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.

Q-1		**Attempt the following questions**	**(10)**
	A.	Define nucleophilic reaction	**01**
	B.	What is Friedel Craft reaction?	**01**
	C.	Define stereochemistry	**01**
	D.	Define Ionic and Covalent bond	**01**
	E.	What is hybridization?	**01**
	F.	Define inductive effect	**01**
	G.	Write the full forms of D/L and R/S	**02**
	H.	Define hemolytic and heterolytic bond fission	**02**

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

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

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