

# C.U.SHAH UNIVERSITY

## Winter Examination-2015

Subject Name : Organic Chemistry-I

Subject Code : 4SC05CHC2

Branch : B.Sc. (Chemistry)

Semester : 5

Date : 04/12/2015

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.

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<b>Q-1</b>	<b>Attempt the following questions:</b>	<b>(14)</b>
	a) Define: conformations	1
	b) Define: stereoisomers	1
	c) Define: cracking	1
	d) Define: catalytic isomerization	1
	e) Define: plane-polarized light	1
	f) Define: dextrorotatory	1
	g) Define: levorotatory	1
	h) Define: Chiral centre for the molecules.	1
	i) Define: racemic modification	1
	j) Write the full name of R and S for the specification of configuration.	1
	k) For the organic molecules, which kind of the view is known as the Newman projection ?	1
	l) Give the name of scientist who has discovered the optical activity (enantiomerism).	1
	m) At which place, the discovery of optical activity (enantiomerism) was done ?	1
	n) In which year, the discovery of optical activity (enantiomerism) was done ?	1

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

<b>Q-2</b>	<b>Write short notes on:</b>	<b>(14)</b>
<b>A</b>	Acidity of $\alpha$ -hydrogens	<b>5</b>
<b>B</b>	Reactions involving carbanions	<b>5</b>
<b>C</b>	Enolization.	<b>4</b>
<b>Q-3</b>	<b>Write short notes on:</b>	<b>(14)</b>
<b>A</b>	Newman projection of ethane.	<b>5</b>
<b>B</b>	Newman projection of butane.	<b>5</b>



C	Structure of carbocations.	4
<b>Q-4</b>	<b>Attempt all questions</b>	<b>(14)</b>
A	Write short note on closer look of cyclohexane	5
B	Explain the ring inversion (flipping) of cyclohexane	5
C	Briefly explain, how do axially and equatorially substituted rings react differently?	4
<b>Q-5</b>	<b>Explain short notes on:</b>	<b>(14)</b>
A	Enantiomers of stereoisomers.	7
B	Grignard reagent.	7
<b>Q-6</b>	<b>Attempt all questions</b>	<b>(14)</b>
A	Describe the halogenations of alkanes with mechanism.	7
B	Explain the methods of preparation of alkanes.	7
<b>Q-7</b>	<b>Attempt all questions</b>	<b>(14)</b>
A	Explain polarimeter.	7
B	Write brief description on diastereomers.	7
<b>Q-8</b>	<b>Attempt all questions</b>	<b>(14)</b>
A	Write short note on <i>meso</i> compounds.	7
B	Discuss in brief: D- and L- configuration.	7

