

## Lesson Plan 2016-2017 (Odd Sem)

Name of the faculty: Dr. R. Ramya

Subject: Physical Chemistry I

Department: Chemistry

Class and Semester: III B.Sc. Chemistry & V

Month	June	July	August	September	October
<b>Topic</b>	<p><b>Colligative properties &amp; Adsorption:</b> 1.1 Colligative properties-Lowering of vapour pressure-Osmosis and osmotic pressure-relation between osmotic pressure and vapour pressure of an ideal solution-reverse osmosis.</p>	<p>1.2 Elevation of boiling point and depression of freezing point-derivations and determinations vant Hoff factor.</p> <p>1.3 Adsorption: Distinction between chemical and physical adsorption, adsorption isotherms – Freundlich adsorption isotherm-Langmuir adsorption isotherm – Derivation, measurement of surface area.</p>	<p><b>Chemical Kinetics:</b></p> <p>4.1 Definitions of terms-Derivations of expressions for Zero, First, Second and Third order rate equations - Study of kinetics by Volumetric, Polarimetric and dilatometric methods. Determination of order of the reactions.</p> <p>4.2 Complex reactions – consecutive, parallel and reversible reactions (no derivation only examples) Effect of temperature on reaction rate – temperature coefficient – concept of activation energy – Arrhenius equation.</p>	<p>4.3 Theories of reaction rates – Bimolecular collision theory- ARRT-Thermodynamic - aspects of ARRT. Comparison of collision theory and ARRT.</p> <p><b>Chemical Equilibrium:</b></p> <p>5.1 Chemical equilibrium: Law of mass action- Law of chemical equilibrium-Thermodynamic derivation of Law of chemical equilibrium.</p> <p>5.2 Vant Hoff reaction Isotherm-standard free energy change-Temperature Dependence of equilibrium Constant</p>	<p>5.2 Vant Hoff isochore- Le chatelier principle and its applications.</p> <p>5.3 Enzyme catalysis: Mechanism and Kinetics of enzyme catalysis - MichaelisMenton Equation-effect of temperature on enzyme catalysis.</p>
<b>Objective</b>	<p>1. Determination of molecular weight of an unknown solute from its Colligative property</p>	<p>1. Able to identify adsorption and absorption. 2. Able to differentiate physical and chemical adsorption</p>	<p>1. Understanding reaction rates, how reaction rates change under varying conditions, and What variables affect reaction rate?</p>	<p>1. Understanding different theories of reaction rates</p> <p>2. Able to Understand the equilibria existing between different states of matter</p> <p>3. Bringout the</p>	<p>1. Study of Enzymes function as biological catalysts</p> <p>2. Knowledge about the effect of temperature, pH, concentration of enzyme and concentration of substrate on enzyme activity.</p>

				relationship between equilibrium constants at different conditions	
<b>Strategies</b>	1. Fit the lecture to the students 2. Focus on topic 3. Select appropriate examples 4. Repeat points when necessary	1. Comparing adsorption with absorption 2. Lecture with examples enabling the students to identify the process	1. Elaborating the Derivation for rate constant for I order 2. Giving option for the students to derive the rate constant for second order	1. Allowing the students to find the similarities and dissimilarities of theories of reaction rates and then explaining it with examples	1. Lecture with examples/illustration
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test
<b>Assignment</b>	-	Application of Adsorption	Problem Related to Chemical Kinetics	-	Role of enzymes in industries
<b>Reference</b>	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain -	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain

