

Enrollment No: _____ Exam Seat No: _____

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name: Organic Chemistry-II

Subject Code: 5SC02OCH1

Branch: M.Sc. (Chemistry)

Semester: 2

Date: 23/10/2018

Time: 02:30 To 05:30

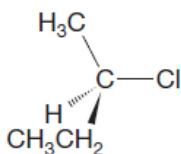
Marks: 70

Instructions:

- (1) Use of Programmable calculator and 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.
-

SECTION – I

- Q-1 Attempt the Following questions (07)**
- Introduce the word Symmetry. (1)
 - Define: Diastereomers (1)
 - Define: Meso compounds (1)
 - Expand the term HOMO. (1)
 - Give full form of R and S (R, S Nomenclature). (1)
 - What is meant by Photolysis? (1)
 - Define: Quantum yield (1)
- Q-2 Attempt all questions (14)**
- Give brief note on types of radiation. Explain Photo-Fries rearrangements. (7)
 - Write a note on Enantiomers. (4)
 - Write a following answers (3)
 - Note on stereoselectivity.
 - R,S nomenclature of



OR

- Q-2 Attempt all questions (14)**
- Explain asymmetric synthesis in detail. (7)



- b. Discuss C. I. P. (Cahn–Ingold–Prelog) nomenclature. (4)
- c. Write a following answers (3)
1. Note on Topicity
 2. Define: Helicity

Q-3 Attempt all questions (14)

- a. Discuss Elements of Chirality including Chiral centre, Chiral axis, and Chiral plane. (7)
- b. Write brief note on (7)
1. Newman and Sawhorse Projection.
 2. Discuss Threo-Erythro nomenclature with examples.

OR

Q-3 Attempt all questions (14)

- a. Explain Cis, Trans and E, Z nomenclature with appropriate examples. (7)
- b. Write a brief note on (7)
1. Write a note on Pseudo stereoisomerism.
 2. Describe sharpless asymmetric epoxidation.

SECTION – II

Q-4 Attempt the Following questions (07)

- a. What do you meant by Pericyclic reaction? (1)
- b. Define: Stereospecific reactions (1)
- c. Define: Chiral Centre (1)
- d. Explain in short Fluorescence. (1)
- e. What are Olefins? (1)
- f. Define: Rearrangements (1)
- g. Write a Beer Lambert law in Photochemistry. (1)

Q-5 Attempt all questions (14)

- a. Describe photo dissociation and gas phase photolysis. (7)
- b. Write a note on (7)
1. Photo degradation of polymer
 2. Norrish type-I reaction.

OR

Q-5 Attempt all questions (14)

- a. Explain Photochemical reaction of olefins and cis-trans stilbenes. (7)
- b. Describe oxetane formation reaction of the Carbonyl Compounds. (7)

Q-6 Attempt all questions (14)

- a. Discuss the cyclization of 1, 3, 5-Hexatriene system. (5)



- b. Define electrocyclic reaction and write a note on cyclisation of $[4n + 2]$ system. (5)
- c. Write Brief note on (4)
1. FMO and PMO approach.
 2. Molecular orbital theory.

OR

- Q-6 Attempt all Questions (14)**
- a. Explain types of Pericyclic reaction in detail. (5)
- b. Discuss $[4+2]$ cycloaddition reaction. (5)
- c. Write note on (4)
1. In phase and out of phase.
 2. Electrocyclic reaction.

