PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY,KANUR,VIJAYAWADA-7
(AUTONOMOUS)
DEPARTMENT OF FRESHMAN ENGINEERING
PVP-14 REGULATION
ENGINEERING PHYSICS&ENGG CHEMISTRY LAB
(EEE,IT,CSE & ECE)
(COMMON FOR EC1L2,CS2L1,IT2L1,EEE2L1)

Credits:2

Lab: 3 periods/week   **Internal assessment: 25 marks**

Semester end examination: 50

COURSE OBJECTIVES

(A)   ENGINEERING PHYSICS LAB

  The entire course is designed to have the knowledge of properties of matter ,sound ,optics , electricity and magnetism and electronics .

1) Students will learn to determine elastic modulai .
2) Students will learn to determine wavelength of source using grating.
3) Students will know the procedure to determine radius of curvature of a lens.
4) Students will learn the procedure to determine time constant of RC Circuits.
5) Students will have the knowledge about zener diode by drawings V-I Characteristics .
6) Students will learn to determine the energy gap of a semi conductor .

AND

(B)   ENGINEERING CHEMISTRY LAB

  To make student

1) Familiar with quality and parameters of water samples, useful for drinking,effluent treatment and agriculture purposes.
2) Aware of preparation of some thermosetting plastic like Bakelite.

COURSE OUTCOMES

  (A) ENGINEERING PHYSICS LAB:

After completion of the course the student will be able to

CO1) understand mechanical properties and determine the rigidity modulus.

CO2) comprehend optical phenomena such as interference and diffraction and calculate the wavelength and radius of curvature of planoconvex lens.

CO3) acquire the knowledge of electronic principles and evaluate the time constant, energy band gap and Zener breakdown.

AND

  (B) ENGINEERING CHEMISTRY LAB

  At end of the course the student is able to

  CO4) Determine parameters like hardness , alkalinity, turbidity and D.O of water sample which are useful for domestic, agriculture and industrial purposes.

 CO5) Understand nature of the soil from PH values which is useful for agriculture.

CO6) Prepare plastics like Bakelite and understand their applications in indust**in various industries.**

LIST OF EXPERIMENTS
(COMMON FOR EEE,ECE,CSE AND IT)
The following are the experiments

A) ENGINEERING PHYSICS LAB
1) Determination of rigidity modulus of the given wire using Torsional Pendulum.
2) Determination of wavelength of a monochromatic source using Diffraction Grating.
3) Determination of radius of curvature of a given plano convex lens by Newton Rings method.
4) Determination of time constant of a R-C Circuit.
5) Draw the Zener Diode V-I Characteristics and determine the breakdown voltage .
6) Determination of band gap of a Semiconductor using p-n junction diode.

B) ENGINEERING CHEMISTRY LAB

1) Determination of Total Hardness of water sample using EDTA.
2) Determination of Total alkalinity of water sample.
3) Determination of D.O. in water.
4) Measurement of Turbidity of water sample.
5) PH of Soil and fruits.
6) Preparation of Phenol-Formaldehyde resin.