## Lesson Plan 2016-2017 (Odd Sem)

Name of the faculty: Dr. R. Ramya

Subject: General Chemistry I

Department: Chemistry

Class and Semester: I B.Sc. Chemistry & I

Month	June	July	August	September	October
<b>Topic</b>	5.1 Definitions of molarity - normality - molality and mole fraction - their calculations	Definition and examples for primary and secondary standards. Calculation of equivalent weight of acid, base, oxidizing agent, reducing agent and salt. Principle of Volumetric Analysis. <b>Slip test</b>	5.2 Theories of acid-base - red-ox - complexometric, iodometric and iodimetric titrations. 5.3 Theories of indicators - acid-base indicators- choice of indicators - redox - metal ion and adsorption indicators.	4.1 Quantum chemistry - Quantum theory of radiation -The Sommerfield extension of Bohr theory- Planck's theory - photoelectric effect - Compton effect - Wave mechanical concept of the atom - de Broglie's relationship. Davisson and Germer experiment- wave nature of electron - Heisenberg's uncertainty principle. <b>Slip test</b>	4.2 Schrodinger wave equation (without derivation) - significance of wave functions, $\psi$ and $\psi^2$ - probability distribution of electrons - radial probability distribution curves.  <b>Revision</b>
<b>Objective</b>	To Understand the expression of concentration term	1. Able to Calculate equivalent weight of acid, base, oxidizing agent, reducing agent and salt. 2. To understand the principles of volumetric analysis	To know about the importance of different types of titration and uses of indicators.	Study on history of quantum chemistry and theories	To understand the significance of Schrodinger wave equation

<b>Strategies</b>	1. Define the terminologies 2. Relate all the terms and formulas 3. Calculate all the concentration terms	Defining the terminologies with examples	Explaining the types of titration and indicator used with examples	1. Giving introduction to quantum chemistry 2. Comparing quantum chemistry with classical one 3. Explaining all the effects and principles in the topic	1. Lecture with examples/illustration
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test
<b>Assignment</b>	Problems on determination of equivalent weight	-		-	-
<b>Reference</b>	Physical Chemistry - Puri and Sharma	Physical Chemistry - Madan and Tuli	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli	Physical Chemistry Madan and Tuli Physical Chemistry Madan and Tuli	Physical Chemistry Madan and Tuli Physical Chemistry Madan and Tuli

## Lesson Plan 2016-2017 (Even Sem)

Name of the faculty: Dr. R. Ramya

Subject: Physical Chemistry II

Department: Chemistry

Class and Semester: III Chemistry and VI Sem

Month	December	January	February	March
<b>Topic</b>	<b>Unit I Photochemistry</b> 1.1 Interaction of radiation with matter, differences between thermal and photochemical processes. Laws of photochemistry: Grothus-Draper law, Stark-Einstein law, Jablonski diagram depicting various processes occurring in the excited state (internal conversion, intersystem crossing)	1.1 Fluorescence, phosphorescence, chemiluminescence quantum yield- photosensitized reactions. 1.2 Kinetics of photochemical combinations- $H_2-Cl_2$ and $H_2-Br_2$ reactions. <b>Unit 2: Electrochemistry I</b> 2.1 Conduction in metals and in electrolyte solutions, specific conductance and equivalent conductance	2.1 Variation of equivalent and specific conductance with dilution-Ostwalds dilution law. 2.2 Debye Huckel theory of strong electrolytes-Onsagar equation (no derivation) Significance and limitations. Kohlrausch law and its applications. <b>Unit 3: Electrochemistry II</b> 3.1 Migration of ions-ionic mobility- Transport number and its determination-Hittorff method and moving boundary method-abnormal transport number	3.2 Applications of conductometric measurements-determination of degree of dissociation of weak electrolytes, ionic product of water, solubility product of a sparingly soluble salt, Conductometric titrations. pH concept-buffer solutions, buffer activity-Henderson equation-applications of buffer solutions.
<b>Objective</b>	1. To impart the students about the knowledge of thermal and photochemistry and laws of photochemistry.	1. Students will be able to identify the nature of the photochemical reaction. 2. Able to understand the types of conductance.	1. They able to describe the above theories and laws.	1. They able to list out all the applications of conductance

<b>Strategies</b>	To begin with stating the differences between thermal and photochemical reactions. To state first and second <b>laws of photochemistry</b> . To elaborate Jablonski diagram.	Defining the terminologies and explaining in detail then solving the derivation for kinetics of photochemical reaction. Explaining with pictorial representation for conductance and discussing about various related terms	Explaining all the theories and laws with illustration	Describing all the application with derivations and examples
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test
<b>Assignment</b>	-	Photosensitization	Significance and limitations of Debye Huckel Onsager equation	-
<b>Reference</b>	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain	Elements of Physical Chemistry - Glasstone and Lewis - Physical Chemistry - Puri and Sharma Physical Chemistry - Kundu and Jain

