

Enrollment No: \_\_\_\_\_ Exam Seat No: \_\_\_\_\_

# C.U.SHAH UNIVERSITY

## Winter Examination-2015

Subject Name: Organic Chemistry

Subject Code: 5SC01OCC2

Branch: M.Sc.(Chemistry)

Semester: 1

Date: 2/12/2015

Time:10:30 To 1:30

Marks: 70

Instructions:

1. Attempt all questions of both sections in same answer book/ Supplementary
  2. Make suitable assumption wherever necessary.
  3. Figures to the right indicate full marks.
  4. Draw figure / Diagram wherever necessary.
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### Section – I

- Q-1 Define following terms (07)
- a) Homolytic fission (01)
  - b) Peterson synthesis (01)
  - c) Nucleophilic addition reaction (01)
  - d) Heterolytic fission (01)
  - e) Crown ethers (01)
  - f) Merrifield resin (01)
  - g) Reaction mechanism (01)
- Q-2 Write the reaction path way and suitable mechanism following reaction (14)
- a) Mukaiyama (05)
  - b) Horner-Wadsworth (05)
  - c) (04)

OR

- Q-2 Write the reaction path way following reaction (14)
- a) Knoevenagel (05)
  - b) Hantzsch Pyrrole (05)



c) (04)

Q-3 Answer the following in detail. (14)

a) Write the following coupling reaction with mechanism (08)

1. Noyori 2. Stille

b) What is arrow notation? Discuss the different types of arrows used in reactions (06)

OR

Q-3 Answer the following in detail. (14)

a) What is Trimethylsilyl iodide? Write the Suzuki Coupling reaction with their application and mechanism (08)

b) What is LDA? Write note on Crown ethers (06)

### Section – II

Q-4 Draw the following reactions. (07)

a) Rosenmund-Von Braun (02)

b) Leuckart (02)

c) Mitsunobu (02)

d) IBX (01)

Q-5 Write the reaction path way following rearrangements with applications (14)

a) Arndt-Eistert (05)

b) Benzil-Benzilic (05)

c) (04)

OR

Q-5 Write the reaction path way following rearrangements with applications (14)

a) Wagner-Meerwein (05)

b) Favorskii (05)

c) (04)

Q-6 Answer the following in detail. (14)

a) Write a note on following organic reagents (08)

1. DCC 2. DMP

b) What is 9-BBN? Discuss the applications of Perkin reaction (06)



OR

- Q-6 Answer the following in detail. (14)
- a) Write a note on following organic catalysts (08)
1. Wilkinson 2. Phase transfer
- b) What is sodium cyanoborohydride? Discuss the Woodward *Cis*-hydroxylation (06)

