Lesson Plan : 1st January 2018 to 28 April 2018 (17 Weeks)

Name of Assistant Professor: Dr. Mohd Yusuf

Class & Section: B. Sc. Sem-II

Subject Name and Code: Chemistry (CH 02)

Jan 1, 2018 to Jan 6,2018 (Week 1)	
Jan 1,Monday	Winter Vacation
Jan 2, Tuesday	Winter Vacation
Jan 3, Wednesday	Winter Vacation
Jan 4, Thursday	Winter Vacation
Jan 5, Friday	Winter Vacation
Jan 6, Saturday	Hydrogen Bonding
Jan 8, 2018 to Jan 13,2018(Week 2)	
Jan 8,Monday	Vander Waals Forces
Jan 9, Tuesday	Brief introduction to Metallic Bond
Jan 10, Wednesday	Band theory
Jan 11, Thursday	Semiconductors: Introduction, types and applications
Jan 12, Friday	s-Block elements: Overview, Diagonal relationship
Jan 13, Saturday	s-Block elements: Hydrides
Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Jan 15, 2018 to Jan 20,2018(Week 3)	
Jan 14,Monday	s-Block elements: Solvation and Complexation tendancies including their function in biosystems
Jan 15, Tuesday	s-Block elements: Solvation and Complexation tendancies including their function in biosystems
Jan 16, Wednesday	s-Block elements: Noble gases- emphasis on their low chemical reactivity
Jan 17, Thursday	s-Block elements: chemistry of xenon
Jan 18, Friday	s-Block elements: structure and bonding of fluorides
Jan 20, Saturday	s-Block elements: structure and bonding of oxides & oxyfluorides of xenon
Jan 22, 2018 to Jan 27,2018(Week 4)	
Jan 22,Monday	*Holiday(Basant Panchmi)*
Jan 23, Tuesday	p-Block elements: Overview of Boron family
Jan 24, Wednesday	*Holiday(Sir Chhotu Ram Jayanti)*
Jan 25, Thursday	p-Block elements: Diborane- properties and structure
Jan 26, Friday	*Holiday (Republic Day)*
Jan 27, Saturday	p-Block elements: Borazene- chemical properties and structure
Jan 29, 2018 to Feb 3 2018 (Week 5)	
Jan 29,Monday	p-Block elements: Trihalides of Boron, Trends in Lewis acid character structure of aluminium (III) chloride
Jan 30, Tuesday	p-Block elements: Overview of Carbon family, Catenation
Jan 31, Wednesday	p-Block elements: pπ-dπ bonding, carbides and fluorocarbons
Feb 1, Thursday	p-Block elements: Silicates and silicones-preparations, properties and uses
Feb 2, Friday	p-Block elements: Introduction to Nitrogen family, oxides of N and P-
Feb 3, Saturday	p-Block elements: oxyacids- structure and relative acid strengths of oxyacids of N and P

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Feb 5, 2018 to Feb 10,2018 (Week 6)	
Feb 5,Monday	p-Block elements: structures of white, red and yellow phosphorus
Feb 6, Tuesday	p-Block elements: Oxoacids of sulphur- structures and acidic strength
Feb 7, Wednesday	p-Block elements: Hydrogen peroxide- structure, properties and uses
Feb 8, Thursday	p-Block elements: Basic properties of Halogens
Feb 9, Friday	p-Block elements: Interhalogen compunds: Overview and preparations
Feb 10, Saturday	*Holiday(Maharashi Dayanand Saraswati Jayanti)*
Feb 12, 2018 to Feb 17,2018 (Week 7)	
Feb 12,Monday	p-Block elements: Interhalogen compunds: Chemical structures
Feb 13, Tuesday	(Holiday) Mahashivratri
Feb 14, Wednesday	p-Block elements: hydro and oxyacids of chlorine- structure and comparison of acid strength
Feb 15, Thursday	Alkenes- Nomenclature, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halides
Feb 16, Friday	Alkenes- Saytzeff rule, Hofmann elimination, physical properties and relative stabilities of alkenes
Feb 17, Saturday	Chemical reactions of alkenes mechanisms involved in hydrogenation, electrophilic and free radical additions
Feb 19,Monday	Alkenes: Hydroboration-oxidation, oxymercurationreduction, ozonolysis
Feb 20, Tuesday	Alkenes: Hydration, hydroxylation and oxidation with $KMnO_4$
Feb 21, Wednesday	Alkenes: Markownikoff's rule and its applications
Feb 22, Thursday	Nomenclature of benzene derivatives, Aromaticity, Huckel's rule
Feb 23, Friday	Aromatic ions, annulenes up to 10 carbon atoms, Aromatic electrophilic substitution
Feb 24, Saturday	Mechanism of Nitration, sulphonation, Friedel-Crafts reaction and halogenation