## Lesson Plan 2016-2017 (Even Sem)

Name of the faculty: Dr. R. Ramya

Subject: Pharmaceutical Chemistry

Department: Chemistry

Class and Semester: III B.Sc. Chemistry & VI Sem

Month	December	January	February	March
<b>Topic</b>	<p>1.1 Definition of the following terms: drug, pharmacophore, pharmacology, pharmacopoeia, bacteria, virus, chemotherapy and vaccine.</p> <p>1.2 Causes, symptoms and drug for jaundice, cholera, malaria and filaria. First aid for accidents - antidotes for poisoning.</p>	<p>2.1 Causes, detection and control of anaemia and diabetes. Diagnostic test for sugar, salt and cholesterol in serum and urine.</p> <p>2.2 Indian medicinal plants and uses-Tulasi, Neem, Kizhanelli, Mango, Semparuthi, Adadodai and Thoothvelai.</p> <p>3.1 Antibacterials: Sulpha drugs- examples and actions- prontosilsulphathiazole, sulphafurazole</p>	<p>3.1 Antibiotics-definition and action of penicillin, streptomycin, chloramphenicol - SAR of chloramphenicol only.</p> <p>3.2 Antiseptics and disinfectants - definition and distinction- phenolic compounds, chloro compounds, and cationic surfactant.</p> <p>4.1 Analgesics, Antipyretics and anti-inflammatory agents : Definition and actions - narcotic and non narcotic- morphine and its derivatives, pethidine and methodone</p>	<p>4.1- salicylic derivative, paracetamol, ibuprofen - disadvantages and uses.</p> <p>4.2 Causes, and treatment of cancer - AIDS - AZT, DDC.</p> <p>5.1 Anaesthetics - definition-local and general - volatile nitrous oxide, ether, Chloroform, cyclo propane- trichloroethylene - uses and disadvantages.</p> <p>5.2 Drugs affecting CNS - Definition, distinction and examples for tranquilizers, sedatives, hypnotics, psychedelic drugs - LSD Hashish- their effects.</p>
<b>Objective</b>	<p>Students will be able to define all the above mentioned terminologies.</p> <p>Students will definitely gain the knowledge about the diseases and awareness about first aid for accidents and antidotes for poisoning</p>	<p>Enable the students to aware of diabetes, anaemia, also about the medicinal value of Indian medicinal plant.</p>	<p>At the end of this class, students are in a position to classify the different chemicals, their specific actions, their properties and their uses.</p>	<p>At the end of this class, students are in a position to classify the different chemicals, their specific actions, their properties and their uses.</p>

<b>Strategies</b>	Define all the terminologies General discussion about the disease, first aid and antidotes for poisoning. Then elaborating the importance of the topics mentioned.	General discussion about the disease and medicinal value of Indian medicinal plants. Then elaborating the facts and importance of the topics mentioned.	General discussion about different types of drugs and their action and uses. Then elaborating the importance of the topics mentioned.	General discussion about different types of drugs and their action and uses. Then elaborating the importance of the topics mentioned.
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test
<b>Assignment</b>	First aid for accidents	Step to prevent anaemia and diabetics.	List of commercially available Analgesics, Antipyretic, Anaesthetics, Antiseptic and disinfectant	-
<b>Reference</b>	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh Pharmaceutical Chemistry - S. Lakshmi	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh Pharmaceutical Chemistry - S. Lakshmi	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh Pharmaceutical Chemistry - S. Lakshmi	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh Pharmaceutical Chemistry - S. Lakshmi

