Enrollment No: _____ Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Organic Chemistry - II

Subject Code: 4SC06CHC2 **Branch: B.Sc. (Chemistry)**

Semester: 6 **Date: 27/04/2018** **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)	Define: Reaction mechanism	1
	b)	Define: Hydrocarbons	1
	c)	Define: Energy of activation	1
	d)	Define: Nucleophile and give its example.	1
	e)	What is heat of Hydrogenation?	1
	f)	Define: Free radical	1
	g)	What is reaction mechanism?	1
	h)	Give only reaction of addition of HCN in aldehydes.	1
	i)	Give the structure of Benzyne.	1
	j)	Define: Aromatic compound	1
	k)	Draw the structure of Witting reagent.	1
	l)	Calculate the value of 'n' in Anthracene.	1
	m)	What is cyanohydrin?	1
	n)	Define: Acetal	1

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

Q-2		**Attempt all questions**	**(14)**
	a)	Explain chlorination of methane and how to control this reaction?	**7**
	b)	Explain acid and base promote halogenation of ketone with mechanism.	**7**
Q-3		**Attempt all questions**	**(14)**
	a)	Discuss Cannizzaro reaction with mechanism and applications.	**7**
	b)	Discuss the stability of Benzene ring and give the chemical reaction of benzene.	**7**
Q-4		**Attempt all questions**	**(14)**
	a)	What is Friedel Crafts Acylation reaction? Explain the preparation of ketone by Friedel Crafts Acylation	**7**
	b)	Explain preparation of aryl halide in detail.	**7**

Q-5		**Attempt all questions**	**(14)**
	a)	Explain H*ü*ckel 4n+2 rule in detail and give an examples of different π electrons containing compounds.	**7**
	b)	Discuss free radical reaction mechanism of methane in detail.	**7**
Q-6		**Attempt all questions**	**(14)**
	a)	Discuss nucleophilic aromatic substitution: bimolecular displacement	**7**
	b)	Discuss addition of derivatives of ammonia in carbonyl group of aldehydes and ketones.	**7**
Q-7		**Attempt all questions**	**(14)**
	a)	Explain *Dumas* and *Kjeldahl* methods for quantitative analysis of nitrogen.	**7**
	b)	What are inhibitors? Give the brief introduction of it. Explain chain reaction of chlorination of methane.	**7**
Q-8		**Attempt all questions**	**(14)**
	a)	Give different reactions of aryl halides with its examples.	**7**
	b)	Discuss addition of alcohols in aldehydes in detail.	**7**