

Exam Seat No: _____

Enrollment No: _____

C.U.SHAH UNIVERSITY

Wadhwan City

Subject Code : 5SC02CHC2

Summer Examination-2014

Date: 11 /06/2014

Subject Name:- Organic Chemistry

Branch/Semester:- M.Sc(Chemistry) /II

Time:2:00To 5:00

Examination: Regular

Instructions:-

- (1) Attempt all Questions of both sections in same answer book / Supplementary
- (2) Use of Programmable calculator & any other electronic instrument is prohibited.
- (3) Instructions written on main answer Book are strictly to be obeyed.
- (4) Draw neat diagrams & figures (If necessary) at right places
- (5) Assume suitable & Perfect data if needed

SECTION-I

Q-1 Define following term . (07)

- a) Chain isomerism (02)
- b) Quantum yield (02)
- c) Isomerism (01)
- d) Photolysis (01)
- e) Photo dissociation (01)

Q-2 Answer the following. (14)

- a) Define Photochemical reaction? Explain the types of Photochemical reaction. (05)
- b) Write a note on 1) Chemiluminescence 2) Jablonski diagram (05)
- c) What is photochemistry? Describe "Law of Photochemistry". (04)

OR

Q-2 Answer the following in detail. (14)

- a) Explain the rate constant and life times of reactive energy states. (05)
- b) Write note on 1) Fluorescence 2) Phosphorescence (05)
- c) Describe the effect of light intensity on photochemical reaction (04)

Q-3 Answer the following. (14)

- a) Discuss the types of excitation in photochemical reaction (07)
- b) Describe the photochemical reaction and isomerization of olefins (07)

OR

Q-3 Answer the following. (14)

- a) Write a note as photoisomerisation of *cis* and *trans* stilbenes (07)
- b) Write a note on cycloaddition reaction and draw the following conversions (07)



SECTION-II

- Q-4 Define following term (07)**
- a) Compare In phase and out phase (02)
 - b) Write Full form of FMO and PMO (02)
 - c) Defines Antrafacial (01)
 - d) Define Intramolecular cyclisation (01)
 - e) Define Substitution reaction (01)
- Q-5 Answer the following in detail. (14)**
- a) Write note on: 1) Azulene 2) Photo-Fries reaction of anilides. (05)
 - b) What are pericyclic reactions? Explain the types of pericyclic reaction. (05)
 - c) Write the reaction and complete mechanism of Bartone reaction. (04)

OR

- Q-5 Answer the following in detail. (14)**
- a) Write note on 1) Tropolone 2) Oxetane formation (05)
 - b) Describe the photochemical formation of smog. (05)
 - c) How will you differentiate between Norrish types I & II reactions. (04)
- Q-6 Answer the following in detail. (14)**
- a) What is molecular orbital symmetry? Drive frontier orbital of 1,3 butadiene. (07)
 - b) Write short note on: 1) Photo Fries rearrangement 2) Actinometry (07)

OR

- Q-6 Answer the following in detail. (14)**
- a) What is electrocyclic reaction? Explain the following terms (07)
 - 1) Conrotatory and Disrotatory motions
 - 2) Nonbenzene aromatic compounds
 - b) Write note on Hukel rule and applications (07)

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