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Feb 26, 2018 to Mar 3,2018 (Week 9)	
Feb 26,Monday	Energy profile diagrams, Activating , deactivating substituents and orientation
Feb 27, Tuesday	Nomenclature and classification of dienes: isolated, conjugated and cumulated dienes
Feb 28, Wednesday	Vacation
Mar 1, Thursday	
Mar 2, Friday	
Mar 3, Saturday	
Mar 5 , 2018 to Mar 10,2018 (Week 10)	
Mar 5,Monday	Structure of butadiene, Chemical reactions
Mar 6, Tuesday	1,2 and 1,4 cycloadditions (Electrophilic & free radical mechanism), Diels-Alder reaction
Mar 7, Wednesday	Nomenclature, structure and bonding in alkynes, methods of formation
Mar 8, Thursday	Chemical reactions of alkynes, acidity of alkynes
Mar 9, Friday	Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation of alkynes
Mar 10, Saturday	Group discussion
Mar 12 , 2018 to Mar 17,2018 (Week 11)	
Mar 12,Monday	Nomenclature and classes of alkyl halides, methods of formation
Mar 13, Tuesday	Chemical reactions, Mechanisms and stereochemistry of nucleophilic substitution reactions of alkyl halides
Mar 14, Wednesday	SN2 and SN1 reactions
Mar 15, Thursday	Methods of formation and reactions of aryl halides, The addition-elimination and elimination-addition mechanisms of nucleophilic aromatic substitution reactions
Mar 16, Friday	Relative reactivities of alkyl halides vs allyl, vinyl halides
Mar 17, Saturday	Relative reactivities of alkyl halides vs aryl halides

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Mar 19, 2018 to Mar 24,2018 (Week 12)	
Mar 19,Monday	Introduction to Electrochemistry
Mar 20, Tuesday	Electrolytic conduction, factors affecting electrolytic conduction
Mar 21, Wednesday	Specific conductance, molar conductance,equivalent conductance
Mar 22, Thursday	relation among Specific conductance, molar conductance,equivalent conductance and their variation with concentration
Mar 23, Friday	*Holiday(Shaheed Diwas)*
Mar 24, Saturday	Group discussion
Mar 26, 2018 to Mar 31,2018 (Week 13)	
Mar 26,Monday	Arrhenius theory of ionization
Mar 27, Tuesday	Ostwald's Dilution Law
Mar 28, Wednesday	Application of Arrhenius and Ostwald theories
Mar 29, Thursday	*Holiday (Mahavir Jayanti)*
Mar 30, Friday	Debye-Huckel-Onsager's equation for strong electrolytes
Mar 31, Saturday	Transport number: Introduction
April 2, 2018 to April 7,2018 (Week 14)	
April 2,Monday	Determination of transport number by Hittorfs methods
April 3, Tuesday	Kohlarausch's Law
April 4, Wednesday	Calculation of molar ionic conductance and effect of viscosity temperature & pressure
April 5, Thursday	Application of Kohlarausch's Law in calculation of conductance of weak electrolytes at infinite diloution
April 6, Friday	Applications of conductivity measurements: determination of degree of dissociation
April 7, Saturday	Determination of Acid strength (Ka) of acids

