QP CODE: 25046170

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Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) IMPROVEMENT / REAPPEARANCE / MERCY CHANCE EXAMINATIONS, NOVEMBER 2025

Third Semester

Core Course - CH3CRT03 - ORGANIC CHEMISTRY-I

Common to B.Sc Chemistry Model I, B.Sc Chemistry Model II Industrial Chemistry & B.Sc Chemistry Model III Petrochemicals

2017 Admission Onwards

12E93520

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Write the structural formula of the compounds a) 3-methyl pentan-2-one b) 2 methyl 1 propanol.
2. Classify the following as nucleophile and electrophile : NH_3, $AlCl_3$, BF_3, C_2H_5OH.
3. What is meant by optical activity?
4. State the difference between meso compound and racemic mixture.
5. Draw the structure of (-) erythrose and (-) Threose.
6. Draw the Sawhorse projection formula of butane.
7. What happens when 1,2 dibromoethane is treated with sodamide in liquid ammonia?
8. Distinguish between 1-butyne and 2-butyne by chemical test.
9. What are Grignard reagents?
10. How will you prepare Aryl fluorides?
11. What happens when o-Di iodobenzene is treated with tetracarbonyl nickel?
12. What is the role of dienophile in a Diels -alder reaction?

(10×1=10

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Briefly discuss +M and -M effect
14. What are the different types of organic reactions?
15. Briefly explain the geometrical isomerism in oximes.
16. Explain why equitorial conformation of cyclohexane is stabler than corresponding axia conformation.
17. What happens when 1-phenyl - 1-propene is added to HBr?
18. Explain how ozonolysis reaction helps in determining alkene structures.
19. Is pyrrole aromatic? Explain.
20. OH group in phenol is ortho and para directing where as NO_2 group in nitrobenzene i meta directing. Give reason for it.
21. Convert o-Allyl phenyl ether to o-allyl phenol.

(6×5=30

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Briefly explain the formation of reactive intermediates.
23. Discuss the conformational analysis of cyclohexane with energy diagram
24. Give the mechanism, stereochemistry and kinetics of SN_2 reactions.
25. Give the Kekule's structure of benzene. How it is supported by (a) resonance energy an (b) M.O. theory.

(2×10=20