

Week/ Working Days	Details	Remarks
Jan 01 - Jan 04, 2020 03 Days	Hydrogen Bonding and Van der Waals forces Hydrogen Bonding – Definition, types, effects of hydrogen bonding on properties of substances, application	
Jan 06 - Jan 11, 2020 06 Days	Brief discussion of various types of Van der Waals forces.	
Jan 13 - Jan 18, 2020 06 Days	Metallic Bond and semiconductors Metallic bond – Qualitative idea of valence bond and Band theories of metallic bond (conductors, semiconductors, insulators). Semiconductors – Introduction, types and applications.	
Jan 20 - Jan 25, 2020 06 Days	s-Block elements Comparative study of the elements including diagonal relationship, Anomalous behaviour of Lithium and Beryllium compared to other elements in the same group	
Jan 27 - Feb 01, 2020 05 Days	salient features of hydrides, oxides, halides, hydroxides (methods of preparation excluded), behaviour of solution in liquid NH ₃	
Feb 03 - Feb 08, 2020 06 Days	Chemistry of Noble Gases General physical properties, low chemical reactivity, chemistry of xenon, structure and bonding in fluorides, oxides and oxyfluorides of xenon.	
Feb 10 - Feb 15, 2020 06 Days	p-Block elements: Electronic configuration, atomic and ionic size, metallic character, melting point, ionization energy, electron affinity,	
Feb 17 - Feb 22, 2020 05 Days	Electronegativity, inert pair effect and diagonal relationship.	
Feb 24 - Feb 29, 2020 06 Days	Boron family (13th group): Diborane: Preparation, properties and structure (as an example of electron deficient compound and multicenter bonding),	
Mar 02 - Mar 07, 2020 06 Days	Borazine chemical properties and structure, relative strength of Trihalide of Boron as lewis acids, structure of aluminium(III) chloride.	
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Name:		Class: B.Sc.	Semester:2019-20 (Even)	Contd.. ..from Page..1..
Mar 16 - Mar 21, 2020 06 Days	Assessment Tests			
	Carbon family and Nitrogen family (14th and 15th group): Catenation, Carbides, fluoro carbons, silicates (structural aspects).			
Mar 24 - Mar 28, 2020 05 Days	Assessment Tests			
	Oxides: Structure of oxides of nitrogen and phosphorus, Oxyacids : Structure and relative acid strength of oxy acids of nitrogen and phosphorus,			
Mar 30 - Apr 04, 2020 05 Days	Structure of white and Red phosphorus. Oxygen family (16th group): Oxy acids of sulphur – structure and acidic strength,			
Apr 07 - Apr 11, 2020 05 Days	Hydrogen Peroxide – properties and uses. Halogen family (17th group): Interhalogen compounds (their properties and structures),			
Apr 13 - Apr 18, 2020 05 Days	Hydra and oxy acids of chlorine – structure and comparison of acid strength, cationic nature of Iodine.			
Apr 20 - Apr 24, 2020 05 Days	Revision			
Apr 27 - Apr 30, 2020 04 Days	Revision			
May 01, 2020	Semester Final Examinations			

Week/ Working Days	Details	Remarks
Jan 01 - Jan 04, 2020 03 Days	Kinetics Rate of reaction, rate equation and its types, factors influencing the rate of a reaction – concentration, temperature, pressure, solvent, light, catalyst.	
Jan 06 - Jan 11, 2020 06 Days	Order of a reaction, integrated rate expression for zero order, first order, second and third order reactions.	
Jan 13 - Jan 18, 2020 06 Days	Half life period of a reaction.	
Jan 20 - Jan 25, 2020 06 Days	Effect of temperature on the rate of reaction – Arrhenius equation.	
Jan 27 - Feb 01, 2020 05 Days	Theories of reaction rate – Simple collision theory for unimolecular collision.	
Feb 03 - Feb 08, 2020 06 Days	Transition state theory of bimolecular reactions.	
Feb 10 - Feb 15, 2020 06 Days	Electrochemistry Electrolytic conduction, factors affecting electrolytic conduction,	
Feb 17 - Feb 22, 2020 05 Days	specific conductance, molar conductance, equivalent conductance and relation among them, their variation with concentration.	
Feb 24 - Feb 29, 2020 06 Days	Arrhenius theory of ionization, Ostwald's Dilution Law.	
Mar 02 - Mar 07, 2020 06 Days	Debye-Huckel – Onsager's equation for strong electrolytes (elementary treatment only),	
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Name:		Class: B.Sc.	Semester:2019-20 (Even)	Contd.. ..from Page..1..
Mar 16 - Mar 21, 2020 06 Days	Assessment Tests			
	Application of Kohlrausch's Law in calculation of conductance of weak electrolytes at infinite dilution.			
Mar 24 - Mar 28, 2020 05 Days	Assessment Tests			
	Applications of conductivity measurements: determination of degree of dissociation,			
Mar 30 - Apr 04, 2020 05 Days	Determination of K_a of acids determination of solubility product of sparingly soluble salts, conductometric titrations.			
Apr 07 - Apr 11, 2020 05 Days	Concepts of pH and pKa , Buffer solution, Buffer action,			
Apr 13 - Apr 18, 2020 05 Days	Henderson – Hazel equation, Buffer mechanism of buffer action.			
Apr 20 - Apr 24, 2020 05 Days	Revision			
Apr 27 - Apr 30, 2020 04 Days	Revision			
May 01, 2020	Semester Final Examinations			

