Lecture Plan

Name of the college: Government College of Arts, Science and Commerce, Khandola, Marcela.

Name of Faculty:Dr Rajashri Mordekar	**Subject:** Chemistry	
Paper code:CHC105	**Program: TY BSc**	**Division:**
Academic year: 2022-23	**Semester: V**	**Total Lectures: 34**

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
July	25/7/22	26/7/22	34	Introduction to spectroscopy Interaction of radiation with matter	Problems to solve	Smart Board	J. N . Gurtu, Physical Chemistry Vol III Gurdeep Raj, Advanced Physical Chemistry,
August	1/8/22	2/8/22		Basics of microwave spectroscopy	Preparation of own notes	Smart Board	

	8/8/22	9/8/22		Moment of Inertia derivation Problems, Selection rule, , spectral intensities	Problems to solve	Smart Board
	16/8/22			Energy equation for Rigid rotor, isotopic substn . Problem Solving	Preparation of own notes	Smart Board
	22/8/22	23/8/22		Non rigid rotor, limitations of spectroscopy Applications of microwave spectroscopy	Problems to solve	Smart Board
	29/8/22			Test on microwave spectroscopy Intro to vibrational spectroscopy	Preparation of own notes	Smart Board
	5/9/22	6/9/22		Energy levels of harmonic oscillator Computation of K, Anharm. oscillator	Preparation of own notes	Smart Board
	12/9/22	13/9/22			Problems to solve	Smart Board

				Fundamental frequencies, hot bands etc. Degrees of freedom-polyatomic molecules group frequencies		Smart Board
	19/9/22	20/9/22		Vibration-rotation spectroscopy Vibration-rotation spectroscopy	Preparation of own notes	Smart Board
	26/9/22	27/9/22		Raman effect, Qualitative treatment of rotational raman	Preparation of own notes	Smart Board
	3/10/22	4/10/22		Vibrational raman Quantum and classical theory, mutual exclusion principle	Preparation of own notes	Smart Board
	10/10/22	11/10/22		Ion selective electrodes Construction and applications	Preparation of own notes	Smart Board
	17/10/22	18/10/22		Decomposition potential Overvoltage	Preparation of own notes	Smart Board
	31/10/22	1/11/22		Fuel cells Fuel cells	Preparation of own notes	Smart Board
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	7/11/22	8/11/22		Fuel cells Electrochemical sensors	Preparation of own notes	Smart Board	
	14/11/22	15/11/22		Revision	Solving question bank	Smart Board	

*** Assessment Rubrics**

Component	Max Marks
ISA 1	10
ISA 2	10
Practical	50
Project	-
Semester End Exam	80