Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name: Stereochemistry in Organic Synthesis

Subject Code: 4SC02SOS1 Branch: B.Sc. (Microbiology)

Semester: 2 Date: 25/10/2018 Time: 02:30 To 04:30 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: Carbocation **01**
b) List of any two examples of Nucleophile. **01**
c) Define: Tautomerism **01**
d) Define: Hybridisation **01**
e) Define: Streochemistry **01**
f) Give one example of diastereomers. **01**
g) Write the Huckel's rules. **01**
h) Explain meso compound with example. **01**
i) Explain Heterolytic and Homolytic bond cleavage with proper examples. **02**

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

Q-2 **Attempt all questions** **(10)**

a) Write a note on Nitration process. **05**
b) Explain Friedel Crafts Acylation reaction of benzene with mechanism. **05**

Q-3 **Attempt all questions** **(10)**

a) Write a note on Carbanion. **05**
b) Explain SN^1 reaction briefly. **05**

Q-4 **Attempt all questions** **(10)**

a) Write the differences between of SN^1 and SN^2 reaction mechanism. **05**
b) Explain Unimolecular (E1) and Bimolecular (E2) elimination reaction with suitable examples. **05**

Q-5 **Attempt all questions** **(10)**

a) Explain the structure of ethane molecule based on hybridization concept. **05**

	b)	Write a note on keto-enol tautomerism.	**05**
Q-6		**Attempt all questions**	**(10)**
	a)	Explain the rules for aromaticity and antiaromaticity.	**05**
	b)	Write a note on (1) Bond angles and (2) Bond distance	**05**
Q-7		**Attempt all questions**	**(10)**
	a)	Discuss the Fischer projection of organic compounds with stepwise process.	**05**
	b)	Write a note on hyperconjugation with suitable examples.	**05**
Q-8		**Attempt all questions**	**(10)**
	a)	Discuss R, S, erythro and thereo nomenclature for stereoisomers with proper examples.	**05**
	b)	Explain stereochemistry of biphenyls compounds.	**05**