

LESSON PLAN OF 3RD SEMESTER CHEMICAL ENGINEERING

Discipline:- CHEMICAL	Semester:-3 RD	Name of the Teaching Faculty Prince Das
Subject:- PHYSICAL CHEMISTRY	No of Days/per Week Class Allotted:-04	
Week	ClassDay	Theory/PracticalTopics
1 st	1 st	PHYSICAL PROPERTIES OF LIQUIDS Intermolecular forces in liquid
	2 nd	Vapour pressure and its Effect on Temperature and Boiling point
	3 rd	Surface Tension
	4 th	Viscosity, Measurement of viscosity by Ostwald Method
2 nd	1 st	Refractive Index, specific Refraction
	2 nd	Determination of Refractive index by Refractometer
	3 rd	Optical Activity, measurement of Optical Activity
	4 th	Measurements of Optical Activity
3 rd	1 st	Solved problems based on physical properties of liquids
	2 nd	Chapterwise Test
	3 rd	SOLUTIONS Solution and types of solutions
	4 th	Ways of Expressing concentration
4 th	1 st	Solved numerical related to concentration
	2 nd	Solutions in Gases in Gases
	3 rd	Henry's law and solved problems
	4 th	Solution in liquids in liquids
5 th	1 st	Solubility of partially miscible liquids
	2 nd	Solubility of solid in liquid
	3 rd	Equilibrium concept, solubility curve
	4 th	Raoult's law, ideal solution
6 th	1 st	Explanation of lowering of vapour pressure and its measurements
	2 nd	Concept of elevation of boiling point and depression of freezing point
	3 rd	OSMOSIS AND OSMOTIC PRESSURE Osmosis and Osmotic Pressure with Example
	4 th	Function of semi-permeable Membrane
7 th	1 st	Osmotic pressure and Isotonic pressure
	2 nd	Theories of osmosis
	3 rd	Reverse osmosis
	4 th	The laws of Osmotic Pressure
8 th	1 st	Solved problems on Osmosis

	2 nd	Relation between Vapour pressure & Osmotic pressure
	3 rd	Relation between Vapour pressure & Osmotic Pressure
	4 th	Simple problems
9 th	1 st	Surprise Test on chapter-1,2,3
	2 nd	DISTRIBUTION LAW Introduction
	3 rd	Nernst's Distribution Law
	4 th	Equilibrium constant from distribution law
10 th	1 st	Solvent Extraction
	2 nd	Multiple Extraction
	3 rd	Concept of liquid-liquid Chromatography
	4 th	Application of Distribution law
11 th	1 st	Application of Distribution law
	2 nd	Application of Distribution law
	3 rd	Numerical problems related to Distribution law
	4 th	COLLOIDS Colloids and Types of colloidal system
12 th	1 st	Characteristics of solutions
	2 nd	Applications of colloids
	3 rd	Methods of preparation of sols & purification of sols
	4 th	Optical, kinetic and electrical properties of sols
13 th	1 st	Emulsion and types of emulsion
	2 nd	Roles of Emulsifier
	3 rd	Preparation of Emulsions and their properties
	4 th	Gel, types of gel,
14 th	1 st	Properties and Application of gel
	2 nd	ADSORPTION Introduction
	3 rd	Types of Adsorption
	4 th	Physical adsorption and Chemisorption
15 th	1 st	Application of Adsorption
	2 nd	Ion-exchange adsorption
	3 rd	Compare absorption and adsorption
	4 th	Ion-exchange application.