

## DEPARTMENT OF CHEMISTRY (UG & PG), JHARGRAM RAJ COLLEGE LESSON PLAN (SESSION: 2023-2024)

**TEACHER: DR. TARUN MISTRI (INORGANIC CHEMISTRY)** 

#### **UG SEMESTER-II**

PAPER: C3T & C3P

| PERIOD     | TOPIC(S) TO BE COVERED                                       |
|------------|--|
| March 2023 | Chemical periodicity   |
| April 2023 | Acid-Base reactions (theory), Acid and Base Titrations (Lab) |
| May 2023   | Practice sessions  |

## PAPER: GE2T & GE2 P

| PERIOD        | TOPIC(S) TO BE COVERED  |
|---------------|---|
| Oct 2023 -Nov | Chemical Bonding and Molecular Structure (Theory) & Qualitative semimicro |
| 2023          | analysis of mixtures containing three radicals (Lab)                      |
| January 2023  | Practice Sessions   |

#### **UG SEMESTER-III**

PAPER: C6T & C6P

| PERIOD              | TOPIC(S) TO BE COVERED  |
|---------------------|---|
| Aug2023-Sep<br>2023 | Chemical Bonding (I & II) (Theory) & Iodo-/ Iodimetric Titrations (Lab) |

#### **UG SEMESTER-IV**

PAPER: C9T & C9P

| PERIOD          | TOPIC(S) TO BE COVERED  |
|-----------------|---|
| February 2023   | Coordination Chemistry-I  |
| Mar 2023 -April | Chemistry of s and p Block Elements (Theory) & Complexometric titration (Lab) |
| 2023            |   |
| May 2023        |   |

### PAPER: GE4T & GE4P

| PERIOD        | TOPIC(S) TO BE COVERED  |
|---------------|---|
| Feb2023-March | Chemical Analysis (theory) & Analytic and Environmental Chemistry-LAB |
| 2023          |   |
| April 2023    | Practice Sessions   |

## **UG SEMESTER-V**

**PAPER: C11T & C11P** 

| PERIOD            | TOPIC(S) TO BE COVERED  |
|-------------------|---|
| Jul 2023-Sep 2023 | Coordination Chemistry-II (Theory) & Chromatography of metal ions (Lab) |
| October 2023      | Practice session & Class tests  |

### PAPER: DSE2T & DSE2P

| PERIOD            | TOPIC(S) TO BE COVERED  |
|-------------------|---|
| Jul 2023-Aug 2023 | Thermal methods of analysis (Theory) & Analysis of soil (Lab) |
| Sep 2023          | Practice Sessions   |

#### **UG SEMESTER-VI**

**PAPER: C13T & C13P** 

| PERIOD       | TOPIC(S) TO BE COVERED |
|--------------|------------------------|
| January 2024 | Bioinorganic Chemistry |



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| PERIOD          | TOPIC(S) TO BE COVERED                                 |
|-----------------|--|
| February 2024   | Reaction Kinetics and Mechanism (Theory)               |
| Jan 2024 -March | C13P: Qualitative semimicro analysis of mixtures (Lab) |
| 2024            |  |

## **UG SEMESTER-II (NEP)**

#### PAPER: MJ2T & MJ2P

| PERI      | IOD      | TOPIC(S) TO BE COVERED                |
|-----------|----------|---------------------------------------|
| Septembe  | er 2024  | Chemical periodicity                  |
| October 2 | 2024     | Acid-Base reactions                   |
| Sep 2     | 2024-Oct | Oxidation-Reduction Titrimetric (Lab) |
| 2024      |          |                                       |

#### **PG SEMESTER-I**

#### **PAPER: CEM 103 & CEM 195**

| PERIOD        | TOPIC(S) TO BE COVERED  |
|---------------|---|
| October 2023  | Bioinorganic chemistry-I (Theory)   |
| November 2023 | Solid state Chemistry and crystallography (Theory)                                |
| Oct 2023 -Nov | Analysis of Metals and Alloys (Lab) & Synthesis and Characterization of inorganic |
| 2023          | compounds (Lab)   |

### **PG SEMESTER-II**

#### **PAPER: CEM 203:**

| PERIOD        | TOPIC(S) TO BE COVERED      |
|---------------|-----------------------------|
| February 2024 | Group theory-II             |
| March 2024    | Organometallic chemistry –I |

### **PG SEMESTER-III**

### PAPER: CEM 301 (Common Paper)

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|----------------|---------------------------------------|--|
| PERIOD         | TOPIC(S) TO BE COVERED                |  |
| September 2023 | Photophysical processes               |  |
| October 2023   | EPR spectroscopy                      |  |
| November 2023  | PES and NQR spectroscopy              |  |

#### PAPER: CEM 302 (INORGANIC CHEMISTRY SPECIALIZATION):

|              | , , , , , , , , , , , , , , , , , , , |
|--------------|---------------------------------------|
| PERIOD       | TOPIC(S) TO BE COVERED                |
| Sep-Oct 2023 | Chemical applications of group theory |

### PAPER: CEM 303 (INORGANIC CHEMISTRY SPECIALIZATION):

| PERIOD         | TOPIC(S) TO BE COVERED   |
|----------------|--------------------------|
| September 2023 | Inorganic photochemistry |

## PAPER: CEM 395 (INORGANIC CHEMISTRY SPECIALIZATION):

|                             | ·                      |
|-----------------------------|------------------------|
| PERIOD                      | TOPIC(S) TO BE COVERED |
| Sep 2023 –<br>December 2023 | Review work            |



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### **PG SEMESTER-IV**

## PAPER: CEM 402 (INORGANIC CHEMISTRY SPECIALIZATION):

| PERIOD |      | )    |                  | TOPIC(S) TO BE COVERED |
|--------|------|------|------------------|------------------------|
| Feb    | 2024 | -Mar | Magnetochemistry |                        |
| 2024   | ļ    |      |                  |                        |

## PAPER: CEM 403 (INORGANIC CHEMISTRY SPECIALIZATION):

|                 | ·                      |
|-----------------|------------------------|
| PERIOD          | TOPIC(S) TO BE COVERED |
| Feb 2024 -March | Analytical chemistry   |
| 2024            |                        |

## PAPER: CEM 495 (INORGANIC CHEMISTRY SPECIALIZATION):

| PERIOD         | TOPIC(S) TO BE COVERED |
|----------------|------------------------|
| Feb 2024 – May |                        |
| 2024           | Review Work            |
|                |                        |