

**CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR
WOMEN,
NUVEM-GOA**

SEMESTER END EXAMINATION AUGUST 2020

Semester: VI of B.Sc. Course name & Code: Organic Chemistry CHC110

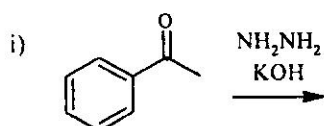
Total marks: 30 Date: 07/08/2020 Duration: 2 hours Total No of pages:02

*Instructions: 1. All questions are compulsory
2. Figures to the right indicate marks*

Q1. Answer any FIVE of the following:

(2×5=10)

a) Predict the product for the following

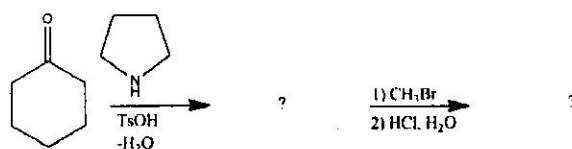


b) Identify the number of acidic protons in the following:

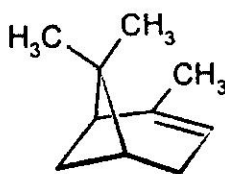
i) Propanal

ii) Ethylacetoacetate

c) Complete the following reaction.



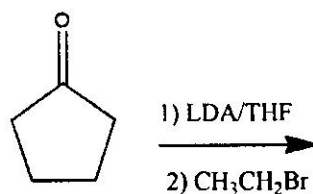
d) Give analytical evidence for the presence of six membered ring in the following compound



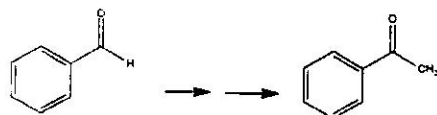
e) Draw the structure of table sugar

f) Dextrose on treatment with acetic anhydride gives compound A. Identify and write the structure of compound A.

g) Complete the following reaction.

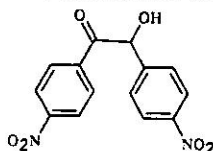


h) Complete the following

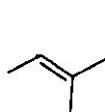


Q2. Answer any FOUR of the following: (5×4=20)

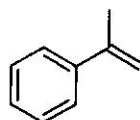
a) With the help of an appropriate name reaction write the reaction pathway for the synthesis of compound B. Also write the mechanism to support your answer.



b) What starting materials are needed to prepare the following compounds by using an appropriate name reaction? Also write the mechanism to support your answer.

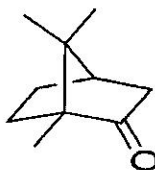


i



ii

c) Outline the steps involved in synthesis of the following compound.



d) α -Pinene on reaction with alcoholic sulphuric acid yields α -terpineol. State the analytical evidences obtained from this reaction in the structure elucidation of α -Pinene.

e) Outline the synthesis of ethyl acetoacetate. Also give a detailed mechanism.

f) Outline a systematic reaction pathway to prepare D-Arabinose from $C_6H_{12}O_6$