

Enrollment No: \_\_\_\_\_ Exam Seat No: \_\_\_\_\_

# C.U.SHAH UNIVERSITY

## Summer Examination-2017

Subject Name: Stereochemistry in Organic Synthesis

Subject Code: 4SC02SOS1

Branch: B.Sc. (Microbiology)

Semester: 2

Date: 16/05/2017

Time: 02.00 To 04.00

Marks: 50

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>(10)</b>
	A. Define nucleophilic reaction	<b>01</b>
	B. What is Friedel Craft reaction?	<b>01</b>
	C. Define stereochemistry	<b>01</b>
	D. Define Ionic and Covalent bond	<b>01</b>
	E. What is hybridization?	<b>01</b>
	F. Define inductive effect	<b>01</b>
	G. Write the full forms of D/L and R/S	<b>02</b>
	H. Define hemolytic and heterolytic bond fission	<b>02</b>

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

<b>Q-2</b>	<b>Answer the following questions</b>	<b>(10)</b>
	A. Discuss the reaction mechanism of SN1 and SN2 reactions	<b>05</b>
	B. Explain the stability of free radicals based upon resonance and hyperconjugation	<b>05</b>
<b>Q-3</b>	<b>Answer the following questions</b>	<b>(10)</b>
	A. What is activation energy? Discuss the Huckel rules for aromaticity	<b>05</b>
	B. Discuss the reaction mechanism of E1 and E2 reactions	<b>05</b>
<b>Q-4</b>	<b>Answer the following questions</b>	<b>(10)</b>
	A. Discuss the stability of carbocation	<b>05</b>
	B. Discuss the thero-erythro nomenclature for stereoisomers with suitable examples	<b>05</b>



<b>Q-5</b>	<b>Answer the following questions</b>	<b>(10)</b>
	A. Discuss the stability of carboanion	<b>05</b>
	B. Write a note on Fisher projection formula	<b>05</b>
<b>Q-6</b>	<b>Answer the following questions</b>	<b>(10)</b>
	A. Discuss the factors affecting rate of reaction	<b>05</b>
	B. Write a note on Newman formula	<b>05</b>
<b>Q-7</b>	<b>Answer the following questions</b>	<b>(10)</b>
	A. Write a note on	
	1. Hofmans rule	<b>03</b>
	2. Saytzeff rule	<b>03</b>
	3. Antiaromaticity	<b>04</b>
<b>Q-8</b>	<b>Answer the following questions</b>	<b>(10)</b>
	A. Write differences between tautomerization and resonance with suitable example	<b>05</b>
	B. Write a note on effect of substituent's on the strength of base	<b>05</b>

