**SEMESTER-I**

**------------------------------------------------------------------------------------------------------------**

**GE T1: ATOMIC STRUCTURE, CHEMICAL PERIODICITY, ACIDS AND BASES, REDOX REACTIONS, GENERAL ORGANIC CHEMISTRY & ALIPHATIC HYDROCARBONS**

**(Credits: Theory-04, Practicals-02)**

**Theory: 60 Lectures**

***Section A: Inorganic Chemistry-I* (30 Lectures)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Chapters** | **No. of lectures****(30)** | **Marks** | **July-15th Sept** | **Internal Exam****3rdWeek of September** | **3rd Week of September- 8th December****(including Puja vacations)** | **9th December-15th December**  | **End-Sem Exam****16th Dec. to****24th September** | **End-Sem Break** |
| **Atomic Structure** | 10 | 40 | 10 | 10 |  | Study Leave | Exam | 25th Dec. to 31st Dec. |
| **Chemical Periodicity**  | **05** | 06 |  |
| **Acids and bases**  | 10 |  | 16 |
| **Redox reactions** | 05 |  |

***Section B: Organic Chemistry-I* (30 Lectures)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Chapters** | **No. of lectures****(30)** | **Marks** | **July-15th Sept** | **Internal Exam****3rdWeek of September** | **3rd Week of September- 8th December****(including Puja vacations)** | **9th December-15th December**  | **End-Sem Exam****16th Dec. to****24th September** | **End-Sem Break** |
| **Fundamentals of Organic Chemistry**  | 05 | 40 | 06 | 10 |  | Study Leave | Exam | 25th Dec. to 31st Dec. |
| **Stereochemistry**  | **08** | 08 |  |
| **Nucleophilic Substitution and Elimination Reactions**  | 05 |  | 18 |
| **Aliphatic Hydrocarbons**  | 12 |  |

GE P1: ATOMIC STRUCTURE, CHEMICAL PERIODICITY, ACIDS AND BASES, REDOX REACTIONS, GENERAL ORGANIC CHEMISTRY & ALIPHATIC HYDROCARBONS LAB

60 Lectures

***Section A: Inorganic Chemistry –LAB (30 Lectures)***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  **Chapters** | **No. of lectures****(30)** | **Marks** | **July-15th Sept** | **Internal Exam****3rdWeek of September** | **4th Week of September- 8th December****(including Puja vacations)** | **9th December-15th December**  | **End-Sem Exam****16th Dec. to****24th September** | **End-Sem Break** |
|  1. Estimation of sodium carbonate and sodium hydrogen carbonate present in a mixture.  |  | 25 |   04 |  | 02 | Study Leave | Exam | 22nd June-30th June |
| 2. Estimation of oxalic acid by titrating it with KMnO4.  |  | 03 |  | 03 |
| 3. Estimation of water of crystallization in Mohr’s salt by titrating with KMnO4. than two of the above type of functional groups should be done |  | 3 |  | 03 |
| 4. Estimation of Fe (II) ions by titrating it with K2Cr2O7 using internal indicator.  | 3 | 03 |
| 5.Estimation of Cu (II) ions iodometrically using Na2S2O3 | 3 | 03 |

***Section B: Organic Chemistry- LAB* (30 Lectures)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  **Chapters** | **No. of lectures****(30)** | **Marks** | **July-15th Sept** | **Internal Exam****3rdWeek of September** | **4th Week of September- 8th December****(including Puja vacations)** | **9th December-15th December**  | **End-Sem Exam****16th Dec. to****24th September** | **End-Sem Break** |
| 1. Detection of special elements (N, Cl, and S) in organic compounds |  | 25 |   02 |  |  | Study Leave | Exam | 22nd June-30th June |
| 2. Solubility and Classification (solvents: H2O, dil. HCl, dil. NaOH) |  | 02 |  |  |
| 3. Detection of functional groups: Aromatic-NO2, Aromatic -NH2, -COOH, carbonyl (no distinction of –CHO and >C=O needed), -OH (phenolic) in solid organic compounds.Experiments A - C with unknown (at least 6) solid samples containing not more than two of the above type of functional groups should be done |  | 12 |  | 14 |