

Sample Format (Lesson Plan)

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Odd Semester/Even Semester)
Session – (2022-23)

Name of the Teacher/s: Dr. Shefali Dhiman and Dr. Qudrat Hundal

Department: Chemistry

Class: BSc 1(semester-1)

Subject: Organic Chemistry

| S.No. | Date (Monthly) | | Topics to be Covered | Academic Activity Undertaken* |
|---|---|------------|--|----------------------------------|
| | From | To | | |
| 1 | 25-08-2022 | 20-09-2022 | Structure and bonding | Lecture |
| 2 | 21-09-2022 | 15-10-2022 | Mechanism of organic reactions | Lecture |
| 3 | 17-10-2022 | 3-11-2022 | Electro-magnetic spectrum; absorption spectrum | Lecture |
| 4 | 4-11-2022 | 14-11-2022 | Stereo-chemistry of organic compounds 1 | Lecture |
| 5 | 15-11-2022 | Till exam | Stereo-chemistry of organic compounds 2 | Lecture |
| Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans | | | | |
| 10 th Oct, 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 | | | | |
| 26 th Oct, 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 | | | | |
| 17 th Nov, 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 | | | | |
| 27 th Nov, 2022 | The teachers have completed the scheduled chapters and topics as shown in the lesson plan | | | |

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| Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans | | | | |
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| Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans | | | | |

***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

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Even Semester)
Session – 2022-23

Name of the Teacher: Dr. Shefali Dhiman and Dr. Qudrat Hundal

Department: P.G. Department of Chemistry

Class: B.Sc I

Subject: Organic Chemistry

| S.No. | Date (Monthly) | | Topics to be Covered | Academic Activity Undertaken* |
|-------|-------------------|------------|--|----------------------------------|
| | From | To | | |
| 1 | 16-01- 2023 | 30-01-2023 | Unit I Alkenes and Cycloalkenes: Nomenclature of alkenes, methods of formation, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halides, regioselectivity in alcohol dehydration. The Saytzeff rule, Hofmann elimination, physical properties and relative stabilities of alkenes. Chemical reactions of alkenes – mechanisms involved in hydrogenation, electrophilic and free radical additions, Markownikoff's rule, hydroboration-oxidation, oxymercuration-reduction. Epoxidation, ozonolysis, hydration, hydroxylation and oxidation with KMnO_4 | Lecture method |
| 2 | 2-02-2023 | 2-03-2023 | Unit I Alkenes and Cycloalkenes: Polymerization of alkenes. Substitution at the allylic and vinylic positions of alkenes. Industrial | Lecture method |

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| | | | <p>applications of ethylene and propene.</p> <p>Unit II Dienes and Alkynes:</p> <p>Methods of formation, conformation and Chemical reactions of cycloalkenes.</p> <p>Nomenclature and classification of dienes : isolated, conjugated and cumulated dienes.</p> <p>Structure of allenes and butadiene, methods of formation, polymerization. Chemical reactions – 1, 2 and 1,4 addition, Diels-Alder reaction.</p> <p>Nomenclature, structure and bonding in alkynes. Methods of formation. Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation, metal-ammonia reductions, oxidation and polymerization.</p> | |
| 3 | 03-03-2023 | 30-03-2023 | <p>Unit III Arenes and Aromaticity:</p> <p>Nomenclature of benzene derivatives. The aryl group. Aromatic nucleus and side chain. Structure of benzene : molecular formula and Kekule structure. Stability and carbon-carbon bond lengths of benzene, resonance structure, MO picture. Aromaticity: The Huckel Rule, aromatic ions. Aromatic electrophilic substitution – general pattern of the mechanism, role of σ- and π complexes. Mechanism</p> | Lecture method |

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| | | | of nitration, halogenation, sulphonation, mercuration and Friedel-Crafts reaction. Energy profile diagrams. Activating and deactivating substituents, orientation and ortho/para ratio. Side chain reactions of benzene derivatives. Birch reduction. Methods of formation and chemical reactions of alkyl benzenes, alkynyl benzenes and biphenyl. | |
| 4 | 31-03-2023 | Till exams | Unit IV Alkyl and Aryl Halides: Nomenclature and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms of nucleophilic substitution reactions of alkyl halides, SN^2 and SN^1 reactions with energy profile diagrams. Polyhalogen compounds: chloroform, carbon tetrachloride. Methods of formation of aryl halides, nuclear and side chain reactions. The addition-elimination and the elimination-addition mechanisms of nucleophilic aromatic substitution reactions. Relative reactivities of alkyl halides vs. allyl, vinyl and aryl halides. | Lecture method |
| Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans | | | | |
| 25 th Jan, 2023 | 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 Feb, 2023 | 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 | | | | |

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| 15th, March 2023 | 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 | | | | |
| 8th April, 2023 | 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 | | | | |
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| Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans | | | | |

***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