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

April 9, 2018 to April 14,2018 (Week 15)	
April 9,Monday	Solubility product
April 10, Tuesday	Determination of solubility product of sparingly soluble salts
April 11, Wednesday	Titrations: Overview and types
April 12, Thursday	Conductometric titrations
April 13, Friday	*Holiday (Vaisakhi)*
April 14, Saturday	*Holiday (Dr. B.R. Ambedkar's Jayanti)*
April 16, 2018 to April 21,2018(Week 16)	
April 16,Monday	pH: Introduction and significance
April 17, Tuesday	Relative acid strength (pKa)
April 18, Wednesday	*Holiday (Lord Parshu Ram Jayanti)*
April 19, Thursday	Buffer solution
April 20, Friday	Trends in chemical reactivity using Buffer medium
April 21, Saturday	Group teaching and presentation
April 23, 2018 to April 28,2018 (Week 17)	
April 23,Monday	How to prepare Buffer solutions for specific pH
April 24, Tuesday	Buffer action
April 25, Wednesday	Buffer mechanism of buffer action
April 26, Thursday	Effect of ion equality
April 27, Friday	Henderson-Hazel equation
April 28, Saturday	Group discussion

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Lesson Plan : 1st January 2018 to 28 April 2018 (17 Weeks)

Name of Assistant Professor: Dr. Mohd Yusuf

Class & Section: B. Sc. Sem-IV

Subject Name and Code: Chemistry (CH 04)

Jan 1, 2018 to Jan 6,2018 (Week 1)	
Jan 1,Monday	Winter Vacation
Jan 2, Tuesday	Winter Vacation
Jan 3, Wednesday	Winter Vacation
Jan 4, Thursday	Winter Vacation
Jan 5, Friday	Winter Vacation
Jan 6, Saturday	Lanthanides: Occurance and electronic structure
Jan 8, 2018 to Jan 13,2018(Week 2)	
Jan 8,Monday	Lanthanides: oxidation states and ionic radii
Jan 9, Tuesday	Lanthanides: lanthanide contraction and complex formation
Jan 10, Wednesday	Lanthanides: complex formation
Jan 11, Thursday	Lanthanide compunds I
Jan 12, Friday	Lanthanide compunds II
Jan 13, Saturday	Lanthanide compunds III
Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Jan 15, 2018 to Jan 20,2018(Week 3)	
Jan 14,Monday	General features of Actinides
Jan 15, Tuesday	Actinides: Occurance and electronic structure
Jan 16, Wednesday	Chemistry of separation of Np from U
Jan 17, Thursday	Chemistry of separation of Pu from U
Jan 18, Friday	Chemistry of separation of Am from U
Jan 20, Saturday	Group discussion
Jan 22, 2018 to Jan 27,2018(Week 4)	
Jan 22,Monday	*Holiday(Basant Panchmi)*
Jan 23, Tuesday	Introduction to acidic radicals
Jan 24, Wednesday	*Holiday(Sir Chhotu Ram Jayanti)*
Jan 25, Thursday	Chemitry and analysis of acidic radicals: Group I
Jan 26, Friday	*Holiday (Republic Day)*
Jan 27, Saturday	Chemitry and analysis of acidic radicals: Group II
Jan 29, 2018 to Feb 3 2018 (Week 5)	
Jan 29,Monday	Chemitry and analysis of acidic radicals: Group III
Jan 30, Tuesday	Individual groups
Jan 31, Wednesday	Chemistry of interference of acid radicals
Feb 1, Thursday	Presentation of qualitative analysis of acid radicals
Feb 2, Friday	Chemistry of identification of acid radicals in typical combinations
Feb 3, Saturday	Applications of analyzing acidic radicals in chemistry