## Lesson Plan 2017-2018 (Odd Sem)

Name of the faculty: Dr. R. Ramya

Subject: Physical Chemistry I

Department: Chemistry

Class and Semester: III B.Sc. Chemistry & V Sem

Month	June	July	August	September	October
<b>Topic</b>	<p><b>Colligative properties &amp; Adsorption:</b> 1.1 Colligative properties-Lowering of vapour pressure-Osmosis and osmotic pressure-relation between osmotic pressure and vapour pressure of an ideal solution-reverse osmosis.</p>	<p>1.2 Elevation of boiling point and depression of freezing point-derivations and determinations vant Hoff factor.</p> <p>1.3 Adsorption: Distinction between chemical and physical adsorption, adsorption isotherms – Freundlich adsorption isotherm-Langmuir adsorption isotherm – Derivation, measurement of surface area.</p> <p><b>Unit-II</b></p> <p>2.1 Definition of terms: Phase, components and degrees of freedom – Derivation of Gibbs</p>	<p>2.3 Thermal analysis and cooling curves, Compound formation with congruent melting point Zn – Mg, FeCl<sub>3</sub> – Water system. Compound formation with incongruent melting point Na – K System.</p> <p><b>Unit III Solution:</b> 3.1 Raoult's law – Ideal solution, Henry's law. Temperature composition diagrams – ideal liquid mixture (Toluene – Benzene) Non ideal mixture (Water– ethanol and water – hydrogen chloride) –Azeotropic mixtures- Distillation of immiscible liquids.</p>	<p>3.3 Nernst distribution law – Thermodynamic derivation – limitations- Applications of Nernst distribution law – Solvent extraction and Determination of Hydrolysis constant.</p> <p><b>Unit IV Chemical Kinetics:</b></p> <p>4.1 Definitions of terms-Derivations of expressions for Zero, First, Second and Third order rate equations - Volumetric, Polarimetric and dilatometric methods. Determination of order of the reactions. Slip test</p>	<p><b>Chemical Equilibrium:</b></p> <p>5.1 Chemical equilibrium: Law of mass action- Law of chemical equilibrium-Thermodynamic derivation of Law of chemical equilibrium.</p> <p>5.2 Vant Hoff reaction Isotherm-standard free energy change- Temperature Dependence of equilibrium Constant</p> <p>5.2 Vant Hoff isochore- Le chatelier principle and its applications.</p> <p>5.3 Enzyme catalysis: Mechanism and Kinetics of enzyme catalysis - MichaelisMenton Equation-effect of temperature on enzyme catalysis.</p>

		<p>phase rule</p> <p>2.2 One component system: Water and sulphur system – Reduced phase rule- Two component system: Simple eutectic system: Pb-Ag system, KI-water system freezing mixtures.</p>	<p>3.2 Partially miscible liquids: Phenol – Water, Triethylamine – Water systems.</p>	<p>4.2 Complex reactions – consecutive, parallel and reversible reactions (no derivation only examples) Effect of temperature on reaction rate – temperature coefficient – concept of activation energy – Arrhenius equation.</p> <p>4.3 Theories of reaction rates – Bimolecular collision theory- ARRT- Thermodynamic - aspects of ARRT. Comparison of collision theory and ARRT.</p>	
<b>Objective</b>	<p>1. Determination of molecular weight of an unknown solute from its Colligative property</p>	<p>1. Able to identify adsorption and absorption. 2. Able to differentiate physical and chemical adsorption. 3. Students will be able to differentiate the types of phases, components, degree of freedom also they will explain the different types of system</p>	<p>1. Understanding Thermal analysis and cooling curves, Compound formation with and without congruent melting point 2. Able to explain all types of solutions</p>	<p>1. Understanding reaction rates, how reaction rates change under varying conditions, and What variables affect reaction rate? 2. Understanding different theories of reaction rates 3. Able to Understand the equilibria existing between different states of matter 4. Bring out the relationship between equilibrium constants at different conditions</p>	<p>1. Will explain the chemical equilibrium and law of mass action. 1. Study of Enzymes function as biological catalysts 2. Knowledge about the effect of temperature, pH, concentration of enzyme and concentration of substrate on enzyme activity.</p>

<b>Strategies</b>	1. Fit the lecture to the students 2. Focus on topic 3. Select appropriate examples 4. Repeat points when necessary	1. Comparing adsorption with absorption 2. Lecture with examples enabling the students to identify the process 3. Giving many examples and option to identify what is what regarding Phase unit	1. Elaborating all the system and its types. 2. Explaining solutions and its laws, and its types with examples	1. Elaborating the Derivation for rate constant for I order 2. Giving options to students to derive the rate constant for second order 3. Allowing the students to find the similarities and dissimilarities of theories of reaction rates and then explaining it with examples	1. Lecture with examples/illustration
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test
<b>Assignment</b>	Colligative properties	Application of Phase rule	Problem Related to Chemical Kinetics	-	-
<b>Reference</b>	Physical Chemistry - Puri and Sharma	Physical Chemistry - Madan and Tuli	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli

