

YEAR PLAN 2018 -2019

Grade XI CHEMISTRY

The academic year is divided into three sessions.

Session One: June to August 2018.

Session Two: September 2018 to December 2018.

Session Three: January 2019 to March 2019

Monthly Tests: June, July, October, January

Term I Examination – August 2018

Term II Examination -December 2018

Term III Examination – March 2019

Aim: Acquisition of knowledge and understanding of terms, concepts, facts, processes, techniques and principles relating to the subject of chemistry.

General Objectives: To develop the ability to apply the knowledge of contents and principles of chemistry in new and unfamiliar situations.

To develop skills in proper handling of apparatus and chemicals.

Enduring understanding:

To develop the ability to appreciate achievements in the field of chemistry and its role in nature and society.

Month	Topics	Specific Learning Objectives	Activities	Resources
June	Some basic concepts of Chemistry	<ul style="list-style-type: none"> ❖ Understand the importance and scope of chemistry ❖ Learn about atoms and Dalton's atomic theory ❖ Learn the laws of chemical combinations ❖ Recall mole concept ❖ Learn terms used in volumetric calculations 	Statement and Mathematical expression. Simple calculations, Explanations. Assignments.	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
	Redox reactions	<ul style="list-style-type: none"> ❖ Understand the concept of oxidation and reduction and related terms ❖ Familiarize with the examples of redox reactions ❖ Understand the rules for calculating oxidation number ❖ Learn the balancing of redox reactions 	Solve problems related to the concepts in redox reactions Powerpoint presentations Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
	Organic Chemistry: Some basic principles and techniques Monthly Test	<ul style="list-style-type: none"> ❖ Understand the importance of organic chemistry ❖ Learn the classification and naming of organic compounds based on IUPAC nomenclature ❖ Learn the definition and classification of isomerism 	Explain using models Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
July	Structure of atom	<ul style="list-style-type: none"> ❖ Have an idea about the fundamental particles of atom ❖ Learn to write the electronic configuration of atoms ❖ Learn the different types of spectra ❖ Understand the quantum mechanical model of an atom 	Powerpoint presentations Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
	Organic Chemistry: Some basic principles and techniques (continued) Monthly Test	<ul style="list-style-type: none"> ❖ Learn the different types of organic reactions and understand their mechanism ❖ Learn the analysis of organic compounds 	Written work Presentations	
August	Term I Examination Onam holidays			
September	Classification of elements and Periodicity in Properties	<ul style="list-style-type: none"> ❖ Learn the origin of the long form of the periodic table ❖ Understand the periodic trends in properties of elements ❖ Understand the periodicity in oxidation states 	Identification of elements from the periodic table Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava

	Equilibrium	<ul style="list-style-type: none"> ❖ Understand physical and chemical equilibrium and its characteristics ❖ Understand the concept of Le Chatelier's principle and its applications ❖ Learn to derive Ostwald's dilution law ❖ Understand the concept of common ion effect, salt hydrolysis and buffer solutions 	Solve Problems Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
October	Chemical bonding and molecular structure	<ul style="list-style-type: none"> ❖ Understand the different types of bonds ❖ Understand the concept of VSEPR theory ❖ Understand the concept of MO Theory ❖ Correlate the stabilities of some molecular ion species to the molecular orbital configurations ❖ Understand the concepts of resonance and hydrogen bonding 	Familiarization of structures through ball and stick models Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
	Hydrocarbons	<ul style="list-style-type: none"> ❖ Learn the common and IUPAC names of alkanes, alkenes and alkynes ❖ Understand the preparation, physical and chemical properties of these compounds ❖ Understand the mechanism of some important reactions of these compounds ❖ Learn the common and IUPAC names of aromatic hydrocarbons ❖ Understand the preparation, physical and chemical properties of these compounds ❖ Understand the mechanism of some important reactions of these compounds 	Presentations Written work	
	Monthly Test			
November	Some p-block elements	<ul style="list-style-type: none"> ❖ Familiarize with group 13 and 14 elements ❖ Understand the preparation and properties and structures of some compounds of group 13 and 14 elements 	Identification of group 13 and 14 elements from the periodic table Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
	Chemical thermodynamics	<ul style="list-style-type: none"> ❖ Learn the definition of terms related to thermodynamics ❖ Understand the essentials of first law of thermodynamics ❖ Understand the concepts of internal energy and enthalpy ❖ Understand the essentials of second law of thermodynamics ❖ Understand the concepts of entropy and Gibb's free energy 	Solve numerical problems related to the concepts in thermodynamics Written work	
December	Term II Examination X'mas holidays			
January	Structure of matter: Gases and liquids	<ul style="list-style-type: none"> ❖ Understand the various laws associated with the gaseous state ❖ Learn to derive the ideal gas equation ❖ Understand the concept of kinetic theory of gases ❖ Learn the definition of vapour pressure, viscosity and surface tension associated with liquid state 	Written work Powerpoint presentations	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit ISC Chemistry by Dr. H.C.Srivastava
	s-block elements	<ul style="list-style-type: none"> ❖ Familiarize with group 1 and 2 elements ❖ Understand the preparation and properties and structures of some compounds of group 1 and 2 elements 	Presentations Written work	
	Monthly test			
February	Hydrogen	<ul style="list-style-type: none"> ❖ Understand the position of hydrogen the periodic table ❖ Have an idea about the compounds of hydrogen ❖ Understand the concepts of hard and soft water and the removal of 	Presentations Written work	ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit

	Environmental Chemistry Revision	hardness of water ❖ Learn the preparation, structure, oxidizing and reducing properties of peroxides ❖ Learn to define pollution and pollutants ❖ Understand the concept of greenhouse effect and global warming ❖ Have an idea about the different types of pollutants	Project Seminars Discussions	ISC Chemistry by Dr. H.C.Srivastava Questions from past papers
March	Term III Examination	Project: Measuring the amount of acid in vinegar by titration with an indicator solution Text books: ISC Chemistry for Class XI by R.D. Madan and B.S. Bishit, ISC Chemistry by Dr. H.C.Srivastava Facilitator: Ms. Vidya Vilas CHECKED		