**Summary of Lesson Plans of College Faculty**

**Name of College: Indira Gandhi National College, Ladwa (KKR) Academic Session: 2019-20 Semester: II, IV &VI For the Month of January 2020**

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| **S. No.** | **Name of Assistant/ Associate Professor** | **Subject** | **Topics/Chapter to be covered** | **Academic Activity to be organized** | **Topic of Assignments/Tests to be given to the students** |
|  |  |  | **B.Sc. I** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Hydrogen Bonding and Vander Waals forces, Metallic Bond and semiconductors, s-Block elements |  |  |
| 2. | Dr. R.K. Chauhan | Physical Chemistry | Kinetics Rate of reaction, rate equation and its types, Order of a reaction etc | Discussion on Previous years Questions |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Alkenes: Nomenclature and Chemical reactions |  |  |
|  |  |  | **B.Sc. II** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Chemistry of f-Block elements: Lanthanides |  |  |
| 2. | Dr. Amit Kumar | Physical Chemistry | Second law of thermodynamics, Carnot’s cycles and its efficiency, Concept of entropy | Discussion on Previous years Questions |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Infrared (IR) absorption spectroscopy, selection rules, Applications of IR spectroscopy |  |  |
|  |  |  | **B.Sc. III** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Acids and Bases: Various Concepts, HSAB principle |  |  |
| 2. | Dr. Amit Kumar | Physical Chemistry | Photochemistry: photochemical processes. Laws of photochemistry etc | Discussion on Previous years  Questions |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Organic Synthesis via Enolates |  |  |

**Summary of Lesson Plans of College Faculty**

**Name of College: Indira Gandhi National College, Ladwa (KKR) Academic Session: 2019-20 Semester: II, IV &VI For the Month of February 2020**

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| **S. No.** | **Name of Assistant/ Associate Professor** | **Subject** | **Topics/Chapter to be covered** | **Academic Activity to be organized** | **Topic of Assignments/Tests to be given to the students** |
|  |  |  | **B.Sc. I** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Chemistry of Noble Gases and p-Block elements | Poster Making Competition |  |
| 2. | Dr. R.K. Chauhan | Physical Chemistry | Kinetics: Theories of reaction rate | Group Discussion |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Arenes and Aromaticity, Aromatic electrophilic substitution reactions, Alkynes: Preparation and properties |  |  |
|  |  |  | **B.Sc. II** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Chemistry of f-Block elements: Actinides | Group Discussion |  |
| 2. | Dr. Amit Kumar | Physical Chemistry | Third law of thermodynamics: Nernst heat theorem, Gibbs function (G) and Helmholtz function (A) | Expert Lecture |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Amines: Structure, nomenclature, physical and chemical properties | Expert Lecture |  |
|  |  |  | **B.Sc. III** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Organometallic chemistry, organometallic compounds: preparation, properties and bonding | Expert Lecture |  |
| 2. | Dr. Amit Kumar | Physical Chemistry | Ideal and non-ideal solutions, Raoult’s law, Colligative properties etc | Expert Lecture |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Heterocyclic Compounds: Methods of synthesis and chemical reactions | Expert Lecture |  |

**Summary of Lesson Plans of College Faculty**

**Name of College: Indira Gandhi National College, Ladwa (KKR) Academic Session: 2019-20 Semester: II, IV &VI For the Month of March 2020**

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| **S. No.** | **Name of Assistant/ Associate Professor** | **Subject** | **Topics/Chapter to be covered** | **Academic Activity to be organized** | **Topic of Assignments/Tests to be given to the students** |
|  |  |  | **B.Sc. I** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Boron family (13th group) and Carbon family (14th group) | Chemistry Quiz | Assignment on s and p block elements |
| 2. | Dr. R.K. Chauhan | Physical Chemistry | Electrochemistry: Electrolytic conduction and various conductance | Discussion on Previous years Questions |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Dienes and Alkynes: Structure and chemical Properties |  | Assignment on Arenes and Aromaticity |
|  |  |  | **B.Sc. II** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Theory of Qualitative and Quantitative Analysis: analysis of various groups of basic and acidic radicals | Chemistry Quiz | Assignment on various properties of Lanthanides |
| 2. | Dr. Amit Kumar | Physical Chemistry | Electrolytic and Galvanic cells | Discussion on Previous years Questions | Assignment on Second and Third laws of Thermodynamics |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Diazonium Salts: Mechanism of diazotisation, structure etc |  |  |
|  |  |  | **B.Sc. III** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Bio-inorganic chemistry, Metal ions present in biological system etc | Chemistry Quiz | Test of Acids and Bases |
| 2. | Dr. Amit Kumar | Physical Chemistry | Phase Rule and Phase Equillibrium of One and two component systems | Discussion on Previous years Questions |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Amino Acids, Peptides & Proteins |  | Assignment on Heterocyclic Compounds |

**Summary of Lesson Plans of College Faculty**

**Name of College: Indira Gandhi National College, Ladwa (KKR) Academic Session: 2019-20 Semester: II, IV &VI For the Month of April 2020**

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| **S. No.** | **Name of Assistant/ Associate Professor** | **Subject** | **Topics/Chapter to be covered** | **Academic Activity to be organized** | **Topic of Assignments/Tests to be given to the students** |
|  |  |  | **B.Sc. I** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Nitrogen family (15th group), Oxygen family ( 16th group) and Halogen family ( 17th group) |  |  |
| 2. | Dr. R.K. Chauhan | Physical Chemistry | Electrochemistry: solubility product of sparingly soluble salts, conducto-metric titrations, Buffer solution, Buffer action etc | Test of Electrochemistry |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Alkyl and Aryl Halides: Nomenclature, methods of formation, chemical reactions of alkyl halides |  |
|  |  |  | **B.Sc. II** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Theory of Qualitative and Quantitative Analysis: theory of precipitation etc |  |  |
| 2. | Dr. Amit Kumar | Physical Chemistry | Types of reversible electrodes, Standard Hydrogen and reference electrodes etc |  |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Aldehydes and Ketones: Nomenclature and structure and chemical reactions of the carbonyl group | Test on Aldehydes and Ketones |
|  |  |  | **B.Sc. III** |  |  |
| 1. | Dr. Amit Kumar | Inorganic Chemistry | Silicones and Phosphazenes: Nomenclature, classification, preparation and uses |  |  |
| 2. | Dr. Amit Kumar | Physical Chemistry | Introduction to statistical mechanics, Born oppenheimer approximationetc | Assignment on various Colligative Properties |
| 3. | Dr. R.K. Chauhan | Organic Chemistry | Synthetic Polymers: Types of Polymerization. Various Polymers etc |  |