EC-151

PHYSICS LAB

L T P C - - 3 2

COURSE OBJECTIVES:

- 1. To familiarize the students with electronic measuring instruments..
- 2. To measure various parameters of the optical components.
- 3. Design/problem solving skills, practical experience are developed through laboratory assignments which provide opportunities for developing team in multidisciplinary environments.
- 4. To understand the general, scientific concepts and a wide idea on various components & instruments required for technology.

COURSE OUTCOMES:

After successful completion of the course, the students will be able to

- 1. Describe the use of CRO, signal generator, spectrometer for making measurements.
- 2. Evaluate the optical components using principles of interference & diffraction.
- 3. Examine the selectivity parameter in electrical circuits.
- 4. Function effectively as an individual member to examine and analyze the data.

List of Experiments:

- 1. Interference fringes measurement of thickness of a foil using wedge method.
- 2. Newton's rings measurement of radius of curvature of Plano convex lens.
- 3. Lissajous' figures calibration of an audio oscillator.
- 4. Photo cell characteristic curves and determination of stopping potential.
- 5. Diffrraction grating measurement of wavelengths.
- 6. Torsional pendulum determination of Rigidity modulus of a wire.
- 7. Photo-Voltaic cell determination of fill factor.
- 8. Series LCR resonance circuit determination of Q factor.
- 9. Sonometer determination of A.C. frequency.
- 10. Laser determination of single slit diffraction.
- 11. B H Curve Variation of magnetic field along the axis of a circular current carrying coil.
- 12. Optical Fiber Determination of Numerical Aperture and Acceptance Angle.

REFERENCE BOOK : Physics Lab Manual , R.V.R. & J.C. CE, Guntur

Note: A minimum of 10(Ten) experiments have to be performed and recorded by the candidate to attain eligibility for Semester End Practical Examination.