

Rayat Shikshan Sanstha's
Prof.Dr.N.D.Patil Mahavidyalaya, Malkapur-Perid
DEPARTMENT OF CHEMISTRY

Program Outcomes (Pos)

After Completion of this program students should be able to;

- PO 1** Understand scientific laws and principles and apply the scientific knowledge to overcome complex problems in the life.
- PO 2** Think critically and rationally in view of nature, environment and society.
- PO 3** Communicate the scientific knowledge in lingua-frank of the world i.e. English and gain access to the current scientific affairs.
- PO 4** Enlighten the people around by uncovering the scientific principles behind the magic and superstitions.
- PO 5** Understand the significance of human values and respect belief system in the culture.
- PO 6** Become sensitive to the matters of environment sustainability and use science for the progress of humanity without damaging the ecosystem.

Program Specific Outcomes (PSOs)

After Completion of this specific program students should be able to;

- PSO 1** Understand the basic principles and concepts underlying the Inorganic, Organic and Physical chemistry and Spectroscopy and Chromatography.
- PSO 2** Comprehend the application of chemistry in various walks of life.
- PSO 3** Perform procedures as per laboratory standards in the areas of analytical chemistry, coordination chemistry, inorganic chemistry, organic chemistry and physical chemistry.
- PSO 4** Able to use instrumental methods of chemical analyses.
- PSO 5** Exposure to different processes used in Industries and their applications

Course Outcomes (Cos)

After completion of these courses students should be able to;

Sr.No.	Class	Sub.& Pap. No.	After completion of these courses students should be able to;
1	B.Sc.I Sem-I	Ino.Chem. Paper No. I	CO1. To Introduce to Ionic solids, Covalent bonding. CO2. Describe and Application of p- Block elements. CO3. Distinguish between Acids and Bases. CO4. Understand the ionic solid and their crystal structure.
		Org.Chem. Paper No.II	CO1. To Introduction to Fundamentals of Organic reaction mechanism. CO2. Discuss stereochemistry of organic constitution, Cycloalkane, Cycloalkene. CO3. Explain Alkadienes, Synthetic reagent and Aromaticity.
2	B.Sc.I Sem-II	Phy.Chem. Paper No.III	CO1. To Acquaint with Distribution law. CO2. To Explain Thermodynamics, Chemical kinetics. CO3. To Study the Gaseous State and Nuclear chemistry.
		Ana.Chem. Paper No.IV	CO1. To Gain knowledge about Basic concepts of Industrial Chemistry. CO2. Explain Water, Fuels. CO3. Discuss the Fertilizers.
3	B.Sc.II Sem-III	Phy.Chem. Paper No.V	CO1. Explain Adsorption of Knowledge about Electrochemistry. CO2. To Explain Thermodynamics, Chemical kinetics. CO3. Discuss Physical properties of liquids.
		Ana.Chem. Paper No.VI	CO1. Describe analytical chemistry, Gravimetric. CO2. To Explain Inorganic qualitative analysis. CO3. Explain Conductometric titration and Analysis of fertilizer.
4	B.Sc.II Sem-IV	Ino.Chem. Paper No. VII	CO1. To explain Acquainted with Chemistry of elements of first transition series. CO2. To study of Coordination Chemistry, Chelation, Catalysis. CO3. To study of f block element CO4. Explain Coordination chemistry.
		Org.Chem. Paper No.VIII	CO1. To Understand Stereochemistry. CO2. Explain Polynuclear Hydrocarbons. CO3. Explain and the study of Heterocyclic Compounds. Co4. Discuss Name Reaction. And Green Chemistry.
5	B.Sc.III Sem-V	Ino.Chem. Paper No. IX	CO1. The role of study of acid and bases. CO2. To useful to understand geometry, Stability. Nature of bonding. CO3. Explain Application of semiconductor. CO4. Discuss the classification, types and application of catalysis.
		Org.Chem. Paper No.X	CO1. To Understanding of electromagnetic radiation. CO2. Explain Knowledge of chromospheres. CO3. To Understand Knowledge of Auxophore, knowledge of vibration transition, Understanding of magnetic. CO4. Discuss the Knowledge of molecular ion.
		Phy.Chem. Paper No.XI	CO1. To explain Learning of quantum chemistry, Knowledge about spectroscopy. CO2. To Understanding photochemical laws, reaction. CO3. Explain Learning the vapors type of solution. CO4. Discuss the Knowledge of emf.
		Ana.Chem. Paper No.XII	CO1. Explain Learning of the technique of gravimetric analysis. CO2. Discuss brief Knowledge of instrumental. CO3. To explain Understanding the basic of ion exchange. CO4. To explain Application of optical methods.

6	B.Sc.III Sem-VI	Ino.Chem. Paper No. XIII	CO1. Explain the topic focused on mechanism of reaction. CO2. Explain the generation of nuclear power. CO3. The following characteristic, properties, preparation of Lanthanide. CO4. To explain Extraction of cast iron, Role of various metal and non metal.
		Org.Chem. Paper No.XIV of drug.	CO1. To Knowledge of reagents, Knowing basic term used in retro synthesis analysis. CO2. Student will learn addition reaction. CO3. To explain Knowledge of terpenoid and alkoides. CO4. Explain the Classification of Drugs.
		Phy.Chem. Paper No.XV	CO1. Explain the Learning and understanding of phase rule. CO2. Explain Learning Space lattice, Lattice sites. CO3. To explain Knowledge of Learning of kinetics. CO4. Discuss the Knowledge of Distribution of law.
		Ind.Chem. Paper No.XVI	CO1. Explain and Detail Manufacture of Sugarcane. CO2. Manufacture of Principal of production of H ₂ O, H ₂ SO ₄ , HNO ₃ , and Na ₂ CO ₃ . CO3. To explain Understanding the Petroleum Industry. CO4. Explain Learning of Nanotechnology.