

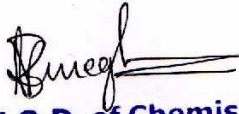
Sri Adichunchanagiri College of Arts and Commerce
Nagamangala, Mandya District- 571432

PROGRAM OUTCOMES:

CBCS

By the end of the program the students will be able to:

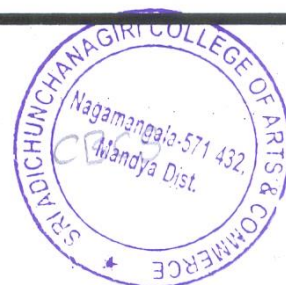
1. **PO.1:** To create enthusiasm among students for chemistry and its application in various fields of life.
2. **PO.2:** To provide students with broad and balanced knowledge and understanding of key concepts in chemistry.
3. **PO.3:** To develop in students a range of practical skills so that they can understand and assess risks and work safely measures to be followed in the laboratory.
4. **PO.4:** To develop in students the ability to apply standard methodology to the solution of problems in chemistry.
5. **PO.5:** To provide students with knowledge and skill towards employment or higher education in Analytical chemistry or multi-disciplinary areas involving chemistry.
6. **PO.6:** To provide students with the ability to plan and carryout experiments independently and assess the significance of outcomes and to cater to the demands of chemical Industries of well-trained graduates.
7. **PO.7:** To develop in students the ability to adapt and apply methodology to the solution of unfamiliar types of problems.
8. **PO.8:** To instil critical awareness of advances at the forefront of chemical sciences, to prepare students effectively for professional employment or research degrees in chemical sciences and to develop an independent and responsible work ethics.


H.O.D. of Chemistry
S.A.C.College of Arts,
Commerce & Science,
Nagamangala-571432, Mandya Dist.


PRINCIPAL
Sri Adichunchanagiri College
of Arts and Commerce
Nagamangala-571 432, Mandya Dist.

Department of Chemistry

COURSE OUTCOME



I Semester:

- Explain periodic properties and classify elements according to properties, discuss the structure of atom.
- Describe and apply Schrodinger equation and quantum numbers.
- Understand the concepts of basic organic chemistry and study the alkanes, alkenes and alkynes.
- Explanation and classification of binary mixtures with suitable examples.
- Application of Nernst distribution law with respect to solvent extraction process and numerical problems.
- Purification of organic compounds by various method.
- Defining the terms related to Stoichiometry.
- Introduction of organic chemistry and their importance to daily life, nomenclature of organic compounds.

II Semester:

- Exemplify chemical bonding, describe the metallic bonding and molecular bonding approach.
- Discuss the nomenclature, properties and mechanisms of aromatic hydrocarbons such as alkyl benzenes, alkyl halides.
- Explanation of kinetic reactions and their mechanism with example and its application.
- Explanation of electrolytes and types of electrolytic effects.
- Discuss hydrolysis of salt and its types, degree of hydrolysis and its relationship with hydrolysis of salt, pH of salt solutions and problems.
- Preparation and synthetic applications of organic reagents and their advantages over inorganic reagents.
- Manufacture, types with examples of soaps, detergents, waxes.

III Semester:

- Chemistry of d and f-block elements, lanthanides and actinides.
- Electronic spectra of transition metal complexes.
- Classification of organometallic compounds with suitable example.
Understand chemical reactions of Alcohols, Ethers, Epoxides, Crown ethers and carbonyl compounds on the basis of their functional groups.
- Explain the theories of reaction rates and laws of thermodynamics.
- Deduce the relationships related to Gibbs free energy.
- Symmetry of elements, Miller indices, Bravais lattices and X-ray diffraction studies and Numerical problems.
- Introduction, principle, instrumentation and applications of different types of chromatographic techniques.
- Introduction, properties and application of Nanotechnology.
- Structure, classification with examples of Amino acids and proteins.

IV Semester:

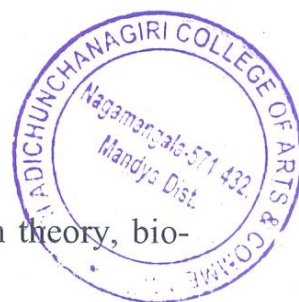
- Classify ligands and describe the theories of structure and bonding. Summarise the application of co-ordination complexes.
- Explanation of valence bond, crystal field and ligand field theories by taking example as a suitable metal complexes.
- Defining the terms related to stereochemistry. Differentiate various sugars in carbohydrates and identify their structure.
- Application of conductance measurements.
- Physical and chemical constitution of liquids, definition of viscosity, surface tension, parachor.



V Semester:

Paper V

- Chemistry of d and f-block elements, lanthanides and actinides.
- Electronic spectra of transition metal complexes, co-ordination theory, bio-inorganic chemistry and metal cluster.
- Classify ligands and describe the theories of structure and bonding Summarise the application of co-ordination complexes.
- Defining the terms related to stereochemistry.
- Differentiate various sugars in carbohydrates and identify their structure.
- To list the principles of green chemistry and its application,
- Synthetic polymer and molecular rearrangements.
- Preparation of keto-enol tautomerism in ethyl acetoacetate, its evidence and several application of acids.



Paper VI

- Symmetry of elements, Miller indices, Bravais lattices and X-ray diffraction studies and numerical problems.
- Definition of liquid crystal its classification and its application.
- Regions of spectra, laws of photochemistry, Principle, construction and working of spectrophotometry and photochemistry.
- Explain the principles, mathematical expressions and applications of rotational, vibrational, Raman and electronic spectroscopy.
- Colour & constitution of dyes and its synthesis.
- Isoprene rule, steam distillation and solvent extraction method of isolation. Structural methods of natural pigments.
- Introduction, principle, instrumentation and applications of different types of chromatographic techniques.

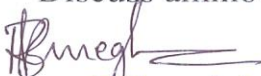
VI Semester:

Paper VII

- Classifying silicates, select reducing agents from Ellingham's diagrams. Illustrate the different methods of metallurgical process.
- Discuss the industrial, materials in details. Classify the phosphozenes and fluorocarbons.
- Industrial applications of refractories, abrasives, explosives and paints.
- Define the term and classify the fuels and propellants.
- Discuss the application of nanotechnology, carbon nanotubes, nanowires and nanomaterial.
- Discuss the chemistry of silicates, zeolite carbide, fullerene and halogen compounds.
- Explain heterocyclic compounds including five and six member ring.
- Explanation and application of synthetic drugs, dyes, alkaloids, vitamins, pesticides.

Paper VIII:

- Terms related to electrochemistry and discuss the application and anomalous properties of transport number.
- Application of conductance measurements.
- Types of conductometric titrations.
- Explain electromotive force-I, II. Types of electrodes and fuel cell.
- Application of electromotive force measurements.
- Explanation of kinetic reactions and their mechanism with example and its application.
- Describe phase rule and its application in one and two component systems and define the terms involved it.
- Spectroscopic methods: U.V, I. R and NMR.
- Discuss amino acids, pesticides and proteins.


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