

Lesson Plan

Name of Assistant/Associate Professor: Reena Kumari ,Rajeev Kumar

Class and section: B.Sc III N.M & Med. . (Sem -6th)

Physical Chemistry -(From Jan 2024 to April 2024)

Chapter 1 Photochemistry	Dates
○ Interaction of radiation with matter, difference between thermal and	Jan , Week3 rd
○ photochemical processes. Laws of photochemistry:	Jan Week 3 rd
○ Grotthus-Drapper law, StarkEinstein law (law of photochemical equivalence),	Jan , Week 4 th
○ Jablonski diagram depicting various processes occurring in the excited state,	Jan, Week 4 th
○ qualitative description of fluorescence,	Feb, Week 1 st
○ phosphorescence, quantum yield,	Feb Week 1 st
○ phosphorescence, quantum yield,	
○ non-radiative processes (internal conversion, intersystem crossing),	Feb , Week 2 nd
○ photosensitized reactions-energy transfer processes (simple examples)	Feb, Week 2 nd
Chapter 2 Solutions, Dilute Solutions and Colligative Properties	
○ Ideal and non-ideal solutions, methods of	Feb, Week 3 rd
○ expressing concentrations of solutions,	Feb, Week 3 rd
○ Dilute solutions, Raoult's law.	Feb, Week 4 th
○ Colligative properties: (i) relative lowering of vapour pressure (ii) Elevation in boiling point	March, Week 1 st
○ (iii) depression in freezing point (iv) osmotic pressure.	March, Week 1 st
○ Thermodynamic derivation of relation between amount of solute and elevation in boiling point and depression in freezing point..	March, Week 2 nd
○ Applications in calculating molar masses of normal, dissociated and associated solutes in solution.	March, Week 2 nd
Chapter 3 Phase Equilibrium	
○ Statement and meaning of the terms – phase,	April, Week 1 rd
○ component and degree of freedom,	April, Week 1 st
○ thermodynamic derivation of Gibbs phase rule,	April Week 2 nd
○ phase equilibria of one component system – Example – water system	April, Week 2 nd
○ Phase equilibria of two component systems solid-liquid equilibria,	
○ simple eutectic Example Pb-Ag system,	April, Week 3 rd

○ desilverisation of lead.	April, Week 3rd
○	
Chapter 3: Introduction to statistical mechanics	
○ Need for statistical thermodynamics,	April, Week 4th
○ thermodynamic probability, Maxwell Boltzmann distribution statistics, Born oppenheimer approximation,	April, Week 4th

Lesson Plan

Name of Assistant/Associate Professor: Anjali

Class & Section: B. Sc III, N.M. & Med., (Sem -6th)

Inorganic Chemistry : (From Jan 2024 to April 2024)

Chapter 1 Organometallic Chemistry	Dates
1.1 Definition 1.2 Nomenclature and classification of Organo metallic compounds	Jan , Week 3 rd
1.3 Preparation , properties and bonding of alkyls of lithium	Jan , Week 3 rd
1.4 Preparation , properties and bonding of alkyls of Aluminium	Jan , Week 4 th
1.5 Preparation, properties and bonding of alkyls of Mercury	Jan , Week 4 th
1.6 Preparation, properties and bonding of alkyls of Sn 1.7 Nature of bonding in Metal Carbonyls	Feb , Week 1 st
1.8 A brief account of metal Ethylenic complexes 1.9 Mononuclear Carbonyls	Feb , Week 1 st
Chapter 2 Acid & Bases , HSAB Concept	
2.1 Arrhenius concept of Acid & Bases 2.2 Advantages & Limitations of Arrhenius concept	Feb, Week 2 nd
2.3 Bronsted Lowry concept of Acid and Bases 2.4 Lux - flood concept of Acid and Bases	Feb, Week 2 nd
2.5 Solvent system concept of Acid and Bases 2.6 Lewis system concept of Acid and Bases	Feb, Week 3 rd
2.7 Relative strength of Acid and Bases 2.8 Concept of Hard and soft Acids and Bases	Feb, Week 3 rd
Problems from chapter 1	Feb, Week 4 th
Problems from chapter 2 and test Problems from chapter 2	March, Week 1 st
Test of chapter 2	March, Week 1 st
Week 9 Chapter 3 Bio Inorganic Chemistry	March, Week 2 nd
3.1 Essential and Trace elements in biological processes 3.2 Metalloproteins with special reference to haemoglobin and myoglobin	March, Week 2 nd
3.5 Biological role of alkali & alkaline earth metals ions	March, Week 3 rd