## Lesson Plan 2017-2018 (Odd Sem)

Name of the faculty: Dr. R. Ramya

Subject: Data Analysis and Separation Techniques

Department: Chemistry

Class and Semester: III B.Sc. Chemistry & V Sem

Month	June	July	August	September	October
<b>Topic</b>	Unit III Introduction	<b>3.1</b> Chromatography-principles and techniques of column, paper and thin layer chromatography-Rf value- applications.	<b>3.2</b> Ion exchange chromatography-principle-experimental techniques and applications.	<b>Unit 4</b> HPLC and GC-Principle, instrumentation and applications	GC-MS and LC-MS-Principle, instrumentation and applications
<b>Objective</b>		Able to describe the principles, techniques and applications of above mentioned separation techniques	Able to describe the principles, techniques and applications of above mentioned separation techniques	Able to describe the principles, techniques and applications of above mentioned separation techniques	Able to describe the principles, techniques and applications of above mentioned separation techniques
<b>Strategies</b>	General discussion about separation techniques and its applications	Illustrating the techniques with pictorial representation of instrument. Discussion about the applications	Illustrating the techniques with pictorial representation of instrument. Discussion about the applications	Illustrating the techniques with pictorial representation of instrument. Discussion about the applications	Illustrating the techniques with pictorial representation of instrument. Discussion about the applications
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test

<b>Assignment</b>	-	General applications of Chromatography	Application of Ion exchange chromatography	-	-
<b>Reference</b>	Elements of Analytical Chemistry - R. Gopalan, P.S. Subramanian, K. Rengarajan	Elements of Analytical Chemistry - R. Gopalan, P.S. Subramanian, K. Rengarajan	Elements of Analytical Chemistry - R. Gopalan, P.S. Subramanian, K. Rengarajan	Elements of Analytical Chemistry - R. Gopalan, P.S. Subramanian, K. Rengarajan	Elements of Analytical Chemistry - R. Gopalan, P.S. Subramanian, K. Rengarajan

### **Lesson Plan 2017-2018 (Even Sem)**

**Name of the faculty: Dr. R. Ramya**

**Subject: Physical Chemistry II**

**Department: Chemistry**

**Class and Semester: III Chemistry and VI Sem**

<b>Month</b>	<b>December</b>	<b>January</b>	<b>February</b>	<b>March</b>
<b>Topic</b>	1.1 Interaction of radiation with matter, differences between thermal and photochemical processes. Laws of photochemistry: Grothus-Draper law, Stark-Einstein law, Jablonski diagram depicting various processes occurring in the excited state (internal conversion, intersystem crossing) Qualitative description of fluorescence, phosphorescence, chemiluminescence quantum yield- photosensitized reactions. 1.2 Kinetics of photochemical combinations- H <sub>2</sub> -Cl <sub>2</sub> and H <sub>2</sub> -Br <sub>2</sub> reactions.	Unit II 2.1 Conduction in metals and in electrolyte solutions, specific conductance and equivalent Variation of equivalent and specific conductance with dilution-Ostwalds dilution law. 2.2 Debye Huckel theory of strong electrolytes-Onsagar equation (no derivation) Significance and limitations. Kohlrausch law and its applications. Unit III 3.1 Migration of ions- ionic mobility- Transport number and its determination- Hittorff method and moving boundary method-abnormal transport number	3.2 Applications of conductometric measurements- determination of degree of dissociation of weak electrolytes, ionic product of water, solubility product of a sparingly soluble salt, Conductometric titrations. pH concept-buffer solutions, buffer activity-Henderson equation-applications of buffer solutions. <b>Electrochemistry – III:</b> 4.1 Solubility product and its relationship with solubility - Hydrolysis of salts- expressions for hydrolysis constant, degree of hydrolysis and pH of aqueous salt solutions. 4.2 Electromotive force- Electrolytic and Galvanic cells-	4.3 Types of reversible electrodes: gas, metal-metal ion, metal-insoluble salt- anion, amalgam and redox electrodes. Single electrode potential, standard hydrogen electrode-reference electrodes-standard electrode potential, sign conventions. Derivation of thermodynamic quantities of cell reactions ( $\Delta G$ , $\Delta H$ and $\Delta S$ ,) 5.1 Cells-types - Concentration cells with and without transference, liquid junction potential. 5.2 Applications of emf measurements-valency of doubtful ions, solubility product and activity coefficient, potentiometric titration-