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Feb 5, 2018 to Feb 10,2018 (Week 6)	
Feb 5,Monday	Introduction to basic radicals
Feb 6, Tuesday	Classification of basic radicals
Feb 7, Wednesday	Systematic analysis of basic radicals: Overview
Feb 8, Thursday	Analysis and chemistry of Group I basic radicals
Feb 9, Friday	Analysis and chemistry of Group II basic radicals
Feb 10, Saturday	*Holiday(Maharashi Dayanand Saraswati Jayanti)*
Feb 12, 2018 to Feb 17,2018 (Week 7)	
Feb 12,Monday	Analysis and chemistry of Group III and IV basic radicals
Feb 13, Tuesday	(Holiday) Mahashivratri
Feb 14, Wednesday	Analysis and chemistry of Group V and VI basic radicals
Feb 15, Thursday	Theory of precipitation, co-precipitation, Post-precipitation
Feb 16, Friday	Methods of purification of precipitates
Feb 17, Saturday	Molecular vibrations, Hooke's law, selection rules
Feb 19,Monday	Intensity and position of IR bands, measurement of IR spectrum, fingerprint region
Feb 20, Tuesday	Characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds
Feb 21, Wednesday	Characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds
Feb 22, Thursday	Characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds
Feb 23, Friday	Applications of IR spectroscopy in structure elucidation of simple organic compounds.
Feb 24, Saturday	Applications of IR spectroscopy in structure elucidation of simple organic compounds.

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Feb 26, 2018 to Mar 3,2018 (Week 9)	
Feb 26,Monday	Structure and nomenclature of amines, physical properties, Separation of a mixture of primary, secondary and tertiary amines
Feb 27, Tuesday	Structural features affecting basicity of amines. Preparation of alkyl and aryl amines
Feb 28, Wednesday	Vacation
Mar 1, Thursday	
Mar 2, Friday	
Mar 3, Saturday	
Mar 5 , 2018 to Mar 10,2018 (Week 10)	
Mar 5,Monday	Gabrielphthalimide reaction, Hofmann bromamide reaction
Mar 6, Tuesday	Electrophilic aromatic substitution in aryl amines, reactions of amines with nitrous acid
Mar 7, Wednesday	Mechanism of diazotisation, structure of benzene diazonium chloride, Replacement of diazo group by H, OH, F, Cl, Br, I, NO_2 and CN groups
Mar 8, Thursday	Reduction of diazonium salts to hyrazines, coupling reaction and its synthetic application
Mar 9, Friday	Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation of alkynes
Mar 10, Saturday	Preparation of nitro alkanes and nitro arenes an d their chemical reactions
Mar 12 , 2018 to Mar 17,2018 (Week 11)	
Mar 12,Monday	Mechanism of electrophilic substitution reactions in nitro arenes and their reductions
Mar 13, Tuesday	Nomenclature and structure of the carbonyl group, Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chlorides
Mar 14, Wednesday	advantage of oxidation of alcohols with chromium trioxide (Sarett reagent) pyridinium chlorochromate (PCC) and pyridinium dichromate
Mar 15, Thursday	Comparison of reactivities of aldehydes and ketones, Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin, aldol, Perkin and Knoevenagel condensations
Mar 16, Friday	Condensation with ammonia and its derivatives, Wittig reaction, Mannich reaction
Mar 17, Saturday	Oxidation of aldehydes, Baeyer–Villiger oxidation of ketones, Cannizzaro reaction. MPV, Clemmensen, Wolff-Kishner, $LiAlH_4$ and $NaBH_4$ reductions

Test :	Questions on the topic.