with special reference to Ca^{2+}	
3.6 Nitrogen Fixation Metalloproteins	March, Week 4 th
, Problems of Chapter - 3	March, Week 4 th
Assignment I	March , Week I st
Chapter -4 Silicons & Phosphazenes	
4.1 Silicons as an example of Inorganic polymers	April , Week I st
4.2 Silicons fluids & oils , silicons elastoma	April, Week 2 nd
4.3 Silicon Resins , Polysiloxane copolymers	April , Week 2 nd
4.4 Introduction to Phosphazenes, its method of preparation of phosphazenes	April, Week 3 rd
4.5 Structure and bonding in Phosphazenes	April , Week 3 rd
4.6 Bonding in Triphosphazenes	April Week 3 rd
4.7 Uses of Phosphazenes	
Assignment - II	April , Week 3 rd

Lesson Plan

Name of Assistant/Associate Professor: Reena Kumari, Bhawna

Class and section: B.Sc III N.M & Med. (Sem -6th)

Organic Chemistry : Week (From Jan, 2024 to April, 2024)

Chapter 1 Organosulphur Compound	Dates
○ Nomenclature Structural feature, M.O.P	Jan , Week 3 rd
○ Chemical rxn of thiols, thioether, sulphonic acid,	Jan , Week 3 rd
○ Sulphonamides & sulphaguanidine	Jan , Week 4 th
○ Synthetic detergents ,alkyl & aryl sulphonates	Jan, Week 4 th
Chapter 2: Heterocyclic compound	
○ Molecular orbital str ,Aromatic characteristics of pyrrole, furan	Feb, Week 1 st
○ Aromatic characteristics of thiophene & pyridine	Feb, Week 1 st
○ M.O.P ,& Chemical Rxn with mechanism of electrophilic substitution	
○ Mech. Of Nucleophilic substitution Reaction in Pyridine derivatives	Feb, Week 2 nd
○ Comparison of basicity of pyridine piperidine & pyrrole	
○ Introduction of condensed 5-6 membered heterocycles	Feb , Week 2 nd
○ Preparation & reaction of indole	Feb, Week 3 rd
○ Rxn of quinoline & isoquinoline	Feb, Week 3 rd
○ Fischer Indole synthesis & skraup synthesis	Feb, Week 4 th
○ Bischler napieralski synthesis, Mech. of Electrophilic substitution of indole	March, Week 1 st
○ Mech. Of electrophilic substitution Rxn. Of Quinoline & Isoquinoline	March, Week 1 st
CHAPTER-3 Organic synthesis via enolates	
○ Acidity of hydrogen, alkylation of diethylmalonate & Ethyl acetoacetate	
○ Synthesis of Ethylacetoacetate, claisen condensation Keto-enol tautomerism of ethyl acetoacetate	March , Week 2 nd
○ Alkylation of 1-3 dithianes	March, Week 3 rd
○ Acylation of Enamines	
CHAPTER-4 Amino Acids, proteins & Nucleic Acids	
○ Classification, structure & stereochemistry of amino acids, Acid-base behavior	March , Week 4 th
○ Isoelectric point & electrophoresis, Prp & reaction	March, Week 4 th

of Amino acids	
○ Structure & Nomenclature of peptides & proteins,	April, Week 1 st
○ Peptide structure determination ,End group analysis, selective Hydrolysis of peptides	April , Week 1 st
○ Classical peptide synthesis ,Solid phase peptide synthesis	April , Week 2 nd
○ Structure of peptides & proteins , levels of proteins structure	April Week 2 nd
○ Problem of chapter heterocyclic compounds	April, Week 3 rd
○ Test of Chapter 2	
○ Denaturation/Renaturation	
○ , nucleic acids introduction , constituents of nucleic acids	April , Week 3 rd
○ Ribonucleosides , ribonucleotides ,double helical structure of D.N.A	April , Week 3 rd
○ Revision And Practical	April , Week 3 rd

Lesson Plan

Name of Assistant/Associate Professor: Pardeep Agarwal i

Class and section: B.Sc II N.M & Med. Sem 4th (PHYSICAL CHEMISTRY)

