

Bhartiya Vidya Mandir Sen. Sec. School, Sector 39, Chandigarh Road, Ludhiana

CLASS - XII Stream-Science Subject: Chemistry Session :2024-2025

BOOK:

Month	Unit/Chapter/Topic	Learning Objective	Resources/Art-Integrated Pedagogy Tools Used/E-Resources	Learning Outcomes /Skills Learnt by Students
APRIL	unit - 6 Haloalkane and Haloarenes: IUPAC nomenclature, preparation of haloalkanes and haloarenes, physical and chemical properties and nature of C-X Bond in haloalkanes and haloarenes, stereochemistry of nucleophilic substitution reaction, β -elimination reaction, Polyhalogenated compounds.	to understand the iupac naming, physical and chemical properties of haloalkanes and haloarenes.	lecture method, showing ppt. and by class activity with flashcards for naming reactions. https://diksha.gov.in/play/content/do_312986226820702208180?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content	learner will be able to know how to write iupac naming, stereochemistry of the compounds, mechanism and naming reactions. Effects of polyhalogenated compounds. the learner will develop critical thinking, creative thinking and reasoning skill.
MAY	unit - 1 solution: Types of solution, Concentration of solution in different units, Henry's law and Raoult's law, Ideal and non-ideal solutions, Colligative Properties and Abnormal molecular mass	to understand various types of solution, concentration concept, application of Henry's law and Raoult's law, differentiate between ideal and non-ideal solution, explanation of colligative properties and abnormal molecular masses.	brain storming questions, group discussion and lecture method. Showing ppt, by preparing solution of different concentrations in the lab. https://diksha.gov.in/play/collection/do_31310347539048038411493?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_312986226111307776192	The learner will be able to understand different concentrations of solution, application of Henry's law in daily life and Raoult's law, different examples of ideal and non-ideal solution, explanation of colligative properties and their application in daily life and abnormal molecular masses. the learner will develop creative thinking, analytical thinking, and critical thinking.

JULY	UNIT-2 Electrochemistry:Electrochemical Cell, Nernst equationElectrolytic conductors conductivity and molar conductivity,Kohlrausch's law, Electrolysis,Batteries and corrosion	to describe electrochemical cell , electrolytic cell, electrode potential, using Nerst Equation to calculate the EMF of the cell, conductivity of strong and weak electrolyte, Batteries and their usage , corrosion.	brain storming questions, group discussion and lecture method . By showing working of electrochemical cell.	https://diksha.gov.in/play/collection/do_31310347539048038411493?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_31309435826502041611533	student will be able to understand the electrode potential , applying Nerst equation to find the emf of the cel, learn Faradays law, application of Kohlrausch law ,understand primary and secondary cells and corrosion.. Student will develop critical thinking, creative thinking and logical thinking.
	UNIT-4 D AND F block elements:General introduction and electronic configuration,Characteristics of d and f block elements,Lanthanides and actinides contraction	justify the position of d and f block elements in the periodic table and learn the electronic configuration of d and f block elements and their properties.	Group discussion	https://diksha.gov.in/play/collection/do_31310347539048038411493?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_312986226679595008178	learners will be able to understand the general properties of the transition elements
AUGUST	UNIT - 7 Alcohol, Phenol and Ethers:IUPAC nomenclature,Preparation & properties of alcohol,Preparation & properties of phenol, Preparation & properties of ethers.	Describe and explain the reaction involved in the preparation and properties of alcohols, phenols and ethers	Brain storming questionare, lecture method, showing ppt., class activity with flashcards for naming reactions. Performing functional group (-OH) tests in lab.	https://diksha.gov.in/play/collection/do_3131034753925365761754?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_312986226870935552196	learners will be able to understand the preparation and properties of alcohols,phenols and ethers. Learner wil develop critical and creative thinking.
	UNIT - 5 Coordination compounds:nomenclature,isomerism and bonding in coordination compounds that is Werner coordination theory valence bond and crystal field theory of coordination compounds, stability and applications of coordination compounds	Describe and predict the different type of isomerism ,understand the nature of bonding in coordination compound in terms of WCT,VBT and CFT	Brain storming questionare, lecture method, showing ppt.,and charts . Prepare Ferrous ammonium sulphate in the lab.	https://diksha.gov.in/play/collection/do_31310347539048038411493?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_312986226744786944179	learners will be able to understand the nature of bonding in coordination compound in terms of WCT ,VBT and CFT and also they will be able to understand the different type of isomerism. Student will develop creative thinking and problem solving skill

OCTOBER	UNIT- 8 Aldehydes , Ketones and Carboxylic acids:IUPAC nomenclature,preparation and properties of aldehyde ketones and distinguish between aldehyde, ketones and carboxylic acids	describe the important method of their preparation and the reactions of aldehyde, ketones and carboxylic acid and to understand chemical reaction.	Brain storming questionare, lecture method, showing ppt., class activity with flashcards for naming reactions. Performing functional group aldehyde, ketone and carboxylic acid tests in lab.	https://diksha.gov.in/play/collection/do_3131034753925365761754?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_31312398778626867211524	learners will be able to understand the preparation and properties of aldehydes , ketones and carboxylic acids. they will be able to distinguish between aldehydes and ketones.
NOVEMBER	UNIT-3 Chemical kinetics:Rate of the reaction,Average rate and instantaneous rate, Order and molecularity,Rate law ,Integrated rate expression for zero and first order reaction, Order and molecularity, Arrhenius equation and collision theory	define the rate constant and describe the dependence of the rate of reaction the concentration of reactants, derive integrated rate expression for zero and first order reaction, define half life time of reaction, correlate half life with rate constant initial concentration of one of the reactants	Brain storming questionare, lecture method, showing ppt., perform experiment to check the rate of the reaction with time in the lab.	https://diksha.gov.in/play/collection/do_31310347539048038411493?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_3131156467760005121569	learners will be able to understand the different factors that decide the actual rate of the reaction. Student will develop analytical skill and problem solving skill.
DEC	UNIT- 9 Amines:IUPAC nomenclature,preparation and properties of amines and methods to distinguish amines	describe the important method of preparation and basic character of amines and its reaction with electrophiles and miscellaneous reactions	Brain storming questionare, lecture method, showing ppt., class activity with flashcards for naming reactions. Performing tests to distinguish primary, secondary and tertiary amines in lab	https://diksha.gov.in/play/collection/do_3131034753925365761754?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_31312909185990656012517	learners will be able to perform the test to distinguish between primary secondary and tertiary student will develop critical and creative thinking.
JAN	UNIT -10 Biomolecules:Carbohydrates , proteins and nucleic acids	the preparation structure and properties and uses of carbohydrates,describe primary secondary and tertiary structure of proteins list their function in human body, differentiate between DNA and RNA	Brain storming questionare, lecture method, showing ppt.,charts ,model of DNA in the lab.	https://diksha.gov.in/play/collection/do_3131034753925365761754?referrer=utm_source%3Dmobile%26utm_campaign%3Dshare_content&contentId=do_3131240181324431361119	learners will be able to learn the preparation structure properties and uses of carbohydrates. learners will be able to understand the differences between DNA and RNA and its functions in our life. Learner will develop critical and creative thinking.