

A.S.D.Govt.Degree College for Women(A), Kakinada

Department of Chemistry

COURSE OUTCOMES

B.Sc 2021-2022

SEMESTER-1

Paper- INORGANIC & PHYSICAL CHEMISTRY

Course Outcomes	DESCRIPTION
CO1	Understand the basic concepts of p-block elements
CO2	Explain the difference between solid, liquid and gases in terms of intermolecular interactions.
CO3	Apply the concepts of gas equations, pH and electrolytes while studying other chemistry courses.
CO4	Understand the relationship between concentration, Volume, moles and colligative properties of solutions

SEMESTER-II

Paper- ORGANIC & GENERAL CHEMISTRY

Course Outcomes	DESCRIPTION
CO1	Understand and explain the differential behavior of organic compounds based on fundamental concepts learnt.
CO2	Formulate the mechanism of organic reactions by recalling and correlating the fundamental properties of the reactants involved.
CO3	Learn and identify many organic reaction mechanisms including Free Radical Substitution, Electrophilic Addition and Electrophilic Aromatic Substitution.
CO4	Correlate and describe the stereochemical properties of organic compounds and reactions
CO5	chemical bonding mainly give information to know the bonding order and bond strength of the molecules.

SEMESTER -III
PAPER: ORGANIC CHEMISTRY & SPECTROSCOPY

Course Outcomes	Description
CO 1	Acquire the knowledge of analysis of materials by using UV and Visible light which helps in identification of impurities and conjugation in organic compounds and biological macro molecules
CO 2	Capable of identifying the functional groups present in organic molecules by using I.R. spectroscopy and molecular structure determination by using NMR spectroscopy which are useful in research
CO3	Get the knowledge of the bond nature of C-OH and C-X and how they are used in daily life and industries.
CO4	Acquire the knowledge about carbonyl compounds, carboxylic acids and how they become backbone of organic chemistry.

SEMESTER -IV, COURSE - IV
INORGANIC ,ORGANIC & PHYSICAL CHEMISTRY

Course Outcomes	Description
CO 1	Acquire some knowledge about organic and organometallic compounds, their structures, properties which are very useful in manufacturing of different important organic compounds
CO 2	Apply the thermodynamics related knowledge predicting the direction of spontaneous chemical transformations.
CO3	Analyse the organic compounds qualitatively.
CO4	Create new routes for the preparation of compounds depending on the requirement

**SEMESTER -IV, COURSE - V
INORGANIC & PHYSICAL CHEMISTRY**

Course Outcomes	Description
CO 1	Understand the theories of bonding in complex compounds and their stability, reaction mechanisms of complex compounds able to understand about bioinorganic compounds and their role in human metabolism.
CO 2	Acquires knowledge on various phase diagrams and apply them to new systems
CO3	Able to understand the concepts of chemical kinetics and able to apply draw solutions to various mathematical problems.
CO4	Able to understand the concepts of electrochemistry

**THIRD YEAR, SEMESTER – V
ELECTIVE PAPER – VII-(B)- (ENVIRONMENTAL CHEMISTRY)**

Course Outcomes	DESCRIPTION
CO1	Understand the environment segments and how it is affected by human activities. Apply simple and advanced analytical tools to measure the different types of pollution
CO2	Understand the energy crisis and different aspects of sustainability. Learn criteria for finding of water quality and apply this for analysis of water. How to convert hard water into soft water and purification of sewage waste water.
CO3	Acquire chemical knowledge to ensure sustainable use of the world's resources and ecosystems services
CO4	Analyse key ethical challenges concerning biodiversity and understand the moral principles, goals and virtues important for guiding decisions that affect Earth's plant and animal life.

CHEMISTRY CLUSTER ELECTIVE-VIII - C - 1
PAPER-VIII-C-1 : ORGANIC SPECTROSCOPIC TECHNIQUES

Course Outcomes	Description
CO 1	Acquires knowledge to interpret the spectra and use the information to determine the structure of various complex molecules
CO 2	Able to understand various energy levels, electronic transitions and electronic spectra of di atomic molecule and polyatomic molecules.
CO3	Analyse the study of molecules with greater sensitivity and speed along with greater resolution
CO4	Acquires Knowledge to apply in the research of biological free radicals for quantitative and qualitative analysis of reactive oxygen species.

CHEMISTRY CLUSTER ELECTIVE-VIII -C-2
PAPER-VIII-C-2 : ADVANCED ORGANIC REACTIONS

Course Outcomes	Description
CO1	Acquires Knowledge to formulate the macroscopic and quantum laws of the absorption of light by molecules
CO2	Gains knowledge to characterize the kinetics of molecular excited states and their role in the photochemical reactivity
CO3	Create new routes for the preparation of compounds depending on the requirement
CO4	Understands the background of organic reaction mechanisms, structure elucidation of organic molecules, molecular rearrangements

CHEMISTRY CLUSTER ELECTIVE-VIII - C - 3

PAPER-VIII-C-3 : PHARMACEUTICAL AND MEDICINAL CHEMISTRY

Course Outcomes	Description
CO1	Gains complete knowledge about all fundamental aspects of Pharmaceutical chemistry
CO2	Get the knowledge on Chemotherapeutic drugs, Psychotherapeutic drugs and Pharmacodynamic drugs
CO3	Understands the mechanism of drug action and synthesis of the various classes of drug molecules
CO4	Acquires knowledge on prevention of AIDS, action of CD4 and CD8 cells, drugs available with structures



V. N. D.
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