Chemistry Lesson Plan: Week (From Jan 2024 to April 2024)

Chapter 1: Thermodynamics II	Dates
o 1.1 Introduction –Need for second Law of thermodynamics and Statement	Jan, Week 3 rd
o 1.2 Carnot Cycle And its efficiency o 1.3 Carnot Theorem	Jan , Week 3 rd
o 1.4 Thermodynamics scale of temperature o 1.5 Entropy	Jan, Week 4 th
o 1.6 Entropy Change in Reversible Processes o 1.7 Entropy Change in irreversible Processes	Jan , Week 4 th
o 1.8 Clausius inequality o 1.9 Entropy change of universe	Feb, Week 1 st
o 1.10 Entropy change for ideal gas with change in P,V & T o Entropy Change during Physical changes	Feb, Week 1 st
o 1.11 Entropy Change on mixing of ideal gas o 1.12 Physical Significance of Entropy o 1.13 Measure of Disorder	Feb, Week 2 nd
Chapter 2:Electrochemistry	
o 2.1 What is Electrochemical cell or Galvanic cell o 2.2 What is Electrolytic Cell	Feb , Week 2 nd
o 2.3 Representation of Electrochemical Cell o 2.4 Electrode Potential	Feb, Week 3 rd
o 2.5 EMF of the Cell And its Measurement o 2.6 Standard cell	Feb, Week 3 rd
o 2.7 Reversible and Irreversible Cell o 2.8 Reversible electrodes	Feb, Week 4 th
o 2.9 Relationship between Chemical and Electrical Energy o 2.10 Calculation of Thermodynamics Quantity of the Cell reaction	March, Week 1 st
o 2.11 Standard Hydrogen Electrode and Measurement of Electrode Potential o 2.12 Other Reference Electrode and Measurement of Electrode Potential	March, Week 1 st
o Assignment-I	March, Week 2 nd
o 2.13 Electrochemical Series o 2.14 Application of Electrochemical Series	March, Week 2 nd
o 2.15 Activity and Activity coefficient of the electrolyte o 2.16 Standard State	March, Week 3 rd
o 2.17 Nernst Equation for EMF of Cell o 2.18 Nernst Equation for Electrode Potential	March, Week 3 rd
o 2.19 Calculation of Equilibrium Constant of Cell reaction	March, Week 4 th

o 2.20 Polarization	
o 2.21 Decomposition Voltage/Potential Deposition	
o 2.22 Discharge of Potential	
o 2.23 Overvoltage or Over Potential	March ,Week 4 th
o 2.24 Hydrogen Overvoltage	
o 2.25 Anodic Overvoltage and Oxygen Overvoltage	April , Week 1 st
o 2.26 Application of Overvoltage	
o Test	April, Week 1 st
o 2.27 Concentration Cell	April , Week 2 nd
o 2.28 Types of Concentration Cell	
o Assignment-II	April , Week 2 nd
o 2.29 EMF of Concentration Cell	April , Week 3 rd
o 2.30 Review of Various Types of Electrochemical Cells	April, Week 3 rd
o 2.31 Liquid Junction Potential	April , Week 3 rd
o 2.32 Determination of Activities and Activity Coefficient from EMF Measurements	April , Week 3 rd
o 2.33 Application of EMF Measurement	

LESSON PLAN

Name of Assistant/Associate Professor: Anjali Sharma

Class and section: B.Sc II Med. & Non med. Sem 4th (INORGANIC CHEMISRY)

Chemistry Lesson Plan: 15 Week (From Jan 2024- April 2024)

