Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Chemistry-III

Subject Code: 4SC03CHC1 **Branch: B.Sc.(Chemistry)**

Semester: 3 **Date: 23/03/2017** **Time: 10:30 To 01:30** **Marks: 70**

Instructions:

(1) Use of Programmable calculator & 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.

Q-1		**Attempt the following questions:**	**(14)**
	a)	Define: covalent bond	**(1)**
	b)	Draw the structure of furan.	**(1)**
	c)	Define: homolytic bond fission	**(1)**
	d)	Draw the structure of purin.	**(1)**
	e)	Define: ionic bond	**(1)**
	f)	Define: heterolytic bond fission	**(1)**
	g)	Draw the structure of pyrrole.	**(1)**
	h)	What are isomers?	**(1)**
	i)	Define: resonance	**(1)**
	j)	Define: resonance energy	**(1)**
	k)	Draw the structure of pyridine.	**(1)**
	l)	What is nucleophiles?	**(1)**
	m)	Draw the structure of quinolone.	**(1)**
	n)	Draw the structure of amino quinolone.	**(1)**

Attempt any four questions from Q-2 to Q-8

Q-2		**Attempt all questions**	**(14)**
	a)	Write a note on curtius rearrangement.	**(5)**
	b)	Discuss the methods for synthesis of Organoboranes.	**(5)**
	c)	Write a note on Halogen migration.	**(4)**
Q-3		**Attempt all questions**	**(14)**
	a)	Discuss the Reformatsky and Aldol reactions.	**(7)**
	b)	Discuss the synthesis and reactions of Diazomethane and Lead tetra-acetate.	**(7)**
Q-4		**Attempt all questions**	**(14)**
	a)	Discuss the physical and chemical properties of quinolone.	**(7)**
	b)	Write the synthesis of guanine and theobromine.	**(7)**
Q-5		**Attempt all questions**	**(14)**

	a)	Discuss the methods of synthesis and chemical reactions of Quinoline.	**(7)**
	b)	Write the complete synthesis of Purine and Uric acid.	**(7)**
Q-6		**Attempt all questions**	**(14)**
	a)	Discuss the methods of synthesis and chemical reactions of Isoquinoline.	**(7)**
	b)	Write a note on 1. Chemical reactions of Benzthiophene 2. Synthesis methods of Benzpyrrole	**(7)**
Q-7		**Attempt all questions**	**(14)**
	a)	Discuss the stability and reactivity of free redicals.	**(7)**
	b)	Discuss the Suzuki coupling reaction with proper mechanism.	**(7)**
Q-8		**Attempt all questions**	**(14)**
	a)	Discuss the classification of Purines and Ureides.	**(7)**
	b)	Write a note on 1. Manganese dioxide 2. LAH	**(7)**