Exam Seat No:_____ Enrollment No:_____

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. Homolyticbond 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) Rosenmundreaction

2. **Explain the following name reactions:** 5

a) Oppenauer oxidation b) Reformatsky

3. Differentiate Clemmensenand 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) 7

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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