Chapter 1: Chemistry of Lanthanides	Dates
<ul style="list-style-type: none">1.1 Introduction1.2 Electronic structure1.3 Physical properties of lanthanides	Jan , Week 3 rd
<ul style="list-style-type: none">1.4 oxidation states1.5 magnetic properties	Jan , Week 3 rd
<ul style="list-style-type: none">1.6 ionic radii and lanthanide contraction1.7 complex formation	Jan , Week 4 th
<ul style="list-style-type: none">1.8 occurrence and isolation1.9 lanthanide compounds	Jan , Week 4 th
Chapter 2: Chemistry of Actinides	Feb, Week 1 st
<ul style="list-style-type: none">2.1 General features and chemistry of actinides2.2 chemistry of separation of Np, Pu and Am from U	Feb, Week 1 st
<ul style="list-style-type: none">2.3 Comparison of properties of lanthanides and actinides and with transition elements	Feb, Week 2 nd
<ul style="list-style-type: none">problems from chapter 1 & 2	
<ul style="list-style-type: none">test of chapter 2	Feb, Week 2 nd
Chapter 3: Theory of qualitative and quantitative inorganic analysis-1	
<ul style="list-style-type: none">3.1 Introduction3.2 Basic Principles of Inorganic qualitative analysis	Feb, Week 3 rd
<ul style="list-style-type: none">3.3 Chemistry of analysis of various acidic radicals3.4 chemistry of identification of acidic radicals in typical combinations	Feb, Week 3 rd
<ul style="list-style-type: none">3.5 chemistry of interference of acid radicals including their removal in the analysis of basic radicals	Feb, Week 4 th
<ul style="list-style-type: none">problems of chapter 3	March , Week 1 st
Chapter 4: Theory of qualitative and quantitative inorganic analysis - II	
<ul style="list-style-type: none">3.1 systematic analysis of basic radicals3.2 chemistry of various reaction	March Week 1 st
<ul style="list-style-type: none">3.3 identification of cations of group I3.4 identification of cations of group II A and separation of group II B	March, Week 2 nd
<ul style="list-style-type: none">Assignment I	March, Week 2 nd
<ul style="list-style-type: none">Test	March, Week 3 rd

• 3.5 identification and separation of group III	March, Week 3 rd
• 3.6 identification and separation of group IV	March, Week 4 th
• 3.7 Schematic flow chart of group V cations	
• 3.8 test of Ni^{2+} in the presence of Co^{2+}	
• 3.9 gravimetry of gravimetric analysis	March Week 4 th
• 3.10 theory of precipitation	April , Week 1 st
• 3.11 factors affecting solubility of precipitates	
• 3.12 particle size of the precipitates	April , Week 1 st
• 3.13 formation of precipitates	April, Week 2 nd
• 3.14 desirable properties and contamination of precipitates	
• 3.15 treatment of the precipitates	April, Week 2 nd
• 3.16 fractional precipitation	
• Problems from Chapter 3	April, Week 3 rd
Test	April , Week 3 rd

LESSON PLAN

Name of Assistant/Associate Professor: Reena Kumari

Class and section: B.Sc II Med. & Non med. Sem 4th (ORGANIC CHEMISRY)

Chemistry Lesson Plan:Week (From Jan 2024 - April 2024)

Chapter 1: Infrared Absorption Spectroscopy	Dates
<ul style="list-style-type: none">1.1 Molecular Vibration1.2 Hooke's Law1.3 Selection Rule	Jan , Week 3 rd
<ul style="list-style-type: none">1.4 Intensity and Position of IR Bands1.5 Measurement of IR Spectrum	Jan , Week 3 rd
<ul style="list-style-type: none">1.6 Fingerprint Reason1.7 Characteristics Absorption of Various Functional Groups	Jan , Week 4 th
<ul style="list-style-type: none">1.8 Interpretation of IR Spectra1.9 Application of IR Spectroscopy	Jan , Week 4 th
Chapter 2: Amines	Feb, Week 1 st
<ul style="list-style-type: none">2.1 Structure of Amines2.2 Nomenclature of Amines	Feb, Week 1 st
<ul style="list-style-type: none">2.3 Separation of Primary, Secondary and Tertiary Amines2.4 Physical Properties	Feb , Week 2 nd
<ul style="list-style-type: none">2.5 Basic Character2.6 Factor effecting the Basic Character	Feb , Week 2 nd
<ul style="list-style-type: none">2.7 Preparation of Alkyl Amine2.8 Preparation of Aryl Amine	Feb , Week 3 rd
<ul style="list-style-type: none">2.9 Gabriel Phthalimide Reaction2.10 Hofmann Bromamide Reaction	Feb , Week 3 rd
<ul style="list-style-type: none">2.11 Electrophilic Substitution of Aryl Amine2.12 Reaction of Amine with Nitrous Acid	Feb, Week 4 th
<ul style="list-style-type: none">Problems from Chapter 1 and 2	Feb, Week 4 th
<ul style="list-style-type: none">Test of Chapter 1 (Infrared Absorption Spectroscopy)	March, Week 1 st
Chapter 3: Diazonium Salts	
<ul style="list-style-type: none">3.1 Mechanism of Diazotization3.2 Structure of Benzene Diazonium Chloride	March, Week 1 st
<ul style="list-style-type: none">3.3 Various Reaction of Diazonium Salts3.4 Reduction of Diazonium Salts to Hydrazine	March, Week 2 nd
<ul style="list-style-type: none">3.5 Coupling Reactions3.6 Synthesis Application of Diazonium Salts	March, Week 2 nd
Chapter 4: Nitro Compounds	March, Week 3 rd
<ul style="list-style-type: none">4.1 Preparation of Nitro Alkane4.2 Preparation of Nitro Arenes	
<ul style="list-style-type: none">4.3 Chemical Reactions4.4 Mechanism of Electrophilic Substitution Reactions	March, Week 3 rd
<ul style="list-style-type: none">4.5 Reduction in Acidic Neutral and Alkaline Medium	March, Week 4 th

