



21100827

QP CODE: 21100827

Reg No :

Name :

B.Sc DEGREE (CBCS) EXAMINATION, MARCH 2021

Fourth Semester

Core Course - CH4CRT04 - ORGANIC CHEMISTRY-II

(Common for B.Sc Chemistry Model I, B.Sc Chemistry Model II Industrial Chemistry, B.Sc Chemistry Model III Petrochemicals)

2017 Admission onwards

8E392507

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is the hybridization of oxygen in oxonium salt?
2. Give the IUPAC name for Glycerol.
3. What is the product obtained when sodium salt of Benzene sulphonic acid fused with NaOH followed by acidification?
4. Name the products obtained when t-butyl methyl ether is treated with Hydroiodic acid.
5. How will you convert benzoyl chloride to benzaldehyde?
6. How do you prepare Lactic acid from acetaldehyde?
7. What is Tollen's reagent?
8. What is Meerwein-Pondorf-Verley reduction?
9. What happens when ethyl magnesium bromide is subjected to carbonation?
10. Why salicylic acid is stronger than benzoic acid?
11. What is Rosenmund reaction?
12. How succinic acid is prepared from maleic acid?

(10×1=10)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Explain Oppenauer oxidation with one example.
14. What are the products obtained when Glycol react with Lead tetra acetate and Periodic acid?
15. a) Describe the mechanism of Bromination and Sulphonation of phenol
b) Explain Fries Rearrangement with mechanism
16. What are the products obtained when
 - a) formaldehyde reacts with NaOH
 - b) anisaldehyde reacts with formaldehyde in presence of NaOH
17. Write the structure of Phosphorous ylides? Discuss one organic reaction involving phosphorous ylides.
18. What are Mannich bases? How Mannich bases are prepared from acetophenone?
19. What is the action of heat of malonic acid with acetaldehyde, nitrous acid and ethanol?
20. Compare the acidity of carboxylic acid and sulphonic acid.
21. Explain the reaction with mechanism
 - a) HVZ Reaction
 - b) Hunsdiecker Reaction

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Briefly discuss the following
 - a) Williamson's synthesis and its limitations.
 - b) Alkoxymercuration-demercuration reaction for the synthesis of ethers and its merits
 - c) Ethers are cleaved by HI not by HCl





23.

How the following conversions are effected. Discuss the mechanism.

1. Benzaldehyde to ethyl cinnamate. 2. Acetaldehyde to crotonic acid (2-butenoic acid)

Convert the following

24. 1. Acetic acid to propionic acid
2. Propionic acid to acetic acid
3. Benzaldehyde to cinnamic acid
4. Acetone to 3-methyl, 2-butenoic acid

Explain with mechanism

25. a) Reimer-Tiemann reaction
b) Knoevenagel reaction
c) Kolbe-Schmidt reaction

(2×10=20)

