

M. SC. (Organic Chemistry) Sem-III (Choice Based Credit & Grade System) : SUMMER - 2019

SUBJECT : ADVANCED ORGANIC REACTION MECHANISM

Day : Saturday
Date : 27/04/2019

S-2019-1180

Time : 03.00 PM TO 06.00 PM
Max. Marks : 60

N.B.:

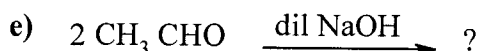
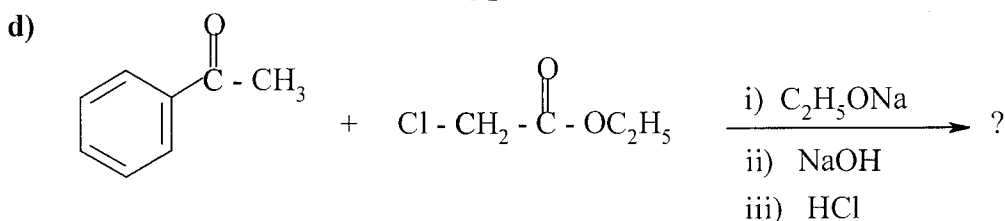
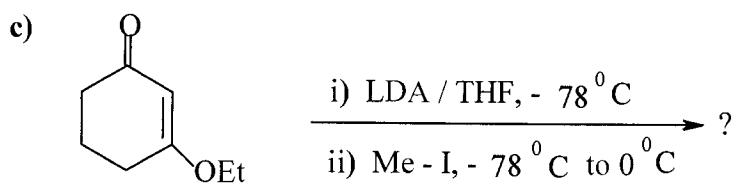
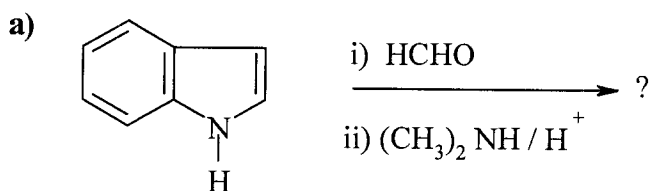
- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION - I

Q.1 Attempt **ANY THREE** of the following: [15]

- a) How are carbenes generated? Discuss reactions of carbenes with alkenes.
- b) Explain keto-enol equilibrium and tautomerism.
- c) What are carbanions? Discuss formation and structure of carbanions.
- d) Discuss the mechanism of simple and crossed Cannizzaro's reaction.
- e) Write a note on : Knoevenagel condensation.

Q.2 Predict the product/s with mechanism of **ANY THREE** of the following: [15]



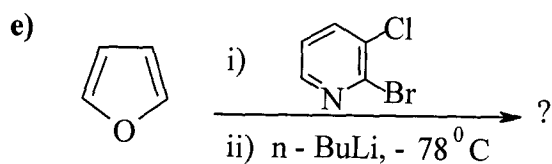
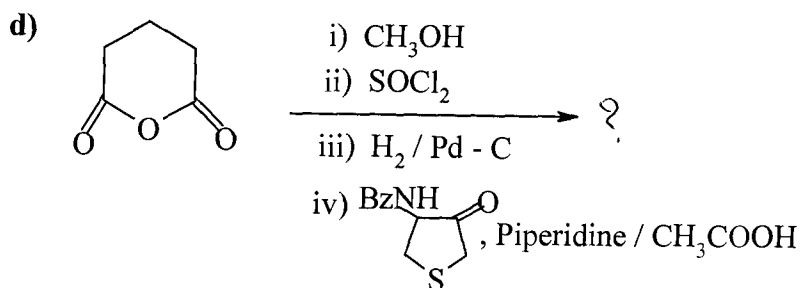
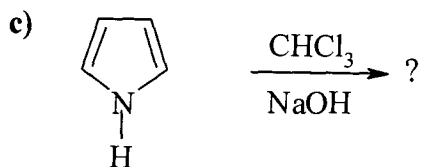
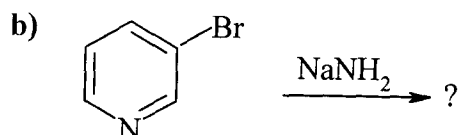
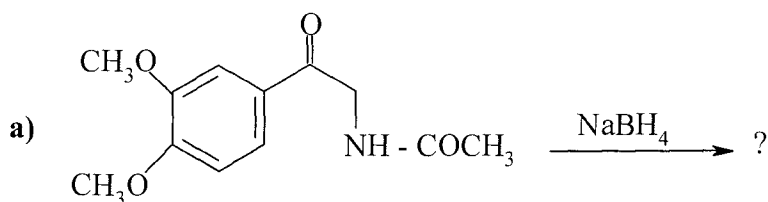
P.T.O.

SECTION – II

Q.3 Attempt ANY THREE of the following: [15]

- Explain Pictet-Gambs method for papaverine synthesis.
- Write the synthesis of chloroquine.
- Give Freindlander synthesis of quinoline.
- What is the product of Vilsmeier – Haack reaction with furan? Give its mechanistic pathway.
- Write a note on : Synthesis of Benzothiophene.

Q.4 Predict the product/s with mechanism of ANY THREE of the following: [15]



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