D 30494 **(Pages : 2)** **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 CH_3-CH_2-CH_2-OH is treated with PCC ?
3. What are crown ethers ? Give two examples.
4. Name the product formed for the following reaction

   $CH_3MgBr + CO_2 \xrightarrow{H_2O/H^+}$

5. What are Frankland's reagents ? How are they prepared ?
6. Suggest a suitable reagent for the following conversion

   Benzoyl chloride —» 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. CH_3-CH_2-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

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 : 30)

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)