

Q.P. Code
BOT305

CSSR & SRRM DEGREE & PG COLLEGE

(AUTONOMOUS)

UG (CBCS) REGULAR EXAMINATIONS, OCT-2025

B.Sc(Bot), SEMESTER-III

MINOR: FUNDAMENTALS IN ORGANIC CHEMISTRY

(w.e.f. 2024-25 Admitted Batch)

Time: 3 hrs.

(No additional sheet will be supplied)

Max. Marks: 70

SECTION-A

I. Answer **any FIVE questions**. Each Question Carries 4 Marks $5 \times 4 = 20$ M

1. Explain the concept of hyperconjugation?
2. Explain about Acidity of carboxylic acids?
3. Write short note on (a) Corey-House synthesis (b) Wurtz reaction
4. Write short note on physical and chemical properties of alkanes?
5. Write a note on Markownikoff rule?
6. Write about Syn addition reaction?
7. Explain about decarboxylation reaction?
8. Discuss the halogenation of Benzene? Explain the reagents, conditions and final product obtained after reaction?
9. Write a short note on Orientation of aromatic substitution - ortho, Para and meta directing groups?
10. Write a short note on Orientation of Amino, and methyl groups?

SECTION – B

II. Answer **ALL questions**. Each Question Carries 10 Marks. $5 \times 10 = 50$ M

11. Explain the concept of Electrophilic Substitution reaction?
Or
12. Define resonance or mesmeric effect and explain factors affecting mesomeric effect and its applications?
13. Explain Baeyer strain theory and its significance in understanding the stability of cycloalkanes?
Or
14. Explain the Cyclohexane conformations with energy diagram, Conformations of monosubstituted cyclohexane?
15. Write the general methods of preparation of alkenes and alkanes?
Or
16. Write Electrophilic additions like H_2 , HX with mechanisms?
17. Write the Structure of Benzene – Preparation - polymerisation of acetylene?
Or
18. Explain Friedel crafts alkylation and acylation reactions, including the role of Lewis acids as catalysts?
19. Define aromaticity? Explain about aromaticity rules and importance of aromaticity?
Or
20. What is Huckel's Rule? Write some examples of Huckel's rule in aromatic compounds?

