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

Winter Examination-2015

Subject Name: Chemistry - III

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

Semester: 3 Date: 03/12/2015 Time: 2:30 To 5:30 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 is hemolytic cleavage?	(01)
	b)	Define inductive effect	(01)
	c)	What are carbcations?	(01)
	d)	Write only reaction for Pinacol-pinacolone rearrangement.	(01)
	e)	Define Nucleophile	(01)
	f)	Define Electrophile	(01)
	g)	Write only the reaction of Reformatsky reaction.	(01)
	h)	Write any one application of manganese dioxide ragent.	(01)
	i)	Write the structure of isoquinoline	(01)
	j)	Write the reaction for preparation of lithium aluminium hydride.	(01)
	k)	Write the cyclization reaction of saturated alcohol using lead tetra acetate.	(01)
	1)	What is the general name of Benzpyrrole	(01)
	m)	Write the structure of tetrahydro furan	(01)
	n)	Write the structure of theobromine	(01)
Atten	npt any f	our questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
_	a)	Discuss the stability of Free radicals.	(05)
	b)	What are carbanion? Discuss its stability.	(05)
	c)	Write a note on resonance energy of benzene	(04)
Q-3	ŕ	Attempt all questions	(14)
	a)	Explain Benzilic acid rearrangement with reaction and mechanism	(05)
	b)	Discuss Suzuki reaction with reaction and mechanism	(05)
	c)	Write a note on curtius rearrangement.	(04)
Q-4	,	Attempt all questions	(14)
~	a)	Explain principle, mechanism and synthetic applications of Diels-Alder reaction	(05)
	b)	Explain principle, mechanism and synthetic applications of Perkin reaction	(05)

	c)	Discuss the principle and application of Aldol Condensation.	(04)
Q-5		Attempt all questions	(14)
	a)	Discuss various methods of preparation of Diazomethane.	(05)
	b)	Discuss applications of Lithium aluminium hydride	(05)
	c)	Write the reactions of organoboranes.	(04)
Q-6		Attempt all questions	(14)
	a)	Describe several methods to synthesize benzpyrrole	(05)
	b)	Write the chemical reactions of benzthiophene	(05)
	c)	Write a note on quinolone	(04)
Q-7		Attempt all questions	(14)
	a)	Discuss various methods of synthesis of purines	(05)
	b)	Write the synthesis of caffeine and guanine from uric acid	(05)
	c)	Write a note on Adenine	(04)
Q-8		Attempt all questions	(14)
	a)	Discuss principle, mechanism and applications of claisen condensation reaction.	(07)
	b)	Write synthesis and chemical reactions of benzfuran	(07)