○ 4.6 Problem of Nitro Compounds	
Chapter 5: Aldehyde and Ketone	
○ 5.1 Nomenclature of Carbonyl Group ○ 5.2 Structure of Carbonyl Group	March Week 4 th
○ 5.3 Synthesis of Aldehyde and Ketone ○ 5.4 Synthesis of Aldehyde from Acid Chloride	April , Week 1 st
○ 5.5 Advantage of Control Oxidation of Alcohol ○ 5.6 Physical Property ○ 5.7 Comparison of Reactivity of Aldehyde and Ketone	April , Week 1 st
○ 5.8 Mechanism of Nucleophilic Addition of Carbonyl Group ○ 5.9 Mechanism of Aldol Reaction ○ 5.10 Mechanism of Perkin Reaction ○ 5.11 Mechanism of Knoevenagel Reaction	April , Week 2 nd
○ 5.12 Condensation with Ammonia and its Derivatives ○ 5.13 Waiting Reaction ○ 5.14 Mannich Reaction	April , Week 2 nd
○ 5.15 Oxidation of Aldehyde ○ 5.16 Baeyer Villiger Oxidation ○ 5.17 Cannizzaro Reaction	April, Week 3 rd
○ 5.18 Clemmensen Reduction ○ 5.19 Wolf kishner Reduction ○ 5.20 LiAlH ₄ and NaBH ₄ Reduction	April , Week 3 rd
○ Problem of Aldehyde & ketone	April , Week 3 rd
○ Revision and Practical	April , Week 3 rd

LESSON PLAN

Name of Assistant/ Associate Professor : PRADEEP AGARWAL

Class and section : B.Sc I Med. & Non Med.

Chemistry Lesson Plan: 18 Week From JAN 2024 to May 2024)

