

D 30494

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Name.....

Reg. No.....

**FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2022**

Chemistry

CHE 5B 07—ORGANIC CHEMISTRY-II

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answers)*Answer questions up to 20 marks.**Each question carries 2 marks.*

1. The boiling points of alcohols are much higher than the corresponding aliphatic hydrocarbons. Why ?
2. What is PCC ? Name the molecule formed when $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-OH}$ is treated with PCC ?
3. What are crown ethers ? Give two examples.
4. Name the product formed for the following reaction
$$\text{CH}_3\text{MgBr} + \text{CO}_2 \xrightarrow{\text{H}_2\text{O}/\text{H}^+}$$
5. What are Frankland's reagents ? How are they prepared ?
6. Suggest a suitable reagent for the following conversion
Benzoyl chloride \rightarrow Benzaldehyde
7. How will you convert toluene to benzaldehyde ?
8. Which among the following is a stronger acid, p-nitrobenzoic acid or benzoic acid ? Why ?
9. How will you convert acetic acid to propanoic acid ?
10. $\text{CH}_3\text{-CH}_2\text{-NO}_2$ reacts with NaOH. Why ?
11. How will you convert benzoic acid to aniline ?
12. Pyridine is less basic than aliphatic amines. Why ?

(Ceiling of marks : 20)

Turn over

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Section B (Short Answers)

Answer questions up to 30 marks.
Each question carries 5 marks.

13. How would you distinguish between 1°, 2° and 3° alcohols?
14. What is Williamson's synthesis? How will you prepare anisole and phenetole using Williamson's synthesis?
15. What is Reformatsky reaction? What is its synthetic use?
16. How will you distinguish pentan-2-one and pentan-3-one?
17. Suggest a suitable reaction for the preparation of α halo acid. Explain using examples.
18. How will you prepare amines using Gabriel's phthalimide synthesis?
19. Starting from ethylacetoacetate, how will you prepare succinic acid?

(Ceiling of marks : 25)

Section C (Essay)

Answer any one question.
The question carries 10 marks.

20. a) Explain the mechanism of pinacol-pinacolone rearrangement.
b) Discuss the mechanism of bromination and nitration of phenol.
21. Write notes on :

Aldol condensation

Cannizzaro reaction

Benzoin condensation

Perkin's reaction.

(1 × 10 = 10 marks)