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

Department of Chemistry

COURSE OUTCOMES

B.Sc 2022-2023

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 0utcomes	Description
CO 1	Acquire the knowledge of analysis of materials by using UV and Visible light whi 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 0utcomes	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 0utcomes	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.

SEMESTER-V

Course VII- (GREEN CHEMISTRY & NANO TECHNOLOGY)

Course Outcomes	DESCRIPTION
CO1	Understand principles of Green Chemistry, Green synthesis and its application to the manufacture of chemical products and sustainable development.
CO2	Get knowledge in Microwave and Ultrasound assisted green synthesis, Green Catalysis and Green solvents. Analyse alternative sources of energy to carry out green synthesis.
CO3	Plan Chemical reactions by adopting Green synthesis which has maximum atom economy.
CO4	Get knowledge about Nanomaterial synthesis, Properties and Application. Apply Chemical methods for synthesis of nanomaterial.

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