

Course Outcomes of
B.Sc. Chemistry - Semester I

Paper –I

S1-CO1

Predict the bond order & magnetic behavior for various molecules on the basis of MOED. In a given, mathematical data, accuracy, precision & error can be explained.

S1-CO2

Describe the synthesis & list the various types of B, C, Si & N compounds.

S1-CO3

Based on bond polarization acidity & basicity of organic compounds & stability of reactive intermediate can be determined

S1-CO4

By considering principles of solubility product & common ion effect determination of anions & cations in a salt mixture

S1-CO5

Have an idea of critical & vander waals constant .By taking the criteria of wave function, particle in a 1dimension box can be explained.

S1-CO6:

Understand Black body radiation, heat capacities of solids, Rayleigh Jeans law, Planck's radiation law, photoelectric effect and de Broglie's hypothesis.

S1-CO7:

Classify stereoisomer's based on symmetry and energy criteria, Interpret E/Z Configuration & conformation of Organic molecules.

Course outcomes of
B. Sc Chemistry - Semester II
Paper – II

S2-CO1

Acquire Knowledge about various preparation and chemical reactivity of aromatic

compounds, halogen compounds and alkyl benzene.

S2-CO2

Able to understand the physical and chemical properties of oxides. Oxy-acids of p and d- block elements

S2-CO3

The study of colligative properties helps to determine molecular masses of solutes, Nernst distribution law used to determine association & dissociation of solute in solvent,

S2-CO4

By using Bragg's equation various crystal structures can be determined & by qualitative analysis one can determine the weight of chemical substances

S2-CO5

By kinetic study one can judge the order of reaction of halogen compound & by taking criteria of optical activity one can express the stereochemistry of SN1 & SN2.

S2-CO6

Aromaticity of aromatic compounds can be predicted by Huckel's rule.

Course outcomes of
B. Sc Chemistry - Semester III
Paper – III

S3- CO1

Defines the properties of f-block elements and their comparative nature with different oxidation states

S3-CO2

Describe the postulates and limitations of Werner's theory, Sidgwick's & VBT theory. Acquire knowledge on the IUPAC Nomenclature, isomerism and solve the EAN of coordination compounds

S3-CO3

Categorise the Organo-metallic compounds of Li, Mg, , Al and Metal carbonyls. Discuss its applications.

S3-CO4

Understand the preparation methods and its synthetic applications in industry of Carboxylic acids. To have an idea on all named reactions and mechanisms of carboxylic acids.

S3- CO5

Understand the preparation methods and its synthetic applications in industry of nitro hydrocarbon

S3-CO6

Compare the property and reactivity of different class of amines and design the synthesis pathway of different organic compounds using amines. Industrial preparation of cyanides & Iso-cyanides

S3 -CO7

Have an extensive knowledge on Thermodynamics with reference to different Thermodynamic functions, processes, work of expansion and laws of Thermodynamics

S3-CO8

Understand the applications of Thermodynamics in basic sciences for deriving equations, in engineering science for calculating efficiency of machine and evaluation of spontaneity of process. Learn to derive the equation of spontaneity, Gibb's equation and Maxwell's relations

S3- CO9

Understand the method to determine types of Errors and to rectify them. Calculation based on statistics - Standard deviation, Coefficient of variation etc.

S3 -CO10

Have an idea on all named reactions and mechanisms of Carbanions. Have an idea of acidic nature & stability of α -hydrogens in terminal alkynes.

S3 -CO11

Design the Phase Equilibria of one component and two component system, compound with congruent and incongruent melting point,

Course outcomes of
B. Sc Chemistry - Semester IV
Paper – IV

S4-CO1

Understand the theories of coordination compounds and stability of metal complexes. Applications of coordination compounds in quantitative and qualitative analysis

S4-CO2

Know about the Biological significance of essential elements and toxicity of heavy metals.

S4-CO3

Acquire knowledge about carbohydrate chemistry with reference to definition, classification and evaluation of structure from reactions.

S4-CO4

Acquire knowledge about chemistry of amino acids – essential amino acids, Biological importance. Learn to relate the peptide bond formation for the synthesis of protein

S4-CO5

Classify heterocyclic compounds and compare their aromatic character and reactivity.

S4-CO6

Develop concept on reaction kinetics with special reference to factors influencing the rate and evaluate the merits of different theories of reaction rate

S4-CO7

Learn to analyze the consequences of light absorption with reference to various photo physical processes and photochemical reactions with normal and abnormal quantum yield.

S4-CO8

Acquire knowledge to differentiate types of bands & conductors used in thermal and electrical conductivity of metals

S4-CO9

Gain knowledge on various name reaction with carbanion intermediate and their preparations.

S4-C10

Demonstrate the methods of preparations and properties, of colloids, Analyze adsorption isotherms and its industrial applications to reduce pollution and compute the surface area of adsorbent.

Course outcomes of
B. Sc Chemistry - Semester V
Paper – V

S5-C01 Understand the principles of Molecular Spectroscopy and structure determination of unknown organic compounds

S5-C02 Understand the principle of Nuclear Magnetic Resonance, concept of chemical shift and splitting of signals – spin –spin coupling. Implement the concept in analyzing the NMR spectrum for identification of organic compounds

S5-C03 Acquire the knowledge of principle and methods of solvent extractions and their application. Understand the classification of Chromatographic methods, principle, nature of adsorbents and solvent systems.

S5-C04 Understand and evaluate Principle, Instrumentation and application of TLC, Paper chromatography, Column chromatography, IEC, GC, HPLC techniques.

Course outcomes of
B. Sc Chemistry - Semester VI
Paper – VI

S6-C01 Know about the terminology in medicinal chemistry and Nomenclature of Drugs & Understand ADME of Drugs.

S6-C02 Evaluate the Synthesis and therapeutic activity of Drugs related to Chemotherapeutics, acting on metabolic disorders and acting on nervous system.

S6-C03 Acquire the knowledge of mechanism of action of drugs and factors effecting action of Enzyme and Receptors.

S6-C04 Recalling Infective and hereditary diseases.

S6-CO5 Analyzing the function of molecular messengers and health promoting drugs