

B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017
SEMESTER IV - CORE COURSE (CHEMISTRY)
CH4B04TB – ORGANIC CHEMISTRY- II

Time: Three Hours

Maximum Marks: 60

PART A

I. Answer all questions. Each question carries 1 mark

1. Which reagent is used for MPV reduction?
2. What is Wacker process?
3. What is Gattermann reaction?
4. Draw the orbital structure of carboxylate group.
5. Arrange the following in the increasing order of acidity
FCH₂COOH, ClCH₂COOH, CH₃COOH

(5×1=5)

PART B

II. Answer any five questions. Each question carries 2 marks

6. What is Benzoin condensation? Explain the mechanism.
7. How will you convert acetylene to methane
8. How will you prepare vinyl alcohol?
9. Explain Reimer - Tiemann reaction with mechanism.
10. Which is more acidic *p*-nitro benzoic acid or *m*-nitro benzoic acid . Why?
11. Discuss the stereochemistry of amines.
12. Explain briefly Schiemann and Gomberg reaction.
13. Explain Sandmeyer's reaction.

(5×2=10)

PART C

III. Answer any five questions. Each question carries 5 marks

14. Explain why formaldehyde is more reactive than acetone towards nucleophilic addition reactions.
15. Describe the mechanism of Wittig reaction.
16. Explain briefly a) Ziesel's method of estimation of alkoxy group b) Fries rearrangement
17. Write a note on pinacole - pinacolone rearrangement.
18. How will you obtain the following from acetic acid
(a) acetyl chloride (b) acetic anhydride (c) acetamide.
19. Write the preparation and uses of anthranilic acid.
20. Suggest a method for the separation of primary, secondary and tertiary amines.
21. How will you convert a) nitro benzene into *m*-dichlorobenzene
b) aniline to *p*-iodonitro benzene

(5×5=25)

PART D

IV. Answer any two questions. Each question carries 10 marks

22. Explain the following reactions with mechanism a) Claisen condensation b) Perkin reaction.
23. Discuss the methods used to distinguish between primary, secondary and tertiary alcohols
24. (a) Explain the effect of substituents on the acidity of aliphatic and aromatic acids.
(b) How to convert (i) formic acid to acetic acid, (ii) butanoic acid to propanoic acid,
25. a) Discuss the preparation and uses of sulpha drugs.
b) Explain Gabriel's Phthalimide reaction.

(2×10=20)