

C.U.SHAH UNIVERSITY

Wadhwan City

Subject Code : 5SC01CHC2

Summer Examination-2014

Date: 12 /06/2014

Subject Name:- Organic Chemistry

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

Time:10:30 To 1:00

Examination: Remedial

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 All questions are Compulsory**

1. Explain the following terms 3
 - a. Curved arrow
 - b. Aldol condensation
 - c. Linear free energy relationship
2. Differentiate:
 - a. Homolytic bond fission and Heterolytic fission 2
 - b. Nucleophiles and Electrophiles 2

Q-2 Attempt the following questions

1. Explain the following reactions: 5
 - a) Elbspersulphate oxidation
 - b) Rosenmund reaction
2. Explain the following name reactions: 5
 - a) Oppenauer oxidation
 - b) Reformatsky
3. Differentiate Clemmensen and Wolf-kishner reduction. 4

OR**Q-2 Attempt the following questions**

1. Justify the following statements: 4
 - a) Elbspersulphate oxidation always takes place in the p-position.
 - b) Rosenmund reaction stops at the aldehyde stage.
2. Give the mechanism of following reaction: 5
 - a) Nazarov cyclization
 - b) Noyori reaction
3. Explain following name reactions: 5
 - a) Mukaiyama reaction
 - b) Vismeier-Haack reaction

Q-3 Attempt the following questions

1. Define arrow notation and explain different types of arrows in details. 7
2. Answer the following question: 7
 - a) Explain aldol condensation with its proper mechanism.



- b) What is prins reaction? Explain its different products depending on the reaction conditions. Give its application also.

OR

Q-3 Attempt following questions

1. What is linear free energy relationship? Derive and explain the Hammett equation. 7
2. Answer the following question 7
 - a. Explain Horner-Wordwoth-Emmons reaction.
 - b. Explain darzen reaction with proper mechanism. Give important application of darzen reaction.

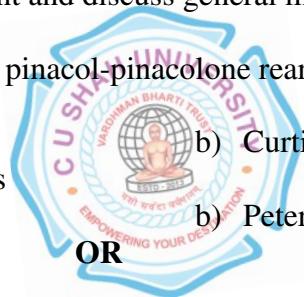
SECTION – II

Q-4 Compulsory and short type question (1 or 2)

1. Define term: Rearrangement 1
2. Write down the specific uses of Phase transfer catalyst. 2
3. Write Applications of wilkinson's catalyst. 2
4. Write down preparation and application of Trimethylsilyl iodide. 2

Q-5 Attempt the following questions

1. Explain the following: 5
 - a) Explain the types of rearrangement and discuss general mechanism behind the nature of migration in rearrangement.
 - b) Discuss the migratory aptitude of pinacol-pinacolone rearrangement.
2. Explain the following: 5
 - a) Baeyer-villiger rearrangement
 - b) Curtius rearrangement
3. Write notes on following reagents 4
 - a) Merrifield resin
 - b) Peterson's synthesis



OR

Q-5 Attempt the following questions

1. Explain the following: 5
 - a) Beckmann rearrangement
 - b) Schmidt rearrangement
2. Explain the following: 5
 - a) Benzilic acid rearrangement
 - b) Demyanovrearrangement
3. Write notes on following reagents 4
 - a) Ceric ammonium nitrate
 - b) Dess martin periodinane

Q-6 Explain the following questions

1. Pinacol-pinacolone rearrangement 7
2. Wagner-Meerwein rearrangement 7

OR

Q-6 Explain the following questions

1. Neber rearrangement 7
2. Favourskiirearrangement 7

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