Subject- Chemistry

Class - B.Sc. 1

Paper I, Title – Physical Chemistry

- 1) Student will be able to explain the mathematical concepts.
- 2) Student will be able to understand about states of matter i.e solid state, liquid and gaseous state.
- 3) Student will be able to understand about rate of the reaction and how temperature affect the rate of a reaction.
- 4) Student will be able to understand about chemical equilibrium and its application in our life.

Subject- Chemistry

Class - B.Sc. 1

Paper II, Title - Inorganic Chemistry

- 1. Student will be able to understand the structure of atom and why we need quantum chemistry.
- 2. Student will be able to understand the role of periodicity in periodic table.
- 3. Student will learn about different type of chemical bondings and how these help in analysis of shapes and structure of different types of molecules
- 4. Student will be able to explain why we need a further division in the periodic table like s, p, d & f blocks.
- 5. Student will be able to understand the details of s & p block elements and what are the significance of these elements in our daily life.

Subject- Chemistry

Class - B.Sc. 1

Paper III, Title - Organic Chemistry

- 1) Student will be able to understand about structure and bonding of basic organic moleculs.
- 2) Student will be able to understand about hydrocarbons and their uses in our life.
- 3) Student will be able to understand about stereochemistry of organic compounds.

Subject- Chemistry

Class - B.Sc. 2

Paper I, Title – Physical Chemistry

- 1. Student will be able to understand about thermodynamics & thermochemistry and its significance in our life.
- 2. Student will be able to understand about phase equilibrium and its importance.
- 3. Student will be able to understand about electrochemistry.
- 4. Student will be able to understand about surface chemistry.

Subject- Chemistry

Class - B.Sc. 2

Paper II, Title - Inorganic Chemistry

- 1. Student will be able to understand about d block elements their magnetic properties, spectral properties, chemical behavior and applications.
- 2. Student will be able to explain how modern day chemistry is all about coordination compound
- 3. Student will be able to understand about f block elements properties.
- 4. Student will be able to understand about abot basics of solvent system.

Subject- Chemistry

Class - B.Sc. 2

Paper III, Title - Organic Chemistry

- 1. Student will be able to understand about chemical properties, physical properties and methods of preparation of alcohol, phenols and ethers.
- 2. Student will be able to understand about chemical properties, physical properties and methods of preparation of aldehyde and ketones.
- 3. Student will be able to understand about chemical properties, physical properties and methods of preparation of carboxylic acids and esters.
- 4. Student will be able to understand about chemical properties, physical properties and methods of preparation of nitrogen containing organic compound.

Subject- Chemistry

Class - B.Sc. 3

Paper I , Title – Physical Chemistry

- 1. Student will be able to understand about why quantum chemistry requires and how it is different from classical theories.
- 2. Student will be able to understand about MOT.
- 3. Student will be able to understand about spectroscopy i.e rotational spectra, vibrational spectra and raman spectroscopy.
- 4. Student will be able to understand about photochemistry.

Subject- Chemistry

Class - B.Sc. 3

Paper II , Title - Inorganic Chemistry

- 1. Student will be able to understand about HSAB concept.
- 2. Student will be able to understand about silicones and phosphazenes.
- 3. Student will be able to understand about metal ligand bonding in metal complex.
- 4. Student will be able to understand about magnetic properties of TM complex.
- 5. Student will be able to understand about electronic spectra of TM complex.
- 6. Student will be able to understand about bioinorganic chemistry and its role in our life.

Subject- Chemistry

Class - B.Sc. 3

Paper III, Title - Organic Chemistry

- 1. Student will be able to understand about ¹H NMR spectroscopy for the structure elucidation of organic compounds.
- 2. Student will be able to understand about Organo-Metallic compound.
- 3. Student will be able to understand about carbohydrates, fats, oil and detergents, also learn about their importance in our life.
- 4. Student will be able to understand about amino acids, peptides and their structure and application.
- 5. Student will be able to understand about synthetic dyes.