Enrollment No: _	Exam Seat No:

C.U.SHAH UNIVERSITY

Summer Examination-2019

Subject Name: Organic Chemistry - I

Subject Code: 4SC03OCH1 Branch: B.Sc. (Chemistry)

Semester: 3 Date: 13/03/2019 Time: 02:30 To 05:30 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)	What do you mean by inductive effect?	(1)
	b)	Due to which bond isomeric alcohol has higher boiling point then isomeric ether?	(1)
	c)	Define: substitution reaction.	(1)
	d)	Which hetero atom is present into thiophene?	(1)
	e)	Give the structure of pyrrole.	(1)
	f)	Acid reacts with alcohol and gives	(1)
	-/	[A] amide [B] ester	(-)
		[C] alcohol with one carbon less [D] acid with one carbon less	
	g)	Which product will be obtained when reduction of furan occurs in presence of H_2/Ni at 200^0 C?	(1)
	h)	Secondary alcohols are oxidized to give	(1)
		[A] amide [B] ester	
		[C] ketone [D] acid	
	i)	Give the structure of 2-Pentanone.	(1)
	j)	Define: nucleophile.	(1)
	k)	What is Aldol condensation?	(1)
	1)	Which type of substitution reaction occurs in friedel crafts alkylation?	(1)
	m)	What is carbocations?	(1)
	n)	Give the structure of valeric acid?	(1)
Attemp	t any f	four questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
	a)	Write note on 'carbanions' and discuss its stability also.	(5)
	b)	Write a note on aromaticity with huckel's rule.	(5)
	c)	What is inductive effect and resonance effect? Explain with example.	(4)
Q-3	ĺ	Attempt all questions	(14)
	a)	Give brief information about electrophilic aromatic substitution reaction with any three reactions of it.	(7)
	b)	Explain hybridization with example.	(5)
	c)	Give the structure of (1) methyl ethyl ketone and (2) cinnamic acid	(2)



Q-4		Attempt all questions	(14)
	a)	Write any five synthesis of aldehyde or ketone.	(5)
	b)	Write Hell valhard zelinsky reaction with mechanism.	(5)
	c)	Write physical properties of aldehyde and ketone. (Any four).	(4)
Q-5		Attempt all questions	(14)
	a)	Discuss any five synthesis of carboxylic acid.	(5)
	b)	Explain cannizzaro reaction with mechanism.	(5)
	c)	Give synthesis of anhydride and alcohol from carboxylic acid.	(4)
Q-6		Attempt all questions	(14)
	a)	Write any three physical properties and any four chemical properties of mono carboxylic acid.	(7)
	b)	Discuss chemical reactions of aldehyde and ketone.	(7)
Q-7		Attempt all questions	(14)
-	a)	Write any three synthesis and any three chemical properties of thiophene	(6)
	b)	Write any five preparation of pyrrole.	(5)
	c)	Explain that thiophene is more aromatic compound then furan and pyrrole.	(3)
Q-8		Attempt all questions	(14)
	a)	Discuss briefly chemical reaction of furan.	(7)
	b)	Discuss structure and aromaticity in five membered heterocyclic ring having nitrogen as hetero atom.	(7)

