



Aggarwal College Ballabgarh

LESSON PLAN 17 WEEKS (JAN-APRIL)-2025

1 WEEK = 4 LECTURES
(Monday, Tuesday, Friday,
Saturday)

Name of Faculty: Tina Jain
Designation/ Department: Chemistry Department

CLASS: M.Sc. Chemistry	SEMESTER: 2	SECTION: A
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SUBJECT: Organic Chemistry-II

Week	DATE	TOPICS TO BE COVERED
1	7-1-2025	Overview of semester units and textbook discussion
	8-1-2025	
	9-1-2025	
	10-1-2025	Ultraviolet and Visible Spectroscopy Principle, electronic energy levels and transitions
	11-1-2025	Chromophores and auxochromes,
	12-1-2025	S. U. N. D. A. Y.
2	13-1-2025	bathochromic and hypsochromic shift, hypochromic and hyperchromic effect.
	14-1-2025	bathochromic and hypsochromic shift, hypochromic and hyperchromic effect.
	15-1-2025	
	16-1-2025	
	17-1-2025	Infrared Spectroscopy: Principle, functional group and fingerprint regions,
	18-1-2025	absorption of infrared radiation and molecular vibrations (stretching and bending)
	19-1-2025	S. U. N. D. A. Y.
3	20-1-2025	absorption of infrared radiation and molecular vibrations (stretching and bending),
	21-1-2025	fundamental vibrations and overtones.
	22-1-2025	

	23-1-2025	
	24-1-2025	Spin active nuclei, chemical shift, shielding and deshielding, internal standards
	25-1-2025	spin-spin coupling, equivalent and non-equivalent protons,
	26-1-2025	REPUBLIC DAY /S. U. N. D. A. Y.
4	27-1-2025	effect of changing solvents and hydrogen bonding on chemical shifts, anisotropic effect.
	28-1-2025	Applications of UV, IR, and NMR spectra in the structural elucidation of organic compounds
	29-1-2025	
	30-1-2025	
	31-1-2025	Applying UV, IR, and NMR spectra in the structural elucidation of organic compounds
	1-2-2025	Applying UV, IR, and NMR spectra in the structural elucidation of organic compounds
	2-2-2025	S. U. N. D. A. Y/BASANT PANCHAMI
5	3-2-2025	SN1, SN2 reactions
	4-2-2025	mixed SN1 and SN2, SNi, reactions
	5-2-2025	
	6-2-2025	
	7-2-2025	SN1', SN2', SNi' reactions
	8-2-2025	SET mechanism
	9-2-2025	S. U. N. D. A. Y
6	10-2-2025	Effects of substrate structure, attacking nucleophile on reactivity towards aliphatic substitution reaction
	11-2-2025	Effects of leaving group and reaction medium on reactivity towards aliphatic substitution reaction
	12-2-2025	HOLIDAY: GURU RAVIDAS JAYANTI
	13-2-2025	
	14-2-2025	Neighboring group mechanism,
	15-2-2025	neighboring group participation by σ - and π -bonds, anchimeric assistance.

	16-2-2025	S. U. N. D. A. Y.
7	17-2-2025	Ambident nucleophiles, regioselectivity in Aliphatic Nucleophilic Substitution:
	18-2-2025	Chemoselectivity in Aliphatic Nucleophilic Substitution:
	19-2-2025	
	20-2-2025	
	21-2-2025	Benzyne and SRN1 mechanisms.
	22-2-2025	ArSN1, ArSN2 reaction
	23-2-2025	S. U. N. D. A. Y.
8	24-2-2025	Effect of substrate structure, leaving group in Aromatic Nucleophilic Substitution
	25-2-2025	Effect of and attacking nucleophiles on reactivity. in Aromatic Nucleophilic Substitution
	26-2-2025	HOLIDAY: MAHA SHIVRATRI
	27-2-2025	
	28-2-2025	SE1, SE2 reaction
	1-3-2025	SEi mechanism, Effect of substrates, leaving group, and solvent polarity on the reactivity.
	2-3-2025	S. U. N. D. A. Y.
9	3-3-2025	Von Richter and Smiles rearrangements, Vilsmeier reaction
	4-3-2025	Aromatic Electrophilic Substitution: Reactivity in substrates and electrophiles
	5-3-2025	
	6-3-2025	
	7-3-2025	Gattermann-Koch reaction., Molecular orbital symmetry, Frontier orbitals of ethylene, 1,3-butadiene, 1,3,5-hexatriene and allyl system
	8-3-2025	Classification of pericyclic reactions, Woodward Hoffmann correlation diagrams.
	9-3-2025	S. U. N. D. A. Y.
10	10-3-2025	Electrocyclic reactions - conrotatory and disrotatory motions, $4n$, $4n+2$, and allyl systems.
	11-3-2025	Electrocyclic reactions - conrotatory and disrotatory motions, $4n$, $4n+2$, and allyl systems.

