S V R K GOVERNMENT DEGREE COLLEGE :: NIDADAVOLE
TABLE – A – CURRICULAR PLAN – LECTURER WISE

NAME OF THE LECTURER : G. RAHUL
DEPARTMENT : CHEMISTRY **CLASS: III B.SC (BZC) YEAR: 2022-2023** **SEMESTER: V** **PAPER : V1(B)**

SERIAL NUMBER	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT /VALUE ADDITION	CURRICULAR ACTIVITY				CO-CURRICULAR ACTIVITIY				REMARKS
					ACTIVITY	HOURS ALLOTED	WHETHER CONDUCTED	IF NOT, ALTERNATIVE DATE	ACTIVITY	HOURS ALLOTED	WHETHER CONDUCTED	IF NOT, ALTERNATIVE DATE	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	3rd week	4	**Unit-1: Quantitative analysis-1** 1. A brief introduction to analytical methods in chemistry.	Analysis, types of analysis	Lecture	4							
	4th week	4	2. Principles of volumetric analysis, concentration terms- Molarity, Molality, Normality, v/v, w/v, ppm and ppb, preparing solutions- Standard solution, primary standards and secondary standards.		Demonstration	3			Audio visual quiz	1			
Dec	1st week	4	3. Description and use of common laboratory apparatus- volumetric flask, burette, pipette, beakers, measuring cylinders		Power point	4							
	2nd week	4	**Unit-2: Quantitative analysis-2** 1. Principles of volumetric analysis: Theories of acid-base (including study of acid-base titration curves).	Conductometric, Potentiometric titrations	Digital class	3			Assignment	1			
	3rd week	4	redox, complex metric, iodometric and precipitation titrations-choice of indicators for the saturations.		Demonstration	4							
	4th week	4	2. Principles of gravimetric analysis: precipitation, coagulation, peptization, co precipitation, post precipitation, digestion, filtration, and washing of precipitate, drying and ignition.		Power point Mid1	3 1							

	1st week	4	**Unit-3: Treatment of analytical data** Types of errors- Relative and absolute, significant figures and its importance, accuracy - methods of expressing accuracy,	Applications of significant figures	Lecture	4							
Jan	2nd week	4	errors- Determinate and indeterminate and minimization of errors, precision-methods of expressing precision, standard deviation and confidence interval.		Lecture	3			Student seminar	1			
	3rd week	4	**Unit-4: separation techniques** 1. Solvent Extraction: Introduction, principle, techniques, factors affecting solvent extraction	Applications of solvent extraction	Power point	3			Assignment	1			
	4th week	4	, Batch extraction, continuous extraction and counter current extraction. Synergism. Application- Determination of Iron (III).		Power point	4							
	1st week	4	2. Ion Exchange method: Introduction, action of ion exchange resins, applications.		Lecture Mid2	3 1							
Feb	2nd week	4	**UNIT-5: Analysis of water** Determination of dissolved solids, total hardness of water	BOD	Demonstration	4							
	3rd week	4	Turbidity, alkalinity, Dissolved oxygen, COD,.		Power point	3			Student seminar				
	4th week	4	determination of chloride using Mohr's method		Demonstration	4							
Mar	1st week	4	Revision		Mind mapping	4							
	2nd week	4	Revision		Question and answer method	2			Pre final	2			

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