Lesson Plan

Mehr Chand Mahajan D.A.V. College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans (Odd Semester)

Session –2025-26

Name of Teachers: Dr. Shefali, Dr. Qudrat Hundal and Dr. Archana

Department: Chemistry

Class: BSc. III (Medical, Non-Medical and MFT) **Subject:** Organic Chemistry

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	24-07-2025	30-08-2025	**Unit 1: Electromagnetic spectrum : Absorption spectra -I** Ulltraviolet (UV) absorption spectroscopy: Absorption laws (Beer Lambert Law), molar absorptivity, presentation and analysis of UV spectra., types of electronic transitions, effects of conjugation, concept of chromophore and auxochromes, bathochromic, hypsochromic, hyperchromic and hypochromic shifts, UV spectra of conjugated enes and enones, Woodward fisher rules and applications in calculating maximum values of conjugated alkenes (cyclic as well as acyclic) and conjugated carbonyl compounds	Lecture

			Unit 2: Electromagnetic spectrum: Absorption spectra-II Infra-red (IR) absorption spectroscopy - Molecular vibrations, Hooke's law, selection rules, intensity and positions of IR bands, measurement of IR spectrum, finger print region.	
2.	01-09-2025	30-09-2025	**Unit 2: Electromagnetic spectrum: Absorption spectra-II** Characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds . **Unit 3: Spectroscopy** Nuclear Magnetic resonance spectroscopy (NMR): ^{1}H NMR, nuclear shielding and deshielding, chemical shift and molecular structure, spin-spin coupling, coupling constants, area of signals, interpretation of NMR spectra of simple organic molecules such as ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromoethane, ethyl acetate, toluene and acetophenone.	Lecture, group discussion
3.	01-10-2025	31-10-2025	Problems pertaining to the structure elucidation of simple organic compounds using UV. IR and PMR spectroscopic techniques. **Unit 4: Carbohydrates** Classification and structure, monosaccharides, osazone	Lecture, group discussion, PPT, Online sources

			formation, interconversion of glucose to fructose, chain lengthening and chain shortening of aldoses, configurations of monosaccharides, erythro and threo diastereomers. Conversion of glucose to mannose, formation of glucosides, ethers and esters, determination of ring size of monosaccharides, cyclic structure of D-glucose, mechanism of mutarotation.	
4.	01-11-2025	10-11-2025	**Unit 4: Carbohydrates** Structure of ribose and deoxyribose. Introduction to disaccharides (maltose, sucrose, lactose) and polysaccharides (starch and cellulose) without involving structure determination.	Lecture, group discussion
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
27^{th} August, 2025	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
24^{th} Sept, 2025	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
29^{th} Oct, 2025	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			

Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
10th Nov, 2025	The teachers have completed the scheduled chapters and topics as shown in the lesson plan

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.Other Methods adopted by the teacher – Please write the specific teaching method