	12-3-2025	
	13-3-2025	
	14-3-2025	Cycloadditions - antarafacial and suprafacial additions, $4n$ and $4n+2$ systems
	15-3-2025	Cycloadditions - antarafacial and suprafacial additions, $4n$ and $4n+2$ systems
	16-03-2025	S. U. N. D. A. Y.
11	17-3-2025	Sigmatropic rearrangements- suprafacial and antarafacial shifts of H, sigmatropic shifts involving carbon moieties, 3,3- and 5,5-sigmatropic rearrangements
	18-3-2025	Sigmatropic rearrangements- suprafacial and antarafacial shifts of H, sigmatropic shifts involving carbon moieties, 3,3- and 5,5-sigmatropic rearrangements
	19-3-2025	
	20-3-2025	
	21-3-2025	Claisen and Cope rearrangements
	22-3-2025	Mechanism of metal hydride reduction of saturated and unsaturated carbonyl compounds
	23-3-2025	S. U. N. D. A. Y.
12	24-3-2025	Addition of Grignard reagents reactions
	25-3-2025	Addition of organozinc reagents reactions
	26-3-2025	
	27-3-2025	
	28-3-2025	Addition of organolithium reagent to carbonyl and unsaturated carbonyl compound
	29-3-2025	Wittig reaction, aldol condensation
	30-3-2025	S. U. N. D. A. Y.
13	31-3-2025	HOLIDAY: ID-UL-FITR
	1-4-2025	Knovengal condensation, mannich reaction
	2-4-2025	
	3-4-2025	

	4-4-2025	Claisen condensation reaction, benzoin condensation
	5-4-2025	Perkin condensation, Stobbe reaction
	6-4-2025	S. U. N. D. A. Y.
14	7-4-2025	Hydrolysis of esters and amides
	8-4-2025	Hydrolysis of esters and amides
	9-4-2025	
	10-4-2025	HOLIDAY: MAHAVIR JAYANTI
	11-4-2025	ammonolysis of esters
	12-4-2025	ammonolysis of esters.
	13-4-2025	S. U. N. D. A. Y.
15	14-4-2025	HOLIDAY: AMBEDKAR JAYANTI
	15-4-2025	Comprehensive revision and doubt-solving session of Unit 1
	16-4-2025	
	17-4-2025	
	18-4-2025	Comprehensive revision and doubt-solving session of Units 1,2
	19-4-2025	Comprehensive revision and doubt-solving session of Units 2,3
	20-4-2025	S. U. N. D. A. Y.
16	21-4-2025	Comprehensive revision and doubt-solving session of Unit 4
	22-4-2025	Comprehensive revision and doubt-solving session of Unit 4
	23-4-2025	
	24-4-2025	
	25-4-2025	Test of Unit 1
	26-4-2025	Test of Unit 2
	27-4-2025	S. U. N. D. A. Y.

17	28-4-2025	Test of Unit 3
	29-4-2025	Test of Unit 4
	30-4-2025	HOLIDAY: AKSHAY TRITYA
	01-05-2025	
	02-05-2025	Revision class
	03-05-2025	Revision class
	04-05-2025	S. U. N. D. A. Y.



Signature