

Lecture Plan

Name of the college: Government College, Khandola

Name of Faculty: Dr Rajashri Mordekar

Subject: Chemistry

Paper code: CHC103

Program: SY BSc

Division: A

Academic year: 2022 - 2023

Semester: III

Total Lectures: 60

Course Objectives:

Expected Course Outcome:

Student Learning Outcome:

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
August	12/8/22	13/8/22	15	Introduction to solutions	Problem solving	Smart board	Essentials of Physical Chemistry, Bahl & Bahl Advanced Physical Chemistry Puri, Sharma and Pathania
				Raoult's law and problem solving			
	19/8/22	20/8/22		Deviations from Raoult's law			
				Temperature composition graphs of Type I			

						Smart board
				Temperature composition graphs of Type II, III		Smart board
	25/8/22	26/8/22		Azeotropes Partially miscible solutions,		
				Critical solution temperature, distillation and fractional distillation		Smart board
	9/9/22	10/9/22		Thermodynamics of ideal solutions	Drawing graph	
				Basics of Phase equilibria		Smart board
	16/9/22	17/9/22		Phase diagrams of one-component systems		
				Two component systems involving eutectics, congruent and incongruent melting points		Smart board
	23/9/22	24/9/22		Conductivity, equivalent and molar conductivity and their variation with dilution for weak and strong electrolytes. Kohlrausch's law of independent migration of ions.		

				<p>Ionic mobility and factors affecting ionic mobility.</p> <p>Transference number and its experimental determination using moving boundary methods.</p>		Smart board
	30/9/22	1/10/22		<p>Applications of conductance measurements: solubility and solubility products of sparingly soluble salts, ionic product of water,</p>		
				<p>conductometric titrations (only acid-base).</p>		Smart board
	7/10/22	8/10/22		<p>Reversible and irreversible cells.</p> <p>Concept of EMF of a cell. Measurement of</p>		

				EMF of a cell.		
				Nernst equation and its importance. Types of electrodes. Standard electrode potential.		Smart board
	14/10/22	15/10/22		Electrochemical series. Thermodynamics of a reversible cell,		
						Smart board
	21/10/22	22/10/22		Concentration cells with transference and without transference. Liquid junction potential		Smart board

				and salt bridge		
				pH determination using hydrogen electrode and quinhydrone electrode.		
	28/10/22	29/10/22		Revision		Smart board

*** Assessment Rubrics**

Component	Max Marks
ISA 1	
ISA 2	
Practical	
Project	
Semester End Exam	