17BSC401P					Analytical Chemistry-I Lab					
Teaching Scheme					Examination Scheme					
L	T	P	C	Hrs/Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
0	0	2	1	2				50	50	100

COURSE OBJECTIVES

- Care about safety precautions during work in the laboratory.
- Understand the scientific back ground of the practical's for industrial and domestic use.
- Comprehend the adsorption principle and its application.
- Experience with spectroscopic techniques to characterize the synthesized complex.
- Evaluating abilities in line with the modern trends in science and technology.

LIST OF EXPERIMENTS

1. To determine soil pH by using a pH-meter.
2. To determine the strength of given mixture of HCl and CH_3COOH by conductometric titration.
3. Gravimetric determination of Sulphate as Barium Sulphate.
4. Spectrophotometric determination of Iron by complexing with 1,10 –Phenanthroline .
5. Determination of hexavalent chromium by complexing with di-phenyl carbazide, using a spectrophotometer.
6. Estimation of oil and grease from a given sample after solvent extraction.
7. Determination of distribution coefficient of an organic acid between water and an organic solvent.
8. To determine the Chemical Oxygen demand (COD) in a given water sample.
9. Determination of elements (e.g., Cu) in aqueous solutions by Atomic absorption spectrometer.
10. Adsorption of Acetic acid on charcoal.

COURSE OUTCOMES

On completion of the course, student will be able to

CO1– Capable of designing set of new experiment.
CO2– Comprehend conductometric titration to calculate the unknown concentration.
CO3– Understand the electrode functional and calculate the pH of any unknown solution.
CO4– Able to determine the amount of oxygen in different water sample and its significance.
CO5– Apply the atomic absorption spectroscopy to investigate the different industrial solution.
CO6– Create a new scientific method to be use in the domestic and industrial purpose.

TEXT/REFERENCE BOOKS

1. A. I. Vogel, A text book of quantitative Inorganic Analysis, ELBS.
2. A. K. Nad, B. Mahapatra & A. Ghosal, An Advanced Course in Practical Chemistry, New Central, 2007. Vogel's Text Book of Practical Organic Chemistry (5th Edn).

SEMESTER EXAMINATION PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

LW(Daily lab performance plus journal maintain each 25 marks) 50 Marks
LE (Viva-voce plus Lab examination each 25 marks) 50 Marks