**IGN COLLEGE, LADWA**

**DEPARMENT OF CHEMISTRY**

**LESSON PLAN**

**Name of Teacher: Dr. Amit Kumar Academic Session: 2020-21**

**Semester: Even Month: April-2021**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.No | Subject | Class | Topic/Chapter to be covered | Other Activity |
| 1 | Inorganic Chemistry | B.Sc II sem | Hydrogen Bonding and Vander Waals forces, Metallic Bond and semiconductors, s-Block elements | Introduction of Syllabi and discussion of programme and course outcomes |
| 2 | Inorganic Chemistry | B.Sc IV sem | Chemistry of f-Block elements: Lanthanides | Introduction of Syllabi and discussion of programme and course outcomes |
| 3 | Physical Chemistry | B.Sc IV sem | Second law of thermodynamics, Carnot’s cycles and its efficiency, Concept of entropy | Introduction of Syllabi and discussion of programme and course outcomes |
| 4 | Inorganic Chemistry | B.Sc VI sem | Acids and Bases: Various Concepts, HSAB principle | Introduction of Syllabi and discussion of programme and course outcomes |
| 5 | Physical Chemistry | B.Sc VI sem | Photochemistry: photochemical processes. Laws of photochemistry etc | Introduction of Syllabi and discussion of programme and course outcomes |

**Name of Teacher: Dr. Amit Kumar Academic Session: 2020-21**

**Semester: Even Month: May-2021**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.No | Subject | Class | Topic/Chapter to be covered | Other Activity |
| 1 | Inorganic Chemistry | B.Sc II sem | Chemistry of Noble Gases and p-Block elements | Poster display competition |
| 2 | Inorganic Chemistry | B.Sc IV sem | Chemistry of f-Block elements: Actinides | Expert Lecture and Poster display competition |
| 3 | Physical Chemistry | B.Sc IV sem | Third law of thermodynamics: Nernst heat theorem, Gibbs function (G) and Helmholtz function (A) |  |
| 4 | Inorganic Chemistry | B.Sc VI sem | Organometallic chemistry, organometallic compounds: preparation, properties and bonding | Expert Lecture and Poster display competition |
| 5 | Physical Chemistry | B.Sc VI sem | Ideal and non-ideal solutions, Raoult’s law, Colligative properties etc |  |

**Name of Teacher: Dr. Amit Kumar Academic Session: 2020-21**

**Semester: Even Month: June-2021**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.No | Subject | Class | Topic/Chapter to be covered | Other Activity |
| 1 | Inorganic Chemistry | B.Sc II sem | Boron family (13th group), Carbon family (14th group) and Nitrogen family (15th group) | Presentations and  Test, discussion on Test |
| 2 | Inorganic Chemistry | B.Sc IV sem | Theory of Qualitative and Quantitative Analysis: analysis of various groups of basic and acidic radicals | Presentations and  Assignment, discussion on Assignment |
| 3 | Physical Chemistry | B.Sc IV sem | Electrolytic and Galvanic cell, Types of reversible electrodes | Presentations |
| 4 | Inorganic Chemistry | B.Sc VI sem | Bio-inorganic chemistry, Metal ions present in biological system etc | Presentations and  Assignment, discussion on Assignment |
| 5 | Physical Chemistry | B.Sc VI sem | Phase Rule and Phase Equilibrium of One and two component systems | Presentations and  Assignment |

**Name of Teacher: Dr. Amit Kumar Academic Session: 2020-21**

**Semester: Even Month: July-2021**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.No | Subject | Class | Topic/Chapter to be covered | Other Activity |
| 1 | Inorganic Chemistry | B.Sc II sem | Oxygen family (16th group) and Halogen family (17th group) | Presentations, discussion on previous years questions |
| 2 | Inorganic Chemistry | B.Sc IV sem | Theory of Qualitative and Quantitative Analysis: theory of precipitation etc | Presentations and discussion on previous years questions |
| 3 | Physical Chemistry | B.Sc IV sem | Standard Hydrogen and reference electrodes etc | Presentations and Test, discussion on Test and previous years questions |
| 4 | Inorganic Chemistry | B.Sc VI sem | Silicones and Phosphazenes: Nomenclature, classification, preparation and uses | Presentations, Discussion on previous years questions |
| 5 | Physical Chemistry | B.Sc VI sem | Introduction to statistical mechanics, Born oppenheimer approximationetc | Presentations, discussion on previous years questions |