



DEPARTMENT OF CHEMISTRY (UG & PG), JHARGRAM RAJ COLLEGE
LESSON PLAN (SESSION: 2022-2023)

TEACHER: DR. DILIP ROUT (ORGANIC CHEMISTRY)

UG SEMESTER-I

PAPER: CC-1T (ORGANIC CHEMISTRY-I), GENERAL TREATMENT OF REACTION MECHANISM I

PERIOD	TOPIC(S) TO BE COVERED
October 2022	Mechanistic Classification: Reaction Type
November 2022	Description of reaction mechanism in terms of curly arrows
December 2022	Reactive Intermediate
January 2022	Class test

PAPER: CC-1P (CHEMISTRY LAB-I)

PERIOD	TOPIC(S) TO BE COVERED
November 2022	Separation of a Binary Solid Mixture
December 2022	Determination of boiling point of Organic Liquid Compounds
January 2022	Identification of a pure Organic Compounds: Solid and Liquid compounds

UG SEMESTER-II

PAPER: CC-4T (ORGANIC CHEMISTRY-II), GENERAL TREATMENT OF REACTION MECHANISM II (Part) and ELIMINATION REACTIONS (Part)

PERIOD	TOPIC(S) TO BE COVERED
March 2023	Reaction Kinetics
April 2023	Elimination Reactions
May 2023	Class test

PAPER: DSC-1BT (CC-2) [FOR THE GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
October 2022	Alkyl Halides
November 2022	Aryl Halides
December 2022	Alcohols and Phenols
January 2022	Class test

PAPER: DSC-1BP (CC-2 LAB) [FOR THE GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
October 2022	Purification of Organic Compounds by Crystallisation
November 2022	Melting and Boiling Point Determination
December 2022	Preparation: Benzoylation of amines/phenols
January 2022	Practice sessions

UG SEMESTER-III

PAPER: GE-3T (ORGANIC CHEMISTRY-II)

PERIOD	TOPIC(S) TO BE COVERED
September 2022	Alcohols, Phenol and Ethers
October 2022	Class test

PAPER: GE-3P (Section B: ORGANIC CHEMISTRY LAB-II)

PERIOD	TOPIC(S) TO BE COVERED
September 2022	Identification of a pure solid organic compound.
October 2022	Identification of a pure liquid organic compound.
November 2022	Practice sessions

PAPER: DSC-1CT (CC3T) [FOR THE GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
September 2022	Carboxylic acid and their derivatives
October 2022	Carbohydrates
November 2022	Amine and Diazonium salts



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UG SEMESTER-IV

PAPER: CC-10T (ORGANIC CHEMISTRY-IV), ORGANIC SPECTROSCOPY

PERIOD	TOPIC(S) TO BE COVERED
February 2023	UV spectroscopy
March 2023	IR Spectroscopy
April 2023	NMR spectroscopy
May 2023	Application of combined spectroscopic techniques

UG SEMESTER-V

PAPER: CC12T (ORGANIC CHEMISTRY V): CARBOHYDRATES and PERICYCLIC REACTIONS

PERIOD	TOPIC(S) TO BE COVERED
July 2022	Monosaccharides and Disaccharides
August 2022	Polysaccharides and Electrocyclic Reactions
September 2022	Cycloaddition and Sigmatropic reactions
October 2022	Class tests

PAPER: C12P (SPECTROSCOPIC ANALYSIS OF ORGANIC COMPOUNDS)

PERIOD	TOPIC(S) TO BE COVERED
July 2022	Assignment of IR spectra
August 2022	Assignment of NMR spectra
September 2022	TLC separation of dyes
October 2022	Column chromatographic separation of leaf pigments from spinach leaves

UG SEMESTER-VI

PAPER: DSE-3T (GREEN CHEMISTRY) [BOTH HONS. and GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
January 2023	Introduction to Green Chemistry and discussion its Principles
February 2023	Green solvent, catalyst and alternative energy source.
March 2023	Designing of green synthesis and future trends in green chemistry

PAPER: DSE-3P (GREEN CHEMISTRY) [BOTH HONS. and GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
January 2023	Preparation of Biodiesel, Benzoin condensation using green catalyst.
February 2023	Solvent free reaction, Calculation of atom economy
March 2023	Photoreduction of benzophenone
April 2023	Practice session

PG SEMESTER-I

PAPER: CEM 102 (ORGANIC CHEMISTRY-I):

PERIOD	TOPIC(S) TO BE COVERED
October 2022	Unit-3: Natural Products: Terpenoids
November 2022	Unit-4: Natural Products: Alkaloids

PAPER: CEM 104 (FOOD PROCESSING AND PRESERVATION-I):

PERIOD	TOPIC(S) TO BE COVERED
December 2022	Unit II: Introduction to Food Microbiology

PG SEMESTER-II

PAPER: CEM 202 (ORGANIC CHEMISTRY-II):

PERIOD	TOPIC(S) TO BE COVERED
February 2023	Unit-4: Stereochemistry I
March 2023	Unit-4: Stereochemistry I



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PG SEMESTER-III

PAPER: CEM 303 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
September 2022	Unit-V: Green Chemistry
October 2022	Unit-V: Green Chemistry
November 2022	Unit-4: Green Chemistry

PAPER: C-CEM 304 (CBCS): PHARMACEUTICAL CHEMISTRY

PERIOD	TOPIC(S) TO BE COVERED
September 2022	Antimalarial drug
October 2022	Antimalarial drug
November 2022	Antimalarial drug

PAPER: CEM 395 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
September 2022 – December 2022 (16 weeks)	Review work in an area of contemporary interest; research work to be performed; seminar Lecture has to be delivered on the total work carried out.

PG SEMESTER-IV

PAPER: CEM 401 (ORGANIC, INORGANIC and PHYSICAL CHEMISTRY SPECIALIZATION): ADVANCED SPECTROSCOPY II

PERIOD	TOPIC(S) TO BE COVERED
February 2023	Unit-1 & 2 : Detailed study of ^1H NMR
March 2023	Unit-3: Mass spectroscopy
April 2023	Unit-4: Combined application of spectroscopic techniques

PAPER: CEM 402 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
February 2023	Unit-1: Organic Photochemistry-I
March 2023	Unit-2: Organic Photochemistry-II

PAPER: CEM 495 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
February 2023 – May 2023 (16 weeks)	Review work in an area of contemporary interest; research work to be performed; seminar Lecture has to be delivered on the total work carried out.