Assignment:	Based on coverd topics.
Mar 19, 2018 to Mar 24,2018 (Week 12)	
Mar 19,Monday	Second law of thermodynamics
Mar 20, Tuesday	Significance of II law of thermodynamics
Mar 21, Wednesday	Carnot's cycles and its efficiency
Mar 22, Thursday	Carnot's theorm
Mar 23, Friday	*Holiday(Shaheed Diwas)*
Mar 24, Saturday	Concept of entropy, entropy as a state function
Mar 26, 2018 to Mar 31,2018 (Week 13)	
Mar 26,Monday	Entropy as a function of V & T
Mar 27, Tuesday	Entropy as a function of P & T, entropy change in physical change
Mar 28, Wednesday	Entropy as a criteria of spontaneity and equilibrium
Mar 29, Thursday	*Holiday (Mahavir Jayanti)*
Mar 30, Friday	Entropy change in ideal gases and mixing of gases
Mar 31, Saturday	Introduction to third law of thermodynamics
April 2, 2018 to April 7,2018 (Week 14)	
April 2,Monday	Nernst heat theorem, statement of concept of residual entropys
April 3, Tuesday	Evaluation of absolute entropy from heat capacity data
April 4, Wednesday	Gibbs and Helmholtz functions; Gibbs function (G) and Helmholtz function (A) as thermodynamic quantities
April 5, Thursday	Derivation of Gibbs-Helmholtz equation
April 6, Friday	Applications of conductivity measurements: determination of degree of dissociation
April 7, Saturday	A & G as criteria for thermodynamic equilibrium and spontaneity, their advantage over entropy chang

Test :	Questions on the topic.

Assignment:	Based on coverd topics.
April 9, 2018 to April 14,2018 (Week 15)	
April 9,Monday	Variation of G and A with P, V and T
April 10, Tuesday	Electrolytic and Galvanic cells- reversible & Irreversible cells, Conventional representation of electrochemical cells
April 11, Wednesday	EMF of cell and its measurement, Wes ton standard cell, activity and activity coefficients
April 12, Thursday	Calculation of thermodynamic quantities of cell reaction
April 13, Friday	*Holiday (Vaisakhi)*
April 14, Saturday	*Holiday (Dr. B.R. Ambedkar's Jayanti)*
April 16, 2018 to April 21,2018(Week 16)	
April 16,Monday	Types of reversible electrodes–metal-metal ion gas electrode, metal-insoluble salt-anion and redox electrodes
April 17, Tuesday	Derivation of electrode reactions, Nernst equations
April 18, Wednesday	*Holiday (Lord Parshu Ram Jayanti)*
April 19, Thursday	Derivation of cell EMF and single electrode potential
April 20, Friday	Standard Hydrogen electrode, reference electrodes, standard electrodes potential, sign conventions
April 21, Saturday	Electro chemical series and its applications
April 23, 2018 to April 28,2018 (Week 17)	
April 23,Monday	Concentration cells with and without transference
April 24, Tuesday	Liquid junction potential, application of EMF measurement using valency of ions, solubility product activity
April 25, Wednesday	Potentiometric titration (acid-base and redox)
April 26, Thursday	Determination of pH using Hydrogen electrode by potentiometric methods
April 27, Friday	Determination of pH using quinhydrone electrode and glass electrode by potentiometric
April 28, Saturday	Group discussion

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Lesson Plan : 1st January 2018 to 28 April 2018 (17 Weeks)

Name of Assistant Professor: Dr. Mohd Yusuf

Class & Section: B. Sc. Sem-VI

Subject Name and Code: Chemistry (CH 06)

