

QP Code: D143664		Total Pages:2		Name:	
				Register No.	
FOURTH SEMESTER (CUFYUGP) DEGREE EXAMINATION, APRIL 2026					
CHEMISTRY					
CHE4CJ204: ORGANIC CHEMISTRY- II					
2024 Admission onwards					
Maximum Time: 2 Hours				Maximum Marks: 70	
Section A					
All Questions can be answered. Each Question carries 3 marks (Ceiling: 24 Marks)					
1	Discuss the optical isomerism in lactic acid and glyceraldehyde.				
2	Differentiate between enantiomers and diastereomers.				
3	Find whether the following compounds are identical, enantiomers, or diastereomers. CHO H — — OH H — — Cl CH₂OH CH₂OH Cl — — H OH — — H CHO				
4	What happens when KMnO ₄ is added to a C=C double bond?				
5	Discuss anti-Markownikov's addition reaction with an example.				
6	Describe the effect of substrate on nucleophilic substitution reactions.				
7	Write the mechanism of oxymercuration-demercuration.				
8	Discuss Friedel-Crafts acylation.				
9	How fluorescein is prepared?				
10	Write the mechanism of nitration of phenol.				
Section B					
All Questions can be answered. Each Question carries 6 marks (Ceiling: 36 Marks)					
11	Write a note on resolution methods of racemic mixture.				
12	Define absolute configuration and relative configuration. Give the R & S configuration of the following compounds. (a) OH H₂N — — CH₃ H (b) COOH H — — OH OH — — H COOH				
13	Describe the R and S configuration using the Cahn–Ingold–Prelog priority rules.				
14	Discuss halogenation with examples. Give the mechanism.				
15	Explain stereoselectivity of addition reactions with examples.				
16	Discuss the effect of nucleophile, solvent and leaving group on SN2 reactions.				
17	Describe the addition–elimination mechanism in nucleophilic aromatic substitution with an example.				
18	Explain why halobenzene are less reactive towards nucleophilic substitution compared to alkyl halides.				

Section C	
Answer any ONE. Each Question carries 10 marks (1×10 = 10 Marks)	
19	Discuss the addition reactions of alkenes with examples.
20	Describe E1, E2 and E1CB mechanisms.