Enrollment No:	Exam Seat No:
	C. U. SHAH UNIVERSITY

Winter Examination-2021

Subject Name: Organic Chemistry-I

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

Semester: 3 Date: 14/12/2021 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.

		(d. A)
		(14)
,		01
,	• • •	01
,	V1	01
d)	What do you mean H-bond?	01
e)	Write the reagent used in acylation reaction.	01
f)	What is Huckel's rule for aromaticity?	01
g)	Draw the structure of Quinoline	01
h)	Draw resonating structure of furan	01
i)	Write the reagent used in nitration reaction	01
j)	What is the H-C-H bond angle in CH ₄ ?	01
k)	Classify following molecules in aromatic, antiaromatic and nonaromatic	01
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1)	Write the increasing order of stability for the following species	01
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m)	How many pi electrons in benzene molecule?	01
n)	What is acid anhydride? Give one example.	01
t any f	our questions from Q-2 to Q-8	
	Attempt all questions	(14)
	f) g) h) i) j) k)	b) How many and which orbitals are involved in the sp² hybridization? c) Define: Hyper conjugation d) What do you mean H-bond? e) Write the reagent used in acylation reaction. f) What is Huckel's rule for aromaticity? g) Draw the structure of Quinoline h) Draw resonating structure of furan i) Write the reagent used in nitration reaction j) What is the H-C-H bond angle in CH ₄ ? k) Classify following molecules in aromatic, antiaromatic and nonaromatic



b) What are carbocations? Explain its stability

07

Q-3		Attempt all questions	(14)
	a)	Discuss the Knorr pyrrole synthesis with its mechanism	07
	b)	Explain chemical reaction of pyrrole	07
Q-4		Attempt all questions	(14)
	a)	Discuss chemical reaction of furan	07
	b)	Discuss any two methods of synthesis of thiophene.	07
Q-5		Attempt all questions	(14)
	a)	Discuss Sulphonation reaction of benzene with its mechanism	07
	b)	Explain Friedel -Craft's alkylation reaction with proper mechanism and examples	07
Q-6		Attempt all questions	(14)
	a)	Discuss chemical properties of ketones.	07
	b)	Define carboxylic acid and write three methods of its preparation	07
Q-7		Attempt all questions	(14)
	a)	Discuss aldol condensation reaction with mechanism.	05
	b)	Write a note on Cannizaro reaction with mechanism	05
	c)	Explain Hell Volhard Zelinsky reaction	04
Q-8		Attempt all questions	(14)
	a)	What is electrophilic substitution reaction? Discuss Nitration with mechanism	07
	b)	Write a note on preparation of aldehydes	07