Jan 1, 2018 to Jan 6,2018 (Week 1)	
Jan 1,Monday	Winter Vacation
Jan 2, Tuesday	Winter Vacation
Jan 3, Wednesday	Winter Vacation
Jan 4, Thursday	Winter Vacation
Jan 5, Friday	Winter Vacation
Jan 6, Saturday	Lanthanides: Occurance and electronic structure
Jan 8, 2018 to Jan 13,2018(Week 2)	
Jan 8,Monday	Definition, nomenclature and classification of organometallic compounds
Jan 9, Tuesday	Preparation, properties, and bonding of alkyls of Li and Al
Jan 10, Wednesday	Preparation, properties, and bonding of alkyls of Hg and Sn
Jan 11, Thursday	Chemistry of metal-ethylenic complexes
Jan 12, Friday	Mononuclear carbonyls and the nature of bonding in metal carbonyls
Jan 13, Saturday	Some typical metal carbonyls
Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Jan 15, 2018 to Jan 20,2018(Week 3)	
Jan 14,Monday	Arrhenius, Bronsted–Lowry, the Lux–Flood, Solvent system and Lewis concepts of acids & bases
Jan 15, Tuesday	Relative strength of acids & base
Jan 16, Wednesday	Concept of Hard and Soft Acids & Bases
Jan 17, Thursday	Symbiosis
Jan 18, Friday	Electronegativity and hardness and softness
Jan 20, Saturday	Group discussion
Jan 22, 2018 to Jan 27,2018(Week 4)	
Jan 22,Monday	*Holiday(Basant Panchmi)*
Jan 23, Tuesday	Essential and trace elements in biological processes
Jan 24, Wednesday	*Holiday(Sir Chhotu Ram Jayanti)*
Jan 25, Thursday	Metalloporphyrin: Haemoglobin
Jan 26, Friday	*Holiday (Republic Day)*
Jan 27, Saturday	Metalloporphyrin: Myoglobin
Jan 29, 2018 to Feb 3 2018 (Week 5)	
Jan 29,Monday	Biological role of alkali and alkaline earth metal ions with special reference to Calcium ions
Jan 30, Tuesday	Nitrogen fixation
Jan 31, Wednesday	Nitrogen fixation
Feb 1, Thursday	Introduction to Silicones
Feb 2, Friday	Slicones: preparation, properties,structure and uses
Feb 3, Saturday	Introduction to phosphazenes

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Feb 5, 2018 to Feb 10,2018 (Week 6)	
Feb 5,Monday	Phosphazenes: preparation, properties,structure and uses
Feb 6, Tuesday	Classification of basic radicals
Feb 7, Wednesday	Group discussion
Feb 8, Thursday	Introduction to heterocyclic chemistry
Feb 9, Friday	Molecular orbital picture and aromatic characteristics of pyrrole and furan
Feb 10, Saturday	*Holiday(Maharashi Dayanand Saraswati Jayanti)*
Feb 12, 2018 to Feb 17,2018 (Week 7)	
Feb 12,Monday	Molecular orbital picture and aromatic characteristics of thiophene and pyridine
Feb 13, Tuesday	(Holiday) Mahashivratri
Feb 14, Wednesday	Methods of synthesis and chemical reactions of pyrrole and furan
Feb 15, Thursday	Methods of synthesis and chemical reactions of thiophene and pyridine
Feb 16, Friday	Comparison of basicity of pyridine, piperidine and pyrrole
Feb 17, Saturday	Condensed five and six-membered heterocycles
Feb 19,Monday	Prepration and reactions of indole
Feb 20, Tuesday	Prepration and reactions of quinoline and isoquinoline
Feb 21, Wednesday	Fisher indole synthesis
Feb 22, Thursday	Skraup synthesis
Feb 23, Friday	Bischler-Napieralski synthesis
Feb 24, Saturday	Mechanism of electrophilic substitution reactions of, quinoline and isoquinoline

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Feb 26, 2018 to Mar 3,2018 (Week 9)	
Feb 26,Monday	Nomenclature and structural features of organo-sulphur compounds
Feb 27, Tuesday	Methods of formation and chemical reactions of thiols and thioethers
Feb 28, Wednesday	Vacation
Mar 1, Thursday	
Mar 2, Friday	
Mar 3, Saturday	
Mar 5 , 2018 to Mar 10,2018 (Week 10)	
Mar 5,Monday	Methods of formation and chemical reactions of sulphonic acids, sulphonamides and sulphaguanidine
Mar 6, Tuesday	Synthetic detergents alkyl and aryl sulphonates
Mar 7, Wednesday	Acidity of alpha-hydrogens, alkylation of diethyl malonate and ethyl acetoacetate
Mar 8, Thursday	Synthesis of ethyl acetoacetate: Claisen condensation, Keto-enol tautomerism of ethyl acetoacetate
Mar 9, Friday	Addition or chain-growth polymerization
Mar 10, Saturday	Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler-Natta polymerization and vinyl polymers
Mar 12 , 2018 to Mar 17,2018 (Week 11)	
Mar 12,Monday	Condensation or step growth polymerization, Polyesters , polyamides, phenol formaldehyde resins
Mar 13, Tuesday	Urea formaldehyde resins, epoxy resins and polyurethanes, Natural and synthetic rubbers
Mar 14, Wednesday	Classification, of amino acids, Acid-base behavior, isoelectric point and electrophoresis
Mar 15, Thursday	Preparation of amino acids, structure and nomenclature of peptides and proteins, Classification of proteins
Mar 16, Friday	Peptide structure determination, end group analysis, selective hydrolysis of peptides, Classical peptide synthesis
Mar 17, Saturday	Solid-phase peptide synthesis, Structures of peptides and proteins: Primary & Secondary structure

