Government City College (A)
Hyderabad-500002
(Affiliated to Osmania University)
Accredited with B++ Grade by NAAC
https://gdcts.cgg.gov.in/charminar.edu

Department Of Chemistry
Course Outcomes:

Course Title: Paper-I

On successful completion of the course, Students will be able to:

COS	Course Outcomes	Blooms Taxonomy Classification
CO1	Students will be able to recall and describe the fundamental concepts of chemical bonding, P-Block Elements 1, structural theory in organic chemistry, acyclic hydrocarbons, and aromatic hydrocarbons.	Remembering
CO2	Students will demonstrate an understanding of the relationships between atomic structure, chemical bonding, and the properties of acyclic and aromatic hydrocarbons.	Understanding
CO3	Applying the principles of chemical bonding and structural theory, students will solve problems related to the properties, reactivity, and synthesis of organic compounds.	Applying
CO4	Students will analyze the structural features and properties of various organic compounds, including acyclic and aromatic hydrocarbons, to make informed predictions about their behavior.	Analyzing
CO5	Using acquired knowledge; students will design and propose synthetic routes for specific organic compounds, demonstrating an ability to apply structural theory in the context of organic chemistry.	Creating

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Course Title: Paper-II

After completing the course students are expected to be able to:

COS	Course Outcomes	Blooms Taxonomy Classification
CO1	Demonstrate a comprehensive understanding of the fundamental principles and concepts across various chapters, including electronic configurations, trends in properties, and key reactions.	Remembering
CO2	Apply acquired knowledge to predict the behavior of different elements and compounds in diverse chemical reactions, showcasing the ability to make informed predictions based on the principles learned.	Understanding
CO3	Analyze and evaluate the environmental, industrial, and societal impact of various chemical processes, elements, and compounds, demonstrating critical thinking skills in assessing the broader implications of chemical phenomena.	Applying
CO4	Propose and design innovative applications or technologies utilizing the properties of different elements and compounds, showcasing creativity and the ability to integrate knowledge into practical solutions.	Analyzing
CO5	Design and optimize experiments to explore the properties, reactions, and applications of chemical compounds, showcasing practical laboratory skills and the ability to apply theoretical knowledge to experimental settings.	Creating

Course Title: Paper-III

After completing the course students are expected to be able to:

COS	Course Outcomes	Blooms Taxonomy Classification
CO1	Demonstrate a comprehensive understanding of the fundamental principles governing f-block elements, coordination compounds, metal carbonyls, organometallic chemistry, carboxylic acids and derivatives, nitro-compounds, amines, cyanides and isocyanides, thermodynamics, carban ions, and the phase rule.	Remembering
CO2	Apply acquired knowledge to predict the chemical behavior and reactions of various compounds and elements, showcasing the ability to make accurate predictions based on theoretical concepts.	Understanding
CO3	Analyze and evaluate the reaction mechanisms involved in coordination compounds, metal carbonyls, organometallic chemistry, carboxylic acids and derivatives, nitrocompounds, amines, cyanides and isocyanides, demonstrating the ability to critically assess chemical processes.	Applying
CO4	Design and optimize synthetic routes for the preparation of specific compounds, showcasing creativity and the ability to apply knowledge to practical laboratory scenarios.	Analyzing
CO5	Demonstrate proficiency in evaluating analytical data, solving complex problems related to chemical reactions, and making informed decisions based on the interpretation of experimental results.	Creating

COURSE TITLE: Paper-IV

After completing the course students are expected to be able to:

COS	Course Outcomes	Blooms Taxonomy Classification
CO1	Demonstrate a comprehensive understanding of the fundamental principles governing coordination compounds, bioinorganic chemistry, carbohydrates, amino acids and proteins, heterocyclic compounds, chemical kinetics, photochemistry, theories of bonding in metals, and carbanions. Memorize key theorems, properties, and algorithms related to solving systems of linear equations and matrix operations.	Remembering
CO2	Apply the principles of coordination compounds, bioinorganic chemistry, and organic compounds to explain and understand their role and significance in biological systems, showcasing the ability to connect theoretical concepts with practical applications.	Understanding
CO3	Analyze and evaluate the chemical processes involved in the synthesis and reactions of coordination compounds, bioinorganic compounds, carbohydrates, amino acids and proteins, heterocyclic compounds, chemical kinetics, photochemistry, metal bonding, and carbanions, demonstrating critical thinking skills in assessing chemical phenomena.	Applying
CO4	Design experiments related to chemical kinetics and photochemistry and interpret experimental data, showcasing practical laboratory skills & the ability to apply theoretical knowledge to experimental settings.	Analyzing
CO5	Synthesize knowledge of bonding theories in metals & apply them to explain the properties & behavior of metal complexes, demonstrating the ability to connect theoretical concepts with experimental observations & real-world applications.	Creating

COURSE TITLE: Paper-V

After completing the course students are expected to be able to:

COS	Course Outcomes	Blooms Taxonomy Classification
CO1	Demonstrate a comprehensive understanding of the fundamental principles governing coordination chemistry, boranes and carboranes, amines, cyanides and isocyanides, heterocyclic compounds, chemical kinetics, molecular spectroscopy, and photochemistry.	Remembering
CO2	Apply the principles learned to predict the synthesis and reactions of coordination compounds, boranes and carboranes, amines, cyanides and isocyanides, and heterocyclic compounds, showcasing the ability to make informed predictions based on theoretical concepts.	Understanding
CO3	Analyze and interpret spectroscopic data from molecular spectroscopy experiments, showcasing the ability to extract meaningful information about molecular structures and properties.	Applying
CO4	Design experiments related to chemical kinetics, and evaluate experimental data to understand reaction mechanisms and rates, demonstrating practical laboratory skills and the ability to apply theoretical knowledge to experimental settings.	Analyzing
CO5	Apply knowledge of photochemistry to explain the mechanisms and applications of photochemical reactions, showcasing the ability to connect theoretical concepts with practical scenarios.	Creating

COURSE TITLE: Paper-VI

After completing the course students are expected to be able to:

COS	Course Outcomes	Blooms Taxonomy Classification
CO1	Demonstrate a comprehensive understanding of the fundamental principles governing inorganic reaction mechanisms, bioinorganic chemistry, hard and soft acids-bases theory, carbohydrates, amino acids and proteins, thermodynamics, proton magnetic resonance spectroscopy, and mass spectroscopy.	Remembering
CO2	Apply the principles learned to analyze and predict inorganic reaction mechanisms, and understand their relevance in bioinorganic systems, showcasing the ability to apply theoretical concepts to real-world scenarios.	Understanding
CO3	Analyze and apply the hard and soft acids-bases theory to predict the behavior of different compounds in various reactions, demonstrating critical thinking skills in assessing chemical reactivity.	Applying
CO4	Interpret data from proton magnetic resonance spectroscopy and mass spectroscopy experiments, showcasing the ability to extract meaningful information about molecular structures and compositions	Analyzing
CO5	Apply thermodynamic principles to understand and analyze chemical processes, showcasing the ability to connect theoretical concepts with practical applications.	Creating