

MASTER OF SCIENCE (CHEMISTRY) (CBCS - 2018 COURSE)
M.Sc. (Chemistry) Sem-III OC : WINTER- 2022
SUBJECT : ADVANCED ORGANIC REACTION MECHANISM

Day : Tuesday

Time : 02:00 PM-05:00 PM

Date : 27-12-2022

W-20150-2022

Max. Marks : 60

N.B.:

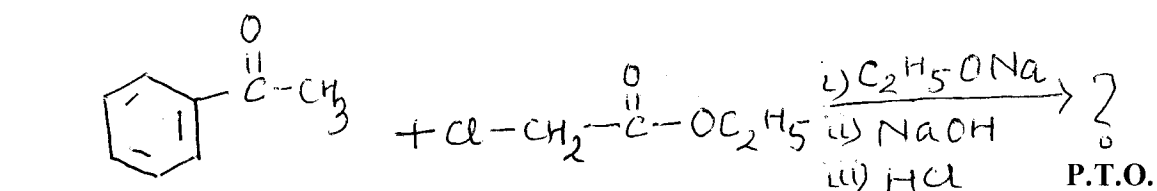
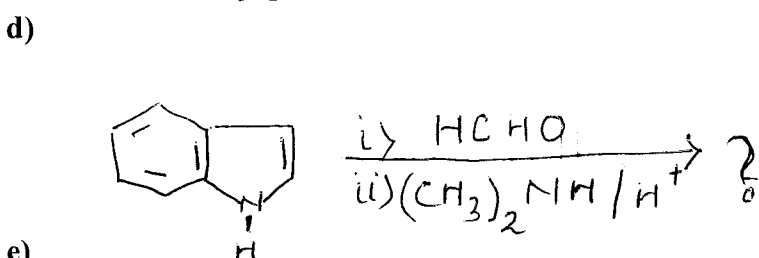
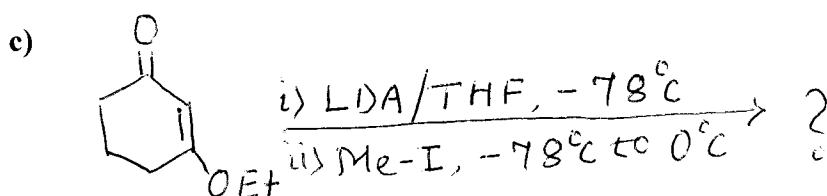
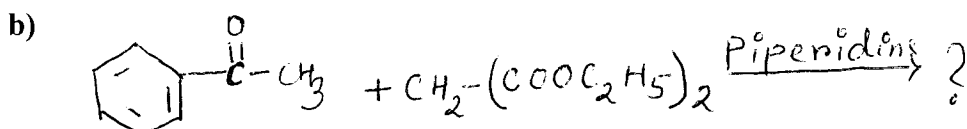
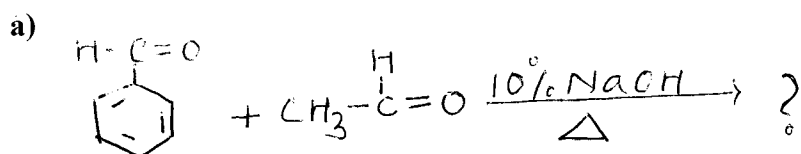
- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SEPARATE** answer books.

SECTION - I

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

- a) What are carbanions? Discuss the preparation, stability and geometry of carbanions.
- b) Discuss the mechanism of simple and crossed Cannizzaro's reaction.
- c) How carbenes are generated? Discuss the reactions of carbenes with alkenes.
- d) Discuss the mechanism and application of Mannish reaction.
- e) Write a short note on: Benzoin condensation.

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



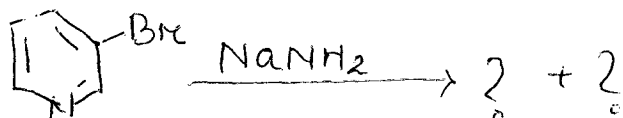
SECTION - II

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

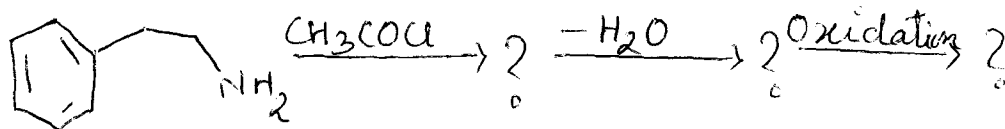
- Explain Pictet-Gamers method of papaverine synthesis.
- How are Isoquinolines prepared from 2-arylethanamine by Bischler-Napieralski method.
- Give Friedlander synthesis of quinoline.
- Explain how 2-chloro pyridine is converted into 2-amino pyridine by Chinchibabin reaction?
- Write a note on Fischer Indole synthesis.

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

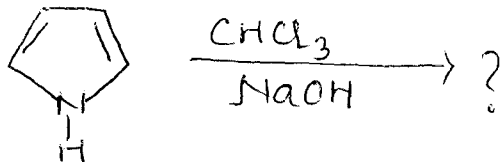
a)



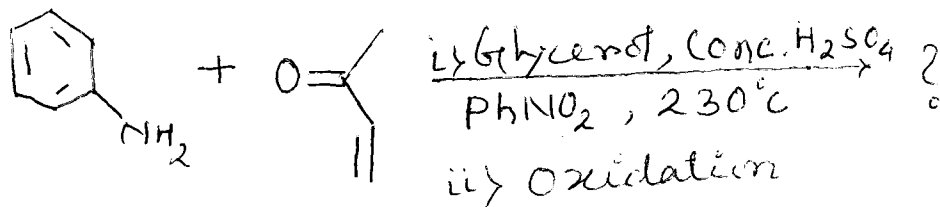
b)



c)



d)



e)

