

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)
B. Tech. Sem - II CHEMICAL : WINTER- 2022
SUBJECT : ORGANIC CHEMISTRY-II

Day : Friday

Time : 10:00 AM-01:00 PM

Date : 25-11-2022

W-24052-2022

Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Use of non-programmable **CALCULATOR** is allowed.
- 5) Assume suitable data if necessary.

Q.1 Discuss Stereochemical evidences to support SN_1 and SN_2 reactions with [10] suitable examples.

OR

Q.1 a) Explain SN_2 reaction with the following points: [06]
i) Kinetics
ii) Attack of nucleophile on intermediate
iii) Effect of solvent

b) Write note on stability of Carbocation. [04]

Q.2 Explain : i) Explain Kinetic isotopic effect in E_2 mechanism. [10]
ii) 1-iodopropane undergoes faster E_2 elimination than 1-chloropropane.
iii) At higher temperature rate of E_2 reaction is greater than SN_2 .

OR

Q.2 What is E_2 reaction? [10]
Explain E_2 reaction with the following points:
i) Kinetic isotopic effect
ii) The element effect
iii) Absence of hydrogen exchange

Q.3 a) Explain: [06]
i) Haloarenes more stable than Haloalkanes.
ii) Haloarenes are less reactive.

b) Write note on Sandmeyer's reaction. [04]

OR

Q.3 a) How will you obtain the following from Chloro-benzene with explanation, [06]
i) p-chloro acetophenone
ii) Di-phenyl
iii) Toluene

b) Give two synthesis methods of Haloarenes. [04]

P.T.O.

- Q.4 a) Discuss methods for structure determination of Terpenoids. [05]
b) Discuss extraction and purification of Alkaloids. [05]

OR

- Q.4 a) Write note on Ionic liquids. [05]
b) Give sources and users of Alkaloids. [05]
- Q.5 a) Explain : [06]
i) Pyrrole undergoes Electrophilic substitution reactions at C-2 position.
ii) Thiophene does not explain the fundamental addition reactions like simple alkenes under normal condition.
- b) Give two synthesis methods of Furan. [04]

OR

- Q.5 a) Write note on structure and aromaticity of Pyridine. [06]
b) Give chemical reactions of Pyridine. [04]
- Q.6 a) Discuss briefly Organometallic Chemistry. [05]
b) Give two synthesis methods of Organo-Lithium Compounds. [05]

OR

- Q.6 a) Write note on π - bonded Organometallic compounds. [05]
b) Give two chemical reactions of Organo - Magnesium Compounds. [05]

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