Government PG College, Ambala Cantt.Subject: **CHEMISTRY**

Lesson Plan Session 2019-20 (Even Semester)

Class: **B.Sc.**Name: **Dr Abha Chaudhary**Semester: 6th

Week/ Working Days	Details	Remarks
Jan 01 - Jan 04, 2020 03 Days	Acids and Bases Arrhenius, Bronsted-lowry, Lux-flood, solvent system and Lewis concept of acids and bases,	
Jan 06 - Jan 11, 2020 06 Days	relative strength of acids and bases, levelling solvents,	
Jan 13 - Jan 18, 2020 06 Days	hard and soft acids and bases (HSAB),	
Jan 20 - Jan 25, 2020 06 Days	Applications of HSAB principle.	
Jan 27 - Feb 01, 2020 05 Days	Organometallic chemistry Definition, classification and nomenclature of organometallic compounds, concept of hapticity of organic ligand,	
Feb 03 - Feb 08, 2020 06 Days	preparation, properties and bonding of alkyls of Li, Al, Hg and Sn,	
Feb 10 - Feb 15, 2020 06 Days	Structure and bonding in metal-ethylene complexes,	
Feb 17 - Feb 22, 2020 05 Days	Structure of Ferrocene, classification in metal carbonyls,	
Feb 24 - Feb 29, 2020 06 Days	Preparation, properties and bonding in mononuclear carbonyls.	
Mar 02 - Mar 07, 2020 06 Days	Silicones and Phosphazenes Nomenclature, classification,	
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Name:		Class: B.Sc.	Semester:2019-20 (Even)	Contd.. ..from Page..1..
Mar 16 - Mar 21, 2020 06 Days	Assessment Tests			
	preparation and uses of silicones, elastomers,			
Mar 24 - Mar 28, 2020 05 Days	Assessment Tests			
	polysiloxane copolymers, poly phosphazenes and bonding in triphosphazene.			
Mar 30 - Apr 04, 2020 05 Days	Bio inorganic chemistry Metal ions present in biological system, classification on the basis of action (essential, non-essential, trace, toxic),			
Apr 07 - Apr 11, 2020 05 Days	Metalloporphyrins with special reference to hemoglobin and myoglobin.			
Apr 13 - Apr 18, 2020 05 Days	Biological role of Na ⁺ , K ⁺ , Ca ⁺² , Mg ⁺² , Fe ⁺² ions, Cooperative effect, Bohr effect.			
Apr 20 - Apr 24, 2020 05 Days	Revision			
Apr 27 - Apr 30, 2020 04 Days	Revision			
May 01, 2020	Semester Final Examinations			

Government PG College, Ambala Cantt.Subject: **CHEMISTRY**

Lesson Plan Session 2019-20 (Even Semester)

Class: **B.Sc.**Name: **Dr Abha Chaudhary**Semester: 6th

Week/ Working Days	Details	Remarks
Jan 01 - Jan 04, 2020 03 Days	Photochemistry: Interaction of radiation with matter,	
Jan 06 - Jan 11, 2020 06 Days	Difference between thermal and photochemical processes.	
Jan 13 - Jan 18, 2020 06 Days	Laws of photochemistry: Grotthus-Draper law,	
Jan 20 - Jan 25, 2020 06 Days	Stark-Einstein law (law of photochemical equivalence),	
Jan 27 - Feb 01, 2020 05 Days	Jablonski diagram depicting various processes occurring in the excited state,	
Feb 03 - Feb 08, 2020 06 Days	qualitative description of fluorescence, phosphorescence,	
Feb 10 - Feb 15, 2020 06 Days	non-radiative processes (internal conversion, intersystem crossing),	
Feb 17 - Feb 22, 2020 05 Days	quantum yield,	
Feb 24 - Feb 29, 2020 06 Days	photosensitized reactions-energy transfer processes (simple examples).	
Mar 02 - Mar 07, 2020 06 Days	Phase Equilibrium	
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Name:	Class: B.Sc.	Semester:2019-20 (Even)	Contd.. ..from Page..1..
Mar 16 - Mar 21, 2020 06 Days	Assessment Tests		
Mar 24 - Mar 28, 2020 05 Days	Statement and meaning of the terms – phase, component and degree of freedom, thermodynamic derivation of Gibbs phase rule,		
Mar 30 - Apr 04, 2020 05 Days	Phase equilibria of one component system –Example – water system.		
Apr 07 - Apr 11, 2020 05 Days	Phase equilibria of two component systems solid-liquid equilibria, simple eutectic		
Apr 13 - Apr 18, 2020 05 Days	Example Pb-Ag system, desilverisation of lead		
Apr 20 - Apr 24, 2020 05 Days	Revision		
Apr 27 - Apr 30, 2020 04 Days	Revision		
May 01, 2020	Semester Final Examinations		