Prasad V. Potluri Siddhartha Institute of Technology, Kanuru, Vijayawada

PVP20

Department of Freshman Engineering

Chemistry of Materials Lab

Course Code	20BS1254	**Year**	I	**Semester**	II
Course Category	Basic Science	**Branch**	CE	**Course Type**	Lab
Credits	1.5	**L-T-P**	0-0-3	**Prerequisites**	Nil
Continuous Internal Evaluation	15	**Semester End Evaluation**	35	**Total Marks**	50

Course Outcomes

Upon successful completion of the course, the student will be able to

CO1	Apply the acquired knowledge to estimate the amount of calcium, Chromium in a given sample (L3)
CO2	Analyze the quality of ground water sample, and active chlorine in bleaching powder (L4)
CO3	Calculate the strength of an acid in lead-acid storage cell.(L3)
CO4	Compare the viscosities and surface tension of different liquids(L4)
CO5	Analyze the compounds and examine the Preparation of a polymer (L4)
CO6	Make an effective report based on experiments

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3		2				3					1		1
CO2	3		2				3					1		1
CO3	3		2				3					1		1
CO4	3		2				3					1	2	1
CO5	3		2				3					1		1
CO6	3		2				3			3		1		1

Syllabus

Expt. No.	Syllabus	Mapped CO's
1	Estimation of calcium in Portland cement	CO1,CO6
2	Determination of chromium (VI) in potassium dichromate	CO1,CO6
3	Determination of viscosity of a liquid	CO4,CO6
4	Determination of surface tension of a liquid	CO4,CO6
5	Determination of sulphuric acid in lead-acid storage cell	CO3,CO6
6	Determination of strength of an acid by pH metric method	CO2,CO6
7	Determination of Hardness of a ground water sample	CO2,CO6
8	Estimation of active chlorine content in Bleaching powder	CO2,CO6
9	Thin layer chromatography (paper chromatography)	CO5,CO6
10	Preparation of Phenol-formaldehyde resin	CO5,CO6

Learning Resources

Text Books

1. Mendham J, Denney RC, Barnes JD, Thosmas M and Sivasankar B Vogel's Quantitative Chemical Analysis 6/e, Pearson publishers(2000).

Reference Books

1. N.KBhasin and Sudha Rani Laboratory Manual on Engineering Chemistry 3/e, DhanpatRai

Publishing Company(2007).
e- Resources & other digital material
1. https://nptel.ac.in/courses/105105178/ 2. http://202.53.81.118/course/view.php?id=82