



JBE-003-1101002

Seat No. _____

M. Sc. (Chemistry) (Sem. I) (CBCS) Examination

December - 2019

C - 102 : Organic Chemistry

Faculty Code : 003

Subject Code : 1101002

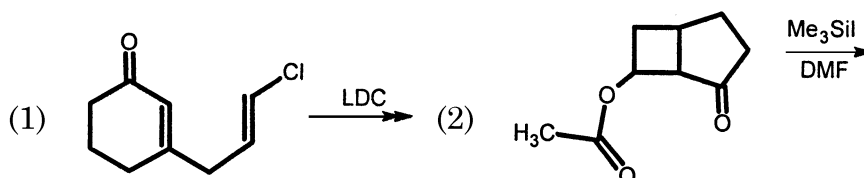
Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) All questions carry equal marks.
(2) All five questions are compulsory.

1 Answer the following : (any seven) 14

- (a) Express the Hammett equation and terms involved in it.
- (b) Explain the principle and mechanism of Fries rearrangement.
- (c) Discuss the mechanism of Smith rearrangement.
- (d) Write the full form of LDC, DDQ, TMS-I, DCC, LDA and PTC.
- (e) Define the term, Carb-cation and enlist the factors effects its stability.
- (f) Discuss the principle and chemical reaction of Birch reduction.
- (g) Complete the following :



- (h) Explain the mechanism of Prins Reaction.
- (i) Differentiate Woodward and Prevost hydroxylation.
- (j) Give a brief account on Benzyne.

- 2** Answer any **two** of the following : **14**
- (a) Discuss the principle, chemical reaction and mechanism of Suzuki Reaction.
 - (b) Describe Biginelli reaction with its mechanism and applications.
 - (c) Describe Sharpless epoxidation in detail.
- 3** Answer any **two** of the following : **14**
- (a) Give a brief account on DDQ.
 - (b) Explain Gillman reagents.
- OR**
- (a) Write the synthesis, mechanism and application of Crown-ether.
 - (b) Explain Wilkinson catalyst with its mechanism.
- 4** Answer the following : **14**
- (a) Explain the principle, chemical reaction and mechanism of Bayerh Villiger rearrangement.
 - (b) Discuss Favorskii rearrangement.
- 5** Answer any **two** from the following : **14**
- (a) Give an account on McMurry reaction.
 - (b) Enlist the reagent used for Hydroboration and discuss any one in detail.
 - (c) Discuss in detail, " Passerini-Reaction".
 - (d) Discuss in detail, "Sommet-Hauser rearrangement"
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