Chapter 1: Alkenes	
<ul style="list-style-type: none">1.1 Nomenclature of alkenes1.2 mechanisms of dehydration of alcohol	Jan , Week 3rd
<ul style="list-style-type: none">1.3 mechanisms of dehydrohalogenation of alkyl halides1.4 saytzeff rule, Hoffmann elimination	Jan, Week 3rd
<ul style="list-style-type: none">1.5 physical properties and relative stabilities of alkenes1.6 chemical reactions of alkenes – mechanisms involved in hydrogenation	Jan , Week 4 th
<ul style="list-style-type: none">1.7 electrophilic and free radical addition	Feb , Week 1st
<ul style="list-style-type: none">1.10 oxymercuration reduction1.11 ozonolysis	Feb, Week 2nd
<ul style="list-style-type: none">1.12 hydration1.13 hydroxylation and oxidation with KMnO₄	F e b ,Week 2nd
Chapter 2: Arenes and Aromaticity	
<ul style="list-style-type: none">2.1 Nomenclature of benzene derivatives : Aromatic nucleus and side chain	Feb , Week 3rd
<ul style="list-style-type: none">2.2 Aromaticity: Huckel rule	Feb , Week 3rd
<ul style="list-style-type: none">2.3 aromatic ions, annulenes upto 10 carbon atoms2.4 aromatic, anti- aromatic and non – aromatic compounds	Feb, Week 3rd
<ul style="list-style-type: none">2.5 aromatic electrophilic substitution	Feb, Week 4th
<ul style="list-style-type: none">2.6 mechanism of nitration. Halogenation and sulphonation	Feb, Week 4th
<ul style="list-style-type: none">2.7 Friedal – craft reaction2.8 energy profile diagram	Feb, Week 4 th
<ul style="list-style-type: none">2.9 activating, deactivating substituents and orientations	March1, Week 1st
<ul style="list-style-type: none">problems of chapter 1 & 2	March, Week 2 nd
<ul style="list-style-type: none">test	March, Week 2 nd
Chapter 3: Dienes and Alkynes	
<ul style="list-style-type: none">3.1 Nomenclature and classification of dienes3.2 Structure of butadiene	March Week 3 rd
<ul style="list-style-type: none">3.3 chemical reactions – 1,2 & 1,4 additions3.4 Diels – alder reaction	March Week 3 rd
<ul style="list-style-type: none">3.5 nomenclature, structure and bonding in alkynes3.6 methods of formation & chemical reaction of alkynes, acidity of alkynes	March, Week 4 th
<ul style="list-style-type: none">3.7 mechanism of electrophilic and nucleophilic addition reactions3.8 hydroboration – oxidation of alkynes	A p r i l Week 1 st
<ul style="list-style-type: none">problem of chapter 3	APRIL, Week 1 st
Chapter 4: Alkyl and aryl halides	
<ul style="list-style-type: none">4.1 Nomenclature and classes of alkyl halides4.2 methods of formation, chemical reactions	April , Week 2 nd
<ul style="list-style-type: none">4.3 Mechanisms and stereochemistry of nucleophilic substitution reactions of alkyl halides4.4 S_N¹ & S_N² reactions with energy profile diagrams	Aprily, Week 2 nd
<ul style="list-style-type: none">4.5 methods of formation & chemical reactions of aryl halides, 4.6 addition elimination and the elimination addition mechanisms of nucleophilic aromaticsubstitutions reactions	May, Week 2 nd
<ul style="list-style-type: none">4.7 relative reactivities of alkyl halides vs allyl, vinyl and aryl halides	May, Week 3 rd

Lesson Plan

Name of Assistant/Associate Professor: RAJIV ASIWAL

Class and section: B.Sc I Med & Non Med.

Chemistry Lesson Plan: Week(From JAN 2024 to May 2024)

Chapter 1 KINETICS 1	
○ Rate of reaction, rate equation	Jan , Week3rd
○ Factor effecting the rate of reaction, order of reaction	Jan , Week 3rd
○ Integrated rate equation of zero and first order reaction	Jan , Week 4th
○ Integrated rate equation of second and third order reaction	Jan , Week 4 th
○ Method of determination of order of reaction	Feb, Week 1 st
Chapter 2 Kinetics	
○ Arrhenius equation and effect of temperature	F e b Week 1 st
○ Simple collision theory of reaction rate, Bimolecular collision theory of reaction rate	Feb , Week 2 nd
○ Transition state theory of bimolecular reaction	Feb, Week 2 nd
○ Problem of chapter of 1 & 2	Feb , Week 2 nd
○ Assignment I	
○ Test of chapter 1	Feb, Week 3 rd
Chapter 3 Electrochemistry 1	
○ Electrolytic conduction and factor effecting	Feb, Week 3 rd
Specific conductance, equivalent conductance, molar conductance	Feb Week 4 th
○ Relation between different conductance	March,Week 1st
○ Effect of concentration on various conductance	March,Week 2 nd
○ Arrhenius theory of ionization, Ostwald dilution law	March, Week 2 nd
9	March, Week 3 rd
○ Debye-Huckel-Onsager equation, transpot number	
○ Definition and determination by Hittoirfs method	March, Week 3 rd
○ Problems From Chapter 3	March, Week 3rd
CHAPTER-4 Electrochemistry 2	
○ Kohlrausch law and its numerical	April Week 1st
○ Calculation of molar ionic conductance and effect of viscosity, temperature	April, Week 2nd
○ And pressure on it	
○ Application of Kohlrausch law in calculation of weak electrochemistry at infinite dilution	April, Week 3rd
○ Application of conductivity measurement	
○ Determination of degree of dissociation	April , Week 4th
○ Determination of pH, Ka and pKa	May, Week 1st
○ Determination of solubility product and numerical based on it	May Week 2 nd
○ Conductometric titration, Henderson-Hazelbalch equation, Buffer solution and buffer action	May, Week 3 rd
○ Mechanism of buffer action	

