



21102807

QP CODE: 21102807

Reg No : .....

Name : .....

**B.Sc DEGREE (CBCS) EXAMINATIONS, OCTOBER 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)

2019 Admission only

5978BBF4

Time: 3 Hours

Max. Marks : 60

**Part A**

*Answer any ten questions.*

*Each question carries 1 mark.*

1. Give an example for polyhydric alcohol.
2. Give the IUPAC name of the white precipitate obtained by the reaction of Phenol and Bromine water.
3. What will be the compound formed when phthalic anhydride is fused with Resorcinol in presence of sulphuric acid?
4. Draw the structure of phenetol .
5. Draw the structures of condensation products of carbonyl compounds with a) hydroxyl amine; b) phenyl hydrazine.
6. How will you prepare crotonaldehyde from acetaldehyde?
7. Suggest a synthesis of methylene cyclohexane from cyclohexanone.
8. What is iodoform reaction?
9. Predict the product of hydrolysis of acetoacetic ester with water.
10. Arrange the following in the increasing order of their acidity  
Cl CH<sub>2</sub> COOH, CH<sub>3</sub> COOH, Br CH<sub>2</sub> COOH ,HCOOH, Cl<sub>2</sub>CH COOH,  
CH<sub>3</sub>CH<sub>2</sub> COOH
11. Give the method of preparation of malonic acid from chloroacetic acid
12. What happens when acetic acid is treated with thionyl chloride?

(10×1=10)





### Part B

Answer any **six** questions.

Each question carries **5** marks.

13. How will you distinguish between primary, secondary and tertiary alcohols?
14. How will you convert
  - a) Propanol to Ethanol.
  - b) Ethanol to propanol
  - c) Ethanol to Ethyl ethanoate
15. Briefly explain Pinacol-Pinacolone rearrangement.
16. Explain the formation of following compounds from acetone.
  - a) mesityl oxide b) phorone c) mesitylene
17. Briefly explain the addition reactions of HCN and NaHSO<sub>3</sub> on carbonyl compounds.
18. Write a note on Mannich reactions.
19. How will you convert salicylic acid to
  - a) picric acid b) Aspirin c) salol
20. Describe the Diels-Alder reaction between 1,3-butadiene and maleic acid
21. What are sulphones? How phenyl sulphones are produced from benzene?

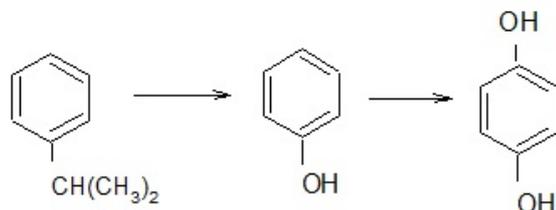
(6×5=30)

### Part C

Answer any **two** questions.

Each question carries **10** marks.

22. How will you carry out the following conversion? Explain the different steps involved in each conversion



23. a) Discuss the mechanism of the following molecular rearrangements.
  - 1) Benzil-Benzilic acid rearrangement.
  - 11) Beckmann rearrangement.
- b) How caprolactam is prepared from cyclohexanone?





24. Give an account of the nucleophilic acyl substitution reactions of acid derivatives.
25. Write the mechanism of the following
- a) Perkin reaction
  - b) Reformatsky reaction
  - c) Claisen condensation

(2×10=20)

