	Write a note on Pyrimidine.	07
	b.	Write a note on Thiazole moiety.	07
		OR	
Q-5		Attempt all questions	(14)
	a.	Write a note on Cinnoline.	07
	b.	Write the chemical properties of Thiophene.	07
Q-6		Attempt all questions	(14)
	a.	Write the synthesis methods of Indole.	05
	b.	Explain the preparation and physical properties of Pyrrole.	05
	c.	Write a note on Phthalazine.	04
		OR	
<b>Q-6</b>		Attempt all Questions	
	a.	Write a note on Quinoline.	07
	b.	Write a note on Pyridine.	07