Lesson Plan

Name of Assistant/Associate Professor: PRADEEP

AGARWAL Class and section: B.Sc I

Chemistry Lesson Plan: Week (From JAN 2024 to May 2024)

Chapter 1 Hydrogen –Bonding &Vander Waal's Forces	
<ul style="list-style-type: none"> ○ Hydrogen Bonding –Definition ○ Types of Hydrogen Bonding ○ Effect of Hydrogen Bonding on Properties of Substance 	JAN , Week3rd
<ul style="list-style-type: none"> ○ Semiconductors-Introduction ○ Types & Applications 	JAN , Week 4 th
Chapter 2: S-Block Elements	
<ul style="list-style-type: none"> ○ Comparative study of the element including diagonal Relationship ○ Anomalous Behaviour of Li & Bi compared to other Elements in Same Group ○ Salient feature of hydrides, Oxides 	F E B Week I st
<ul style="list-style-type: none"> ○ Salient Feature of Halide And Hydroxide ○ Behaviour of Solution in liquid NH₃ 	FEB, Week I st
<ul style="list-style-type: none"> ○ Solvation ○ Complexation tendencies including their function in Bio system 	FEB , Week 2 nd
Chapter 3: Chemistry of Noble Gases	
<ul style="list-style-type: none"> ○ Chemical properties of the noble gases ○ Emphasis on their low chemical properties 	FEB , Week 2 nd
<ul style="list-style-type: none"> ○ Chemistry of xenon ○ Structure &bonding of fluoride ,oxides & oxyfluorides of xenon 	FEB , Week 2 nd
Chapter 4: p-Block Elements	
<ul style="list-style-type: none"> ○ Electronic Configuration ○ Atomic size & Ionic size ○ Metallic Character ○ Melting Point 	FEB, Week 3 rd
<ul style="list-style-type: none"> ○ Ionization Energy ○ Electron Affinity ○ Electronegativity 	FEB, Week 3 rd
<ul style="list-style-type: none"> ○ Inert Pair Effect ○ Diagonal Relationship 	FEBI, Week 4 th
○ Test of Chapter 1 And 2	
<ul style="list-style-type: none"> ○ Diborane ○ Properties & Structure of Diborane ○ Borazine & its structure ○ Chemical properties of Borazine 	MARCH,Week Ist
○ Trihalides of Boron	MARCH Week 2 nd

<ul style="list-style-type: none"> ○ Relative Strength of Trihalides of Boron as Lewis Acid ○ Structure of Aluminium (III) Chloride 	
<ul style="list-style-type: none"> ○ Catenation ○ Carbides ○ Fluoro Carbons 	MARCH, Week 2 nd
<ul style="list-style-type: none"> ○ Silicates ○ Types and Structure of Silicates 	MARCH Week 2 nd
<ul style="list-style-type: none"> ○ Silicones –General methods of preparations ○ Properties & its uses 	MARCH, Week 2 nd
<ul style="list-style-type: none"> ○ Oxides-structure of oxides of N & P ○ Oxoacids –Structure & relative acid Strength of Oxoacids of N & P 	APRIL Week 1 st
<ul style="list-style-type: none"> ○ Structure of white ,yellow & Red phosphorous 	
<ul style="list-style-type: none"> ○ Oxoacids of Sulphur ○ Structure & Acid strength 	APRIL Week 2 nd
<ul style="list-style-type: none"> ○ H₂O₂ ○ Properties and Uses 	APRIL, Week 2 nd
<ul style="list-style-type: none"> ○ Basic Properties of Halogens 	APRIL, Week 3 rd
<ul style="list-style-type: none"> ○ Interhalogen Compound ○ Their Types and Structure 	APRIL, Week 4 th
<ul style="list-style-type: none"> ○ Hydra and Oxy Acids of Chlorine ○ Structure and Acidic Strength 	May, Week 1 st
<ul style="list-style-type: none"> ○ Cationic Nature of Iodine 	May, Week 2 nd
<ul style="list-style-type: none"> ○ Problems From S-block and P-block Elements 	May , Week 3 rd
<ul style="list-style-type: none"> ○ Revision 	