

BACHELOR OF SCIENCE (CBCS - 2016 COURSE)
T. Y. B Sc. Sem-V : WINTER :- 2021
SUBJECT: CHEMISTRY : ORGANIC CHEMISTRY-I

Day : Monday
Date 24-01-2022

W-14941-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

Q.1 Attempt **ANY TWO** of the following: [12]

- a) What is acylation? Discuss the mechanism of Friedel – Craft acylation of benzene. What are its important features?
- b) What is SN^1 reaction? Discuss its mechanism.
- c) Write a note on : Markownikoff's rule and peroxide effect.

Q.2 Attempt **ANY TWO** of the following: [12]

- a) What is elimination? Discuss the mechanism of E_1 reaction. Give factors affecting on it.
- b) Draw chair conformation of *cis* and *trans* 1, 4 – dimethyl cyclohexane. Comment on their stability and optical activity.
- c) Write a note on : Nitration of benzene.

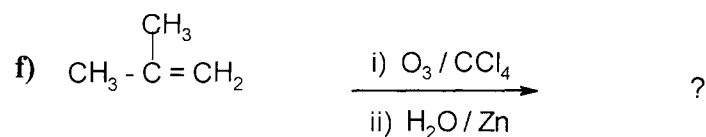
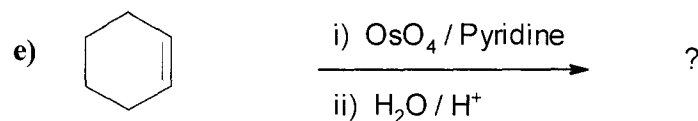
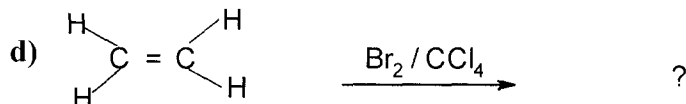
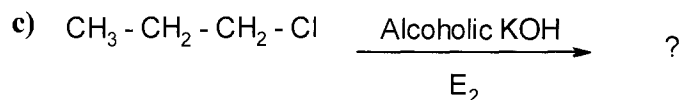
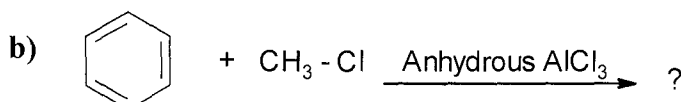
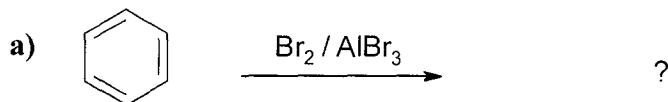
Q.3 Attempt **ANY TWO** of the following: [12]

- a) Discuss the structure of substrate and effect of nucleophile on SN^1 and SN^2 mechanism.
- b) Discuss Hoffmann and Saytzeff elimination with suitable examples.
- c) Write a note on : Trans hydroxylation of alkene.

Q.4 Attempt **ANY THREE** of the following: [12]

- a) What is hydration? Discuss its mechanism.
- b) Explain the terms: **i)** The Bredt's rule **ii)** Optical isomers
- c) Discuss the mechanism of SN^2 reaction.
- d) Write a note on : Activating and Deactivating groups.

Q.5 Predict the product/s and suggest the mechanism for **ANY FOUR** of the following: [12]



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