

Lesson Plan

Mehr Chand Mahajan D.A.V. College for Women, Sector – 36A,
Chandigarh
Monthly Teaching Plans (Odd Semester)
Session –2021-2022

Name of Teachers: Dr. Shefali Dhiman

Department: Chemistry

Class: B. Sc. IIIrd year (5th Semester) Subject: Organic Chemistry (CH-XVIII)

Lesson Plan: Unit 1, 2, 3 and 4.

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	11.08.2021	21.08.2021	Unit 1: Electromagnetic spectra: Absorption spectra UV Absorption spectroscopy: Beer Lambert Law, molar absorptivity, presentation and analysis of UV spectra.	Lecture
2.	23.08.2021	29.09.2021	Unit 1: UV Absorption spectroscopy: types of electronic transitions, Effects of conjugation, chromophore, auxochromes, bathochromic, hypsochromic, hyperchromic shifts, UV spectra of conjugated enes and enones, Woodward fisher rules and application to conjugated alkenes and carbonyl compounds Unit 2: Electromagnetic spectra: Absorption spectra IR Absorption spectroscopy: Molecular vibrations, Hooke's law, selection rules, intensity and positions of IR bands,	Lecture, group discussion
3.	30.09.2021	19.10.2021	Unit 2: IR Absorption spectroscopy: measurement of IR spectrum, finger print region,	Lecture, group discussion

			<p>IR absorption of various functional groups, and interpretation of IR spectra of simple organic compounds.</p> <p>Unit 3: Spectroscopy</p> <p>Nuclear Magnetic resonance spectroscopy (NMR): ^1H NMR, nuclear shielding and deshielding, chemical shift, spin-spin coupling, coupling constants.</p>	
4.	20.10.2021	1.11.2021	<p>Unit 3: Spectroscopy</p> <p>Nuclear Magnetic resonance spectroscopy (NMR): area of signals, interpretation of NMR spectra of simple organic molecules.</p> <p>.</p>	Lecture, group discussion
5.	2.11.2021	25.11.2021	<p>Unit 4: Carbohydrates</p> <p>Classification and structure, monosaccharides, osazone formation, interconversion of glucose to fructose, chain lengthening and chain shortening of aldoses, configurations of monosaccharides, erythro and threo diastereomers</p>	Lecture, online resources
7	26.11.2021	Till Exam	<p>Unit 4: Carbohydrates</p> <p>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. Structure of ribose and deoxyribose.</p> <p>Introduction to disaccharides (maltose, sucrose, lactose)</p> <p>And polysaccharides (starch and cellulose)</p>	Lecture, online resources

Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
7 th September, 2021	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	
5 th October, 2021	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	
3 rd November, 2021	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	
23 rd November, 2021	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	
4 th December, 2021	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

Lesson Plan

**Mehr Chand Mahajan D.A.V. College for Women, Sector – 36A,
Chandigarh
Monthly Teaching Plans (Even Semester)
Session –2021-2022**

Name of Teachers: Dr. Shefali Dhiman

Department: Chemistry

Class: B. Sc. IIIrd year (6th Semester) Subject: Organic Chemistry (CH-XXII)

Lesson Plan: Unit 1, 2, 3 and 4.

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	3 -02- 2022	23 -02-2022	Unit 1: Amino acids, Peptides, Proteins and Nucleic acids Classification, structure, stereochemistry of amino acids, acid-base behavior, isoelectric point, electrophoresis, preparation and reactions of amino acids. Structure and nomenclature, classification of peptides, proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides.	Lecture
2.	24.02.2022	15.03.2022	Unit 1: Classical and solid-phase peptide synthesis, Levels of protein structure, protein denaturation/renaturation. Introduction to nucleic acids, ribonucleosides and ribonucleotides, double helical structure of DNA. Unit 2: Synthetic polymers Addition or chain growth polymerization, free radical and ionic vinyl polymerization, Ziegler-Natta Polymerization,	Lecture, group discussion

			vinyl polymers, Condensation Polymerization,	
3.	16.03.2022	17.03.2022	Unit 2: Polyesters, polyamides, phenol formaldehyde resins, epoxy resins, urea formaldehyde resins, polyurethanes, Natural and synthetic rubbers. Unit 3: Organic synthesis via enolates Acidity of α -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: Claisen condensation, Keto-enol Tautomerism of ethyl acetoacetate. Alkylation and acylation of enamines.	Lecture, group discussion
4.	18.04.2022	9.05.2022	Unit 4: Organometallic Compounds Organomagnesium compounds: Grignard reagents- Synthesis, structure and chemical reactions. Organozinc Compounds: Synthesis and chemical reactions. Organolithium Compounds: Synthesis and chemical reactions.	Lecture, group discussion and seminar
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
5 th March, 2022	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				
4 rd April, 2022	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				
7 th May, 2022	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				
15 th May, 2022	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

