

Vimukta Jati Seva Samitee's
Gramin (ACS) Mahavidyalaya VasantNagar Kotgyal
Tq.Mukhed Dist.Nanded

Department of Chemistry

B.Sc. F.Y., Paper-I

Outcomes

1. Students should learn basic concept of organic chemistry, Nomenclature.
2. Student get well acquainted with functional group in organic chemistry.
3. To understand the basic concepts and difference aliphatic hydrocarbons.
4. To know about term cycloalkane, cycloalkene and Diene.
5. Learn and practice about organic compounds with their names.
6. Students learn some exceptional electronic configuration, trends and Periodicity in the following properties like atomic size, ionization energy, electron affinity & electro negativity.
7. To Understand the inert gases compounds, different fluoride compounds of xenon.

Paper-II

Outcomes

1. After completion of syllabus will be able to understand following outcomes.
2. Learning and understanding rules of Logarithm, Rules of drawing graph, Derivatives, integration, different mathematical concept and SI unit, and their use of solving numerical.
3. Learning surface phenomena at heterogeneous surfaces.
4. Student will learn the basic knowledge of gas phase, Kinetic theory, critical phenomenon, liquefaction and molecular velocities.
5. General characteristics of s-block elements, hydroxides, carbonate & its complexes
6. Study the oxidation and reduction by different methods.

Paper –III

Outcomes

1. After completion of syllabus will be able to understand following outcomes.
2. Student should learn the concept of aromatic hydrocarbons, Aromaticity and antiaromaticity.
3. Student should understand the phenols and synthesis of phenols
4. To know the concept of carboxylic acids and their derivatives.
5. To know about the types of alcohols and reactions of epoxide
6. To study the different properties of P. block elements.
7. To know the acids & Bases by different concept.

Paper –IV

Outcomes:-

1. To impart knowledge of atomic structure, different theories of atomic structure, rules of electronic configuration and quantum numbers.
2. Learning of properties of liquid phase as surface tension, viscosity and prechor
3. Student will learn the basic knowledge of colloidal state, types, preparation, properties and applications of colloidal state

4. Learning and Understanding of catalysis, types of catalysis and characteristics of catalyzed reaction.
5. To Understanding the chemical bond and its different types of bonds
6. Learning the concept of hybridization and study of VSEPR & Molecular orbital theory.

B.Sc. S.Y., Organic + Inorganic-VI

Outcomes

1. Learn the mechanism of name reactions.
2. Know the Synthesis, and Reactions of Aromatic Carboxylic and Sulphonic acids.
3. Know the Synthesis, and Reactions of Organometallic compounds.
4. Learn the synthesis, mechanism, applications of active methylene compounds.
5. Gathering basic knowledge of Oils, Fats, Soaps and Detergents.
6. Understand the basic principle and application of Qualitative Analysis.
7. Know the Classification, Properties of Non-aqueous solvents.

Physics + Inorganic VII

1. Write an expression of Davisson-Germer experiment.
2. Derive Schrodinger wave equation.
3. Understand De-Broglie's hypothesis and uncertainty principle.
4. Solve the numerical problems based on De-Broglie.
5. Understand concept of entropy.
6. Understand statements of first, second and third law of thermodynamics.
7. Know the meaning of phase, component and degree of freedom.
8. Know the nuclear structure & different energy of nuclear.
9. Understand the different steps & procedure in the gravimetric separation method.

Organic + Inorganic-VIII

1. Learn the stereoisomerism of Chiral compounds.
2. Know the Classification, and Reactions of carbohydrates.
3. Know the Synthesis, and Reactions of Nitrogen Compounds.
4. Gathering applications of Reagent in Organic Synthesis.
5. Understand the Characteristics of d-Block Elements.
6. Know the characteristics of d-Block Elements.

B.Sc. T.Y., Paper XII

Outcomes

After completion of this course, student will be able to Organic reaction and mechanism pathways.

1. Nomenclature of various heterocycles.
2. Recognize and comment on different synthetic drugs and dyes.
3. Able to discuss the uses and synthesis of some vitamins and pesticides.
4. Understand the basic principle and application of coordination complex.
5. Know the application of elements in Medicine.

Paper XIII

Outcomes

Understand the concept of molecular Spectroscopy and its applications.

1. Analyze Rotational, Vibrational and Raman Spectra.
2. Interpret the theoretical and experimental methods of chemical kinetics.
3. Know the theory and application of Distribution law.
4. Explain the Nomenclature, classification and application of Organometallic Compounds.
5. Illustrate the classification and application of Metal Carbonyls.

Paper XIV

Outcomes

Learn the basic principal and terms used in UV, IR & NMR Spectroscopy .

1. Apply spectroscopic techniques in analyzing the structure of simple organic molecules.
2. Acquire the basic knowledge and synthesis of polymers.
3. Describe the types of Rearrangement.
4. Postulates and limitations of VBT and CFT.
5. Calculation of CFSE for Tetrahedral and Octahedral Complexes.
6. Explain the types of electronic transition and selection rule.
7. Apply spectroscopic techniques in analyzing the structure of simple organic Molecules.

Paper XV

Outcomes

Basic concept of electrochemistry and its applications.

1. Understanding the Nernst heat theorem and the Thermodynamics open system.
2. Know the Vant-Hoff's Reaction Osochore and numerical on it.
3. Biological role of alkali and alkaline earth metal ions.
4. Describe the structure and functions of Metal Cluster.