GOVERNMENT DEGREE COLLEGE, RAVULAPALEM

DEPARTMENT OF CHEMISTRY

COURSE OUTCOMES

SL. NO	SEMESTER	TITLE OF THE PAPER	COURSE OUTCOMES
1	I	(INORGANIC & PHYSICAL CHEMISTR Y)	At the end of the Course, the student will be able to 1. Understand the basic concepts of p-block, d-block and f -block elements. 2. Explain the difference between solid, liquid and gaseous in terms of intermolecular interactions. 3.Apply the concepts of gas equation, PH and electrolytes while studying other chemistry courses 4. Understanding about Vander Waal's equation, Andrew's isotherm of CO2 gas. 5.Understanding about ideal solutions, colligative properties;
2	II	(ORGANIC & GENERAL CHEMISTRY)	At the end of the course, the student will be able to; 1. Understand and explain the differential behaviour of organic compounds based on fundamental concepts learnt. 2. Formulate the mechanism of organic reactions by recalling and correlating the fundamental properties of the reactants involved. 3. Learn and identify many organic reaction mechanisms including Free Radical Substitution, Electrophilic Addition and Electrophilic Aromatic Substitution. 4. Correlate and describe the stereo chemical properties of organic compounds and reactions. 5. Learn about Colloidal solutions, Emulsions and Adsorptions.
3	III	(ORGANIC CHEMISTRY& SPECTROSCOPY)	At the end of the Course, the student will be able to 1. Understand preparation, properties and reactions of haloalkanes, haloarenes and oxygen containing functional groups. 2. Use the synthetic chemistry learnt in this course to do functional group transformations 3. To propose possible mechanisms for any relevant reactions. 4. Understand the basic concepts of Molecular spectroscopy, NMR - spectroscopy& Application of Spectroscopy to Simple Organic Molecules
4	IV	IV(A): (INORGANIC, ORGANIC AND PHYSICAL CHEMISTRY)	At the end of the course, the student will be able to 1. To learn about the laws of absorption of light energy by molecules and the subsequent photo chemical reactions. 2. To understand the concept of quantum efficiency and mechanisms of photochemical reaction. 3. Understand the preparation and properties of Amino acids and basic knowledge on Proteins. 4. Understand preparation, Structure and Conversions of Glucose and Fructose. [5. Understand the Laws and properties of Thermodynamics
5	V	IV(B) (INORGANIC &PHYSICAL CHEMISTRY)	IV(B)-(INORGANIC &PHYSICAL CHEMISTRY) At the end of the course, the student will be able to; 1. Understand the basic concepts of Coordination Compounds, Inorganic reaction mechanism and Stability of Complexes. 2. Understand the Biological significance of some elements 3. Understand the basic concepts of Phase Rule & Electrochemistry. 4. Understand the Rate of reactions.

6	VI	VI-D(ENVIRONMENTAL CHEMISTRY)	At the end of the course, the students will be able to; 1. Understand the basic concepts of environmental chemistry, scope and importance of environment in nowadays-Natural & Renewable and Non-Renewable resources Reactions of Atmospheric Oxygen & Hydrological Cycle. 2. Learn about the basic concepts of air pollution-sources of air pollution - controlling methods of air pollution. 3. Understand the basic concepts of water quality and criteria for finding of water quality-methods to convert temporary hard water into soft water, methods to convert permanent hard water into soft water- Eutrophication & its effects-Industrial Waste Water Treatment. 4. Gain knowledge about the basic concepts of toxic chemicals in the environment –effects of toxic chemicals-Solid Waste Management. 5: Understand the basic concepts of Eco system functions and types of Eco system-Carbon, Nitrogen & Phosphorous Cycles-concept of Biodiversity.
7	VII	VII- D (GREEN CHEMISTRY & NANOTECHNOLOGY)	At the end of the course, the students will be able to; 1. Understand the basic principles and goals of Green chemistry-green synthesis. 2. To know about the selection of solvent – Green Energy and Sustainability. 3. Understand the apparatus required and examples of microwave and ultrasound assisted green synthesis. 4.Understand Green catalysis and green synthesis 5.Understand the concepts of Nanoscience & Nanotechnology