			Daniel cell, Standard Weston cadmium cell reversible and irreversible cells, conventional representation of electrochemical cells. EMF of a cell and its measurement. Computation of cell EMF.- Nernst equation	Determination of pH using hydrogen, quinhydrone and glass electrodes. 5.3 Decomposition potential and overvoltage (basic concepts)- fuel cells (H <sub>2</sub> -O <sub>2</sub> cell) Lead storage battery.
<b>Objective</b>	1. To impart the students about the knowledge of thermal and photochemistry and laws of photochemistry. 2. Students will be able to identify the nature and types of photochemical reaction.	1. Able to understand the types of conductance. 2. They able to describe the above theories and laws. 3. They able to list out all the applications of conductance 4. Define and explain ionic mobility and transport number and its determination	1. They can understand the concept of pH, buffer, solubility product, hydrolysis constant... 2. They able to represent and differentiate electrolytic and galvanic cell, and all type of cells 3. Derive the Nernst equation	1. Enabling the students to identify Types of reversible electrodes, standard hydrogen electrode-reference electrodes-standard electrode potential, sign conventions. Derivation of thermodynamic quantities of cell reactions ( $\Delta G$ , $\Delta H$ and $\Delta S$ ,) Cells-types, Applications of emf measurements. Decomposition potential and overvoltage (basic concepts)- fuel cells (H <sub>2</sub> -O <sub>2</sub> cell) Lead storage battery.
<b>Strategies</b>	To begin with stating the differences between thermal and photochemical reactions. To state first and second <b>laws of photochemistry</b> . To elaborate Jablonski diagram.	Defining the terminologies and explaining in detail then solving the derivation for kinetics of photochemical reaction. Explaining with pictorial representation for conductance and discussing about various related terms Explaining all the theories and laws with illustration		Describing all the application with derivations and examples
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test

<b>Assignment</b>	-	Methods to Determine order of the reaction	Application of Buffer in industries	Application of electrochemical series
<b>Reference</b>	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli	Physical Chemistry Puri and Sharma Physical Chemistry Madan and Tuli

## Lesson Plan 2017-2018 (Even Sem)

Name of the faculty: Dr. R. Ramya

Subject: Pharmaceutical Chemistry

Department: Chemistry

Class and Semester: III B.Sc. Chemistry & VI Sem

Month	December	January	February	March
<b>Topic</b>	1.1 Definition of the following terms: drug, pharmacophore, pharmacology, pharmacopoeia, bacteria, virus, chemotherapy and vaccine.	1.2 Causes, symptoms and drug for jaundice, cholera, malaria and filaria. First aid for accidents - antidotes for poisoning. 4.1 Analgesics, Antipyretics and anti-inflammatory agents : Definition and actions - narcotic and non narcotic-morphine and its derivatives, pethidine and methadone - salicylic derivative, paracetamol, ibuprofen - disadvantages and uses.	4.2 Causes, and treatment of cancer - AIDS - AZT, DDC. 5.1 Anaesthetics - definition-local and general - volatile nitrous oxide, ether, Chloroform, cyclo propane-trichloroethylene - uses and disadvantages.	5.2 Drugs affecting CNS - Definition, distinction and examples for tranquilizers, sedatives, hypnotics, psychedelic drugs - LSD Hashish- their effects.
<b>Objective</b>	Students will be able to define all the above mentioned terminologies.	1. Students will definitely gain the knowledge about the diseases and awareness about first aid for accidents and antidotes for poisoning. 2. At the end of this class, students are in a position to classify the different agents, their specific	At the end of this class, students are in a position to classify the different agents, their specific actions, their properties and their uses.	1. At the end of this class, students are in a position to classify the different agents, their specific actions, their properties and their uses.

		actions, their properties and their uses.		
<b>Strategies</b>	Define all the terminologies	General discussion about the disease and medicinal value of Indian medicinal plants. Then elaborating the facts and importance of the topics mentioned.	General discussion about different types of drugs and their action and uses. Then elaborating the importance of the topics mentioned.	General discussion about different types of drugs and their action and uses. Then elaborating the importance of the topics mentioned.
<b>Evaluation</b>	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test	Questionnaires Spot test
<b>Assignment</b>	-	List out the commercially available Antipyretics, analgesic, Anti-inflammatory agents	Causes, Symptoms, and treatment of Cancer	List out the commercially available tranquilizers, sedative, hypnotics with chemical names.
<b>Reference</b>	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh	A Text Book of Pharmaceutical Chemistry - Jayashree Ghosh