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

Mar 19, 2018 to Mar 24,2018 (Week 12)	
Mar 19,Monday	Electronic Spectrum Concept of potential energy curves for bonding and antibonding molecular orbitals
Mar 20, Tuesday	Qualitative description of selection rules and
Mar 21, Wednesday	Franck-Condon principle
Mar 22, Thursday	Qualitative description of sigma and pie and n molecular orbital (MO) their energy level and respective transitions
Mar 23, Friday	*Holiday(Shaheed Diwas)*
Mar 24, Saturday	Qualitative description of sigma and pie and n molecular orbital (MO) their energy level and respective transitions
Mar 26, 2018 to Mar 31,2018 (Week 13)	
Mar 26,Monday	Interaction of radiation with matter, difference between thermal and photochemical processes
Mar 27, Tuesday	Laws of photochemistry: Grotthus-Drapper law
Mar 28, Wednesday	Laws of photochemistry: Stark-Einstein law (law of photochemical equivalence)
Mar 29, Thursday	*Holiday (Mahavir Jayanti)*
Mar 30, Friday	Jablonski diagram depiciting various processes occurring in the excited state, qualitative description of fluorescence
Mar 31, Saturday	Phosphorescence, non-radiative processes
April 2, 2018 to April 7,2018 (Week 14)	
April 2,Monday	Quantum yield
April 3, Tuesday	Photosensitized reactions-energy transfer processes
April 4, Wednesday	Ideal and non-ideal solutions, methods of expressing concentrations of solutions
April 5, Thursday	Activity and activity coefficient, Dilute solution
April 6, Friday	Colligative properties, Raolut's law
April 7, Saturday	Relative lowering of vapour pressure

Test :	Questions on the topic.
Assignment:	Based on coverd topics.

April 9, 2018 to April 14,2018 (Week 15)	
April 9,Monday	Elevation of boiling point
April 10, Tuesday	Molelcular weight determination
April 11, Wednesday	Osmosis law of osmotic pressure and its measurement, determination of molecular weight from osmotic pressure
April 12, Thursday	Elevation of boiling point
April 13, Friday	*Holiday (Vaisakhi)*
April 14, Saturday	*Holiday (Dr. B.R. Ambedkar's Jayanti)*
April 16, 2018 to April 21,2018(Week 16)	
April 16,Monday	Depression of freezing point
April 17, Tuesday	Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression in freezing point
April 18, Wednesday	*Holiday (Lord Parshu Ram Jayanti)*
April 19, Thursday	Experimental methods for determining various colligative properties
April 20, Friday	Abnormal molar mass
April 21, Saturday	Degree of dissociation and association of solutes
April 23, 2018 to April 28,2018 (Week 17)	
April 23,Monday	Phase equilibrium-concepts, phase component and degree of freedom
April 24, Tuesday	Thermodynamic derivation of Gibbs phase rule
April 25, Wednesday	Phase equilibria of one component system, water and Sulpher systems
April 26, Thursday	Phase equilibria of two component systems solid-liquid equilibria
April 27, Friday	Simple eutectic example Pb-Ag system
April 28, Saturday	Desilerisation of lead

Test :	Questions on the topic.
Assignment:	Based on coverd topics.