

# PHYSICS SESSIONAL

## COURSE NO: Phy 102

Department of EEE

(LEVEL-1, TERM-2)

- 1-W<sub>1</sub>** Determination of line frequency by Lissajous figures using an oscilloscope and a function generator and verification of the calibration of the calibration of time/div knob at a particular position for different frequencies.
- 2-W<sub>3</sub>** Determination of the spring constant and the effective mass of a loaded spring.
- 3-H<sub>2</sub>** Determination of the pressure-coefficient of air by a constant volume air thermometer.
- 4-H<sub>4</sub>** Determination of the thermal conductivity of a bad conductor by Lee's method.
- 5-O<sub>3</sub>** Determination of the refractive index of the material of a prism with the help of a spectrometer.
- 6-O<sub>4</sub>** Determination of the radius of curvature of a Plano-convex lens by the Newton's ring method.
- 7-M<sub>1</sub>** Determination of the threshold frequency for the material of a photo cathode and hence find the value of the Planck's constant.
- 8-M<sub>2</sub>** Determination of the linear absorption coefficient and mass absorption coefficient of Aluminum using a <sup>137</sup>Cs radioactive source and verification of the inverse square law of gamma radiation.
- 9-H<sub>5</sub>** To plot the thermo-electromotive force vs. temperature (Calibration) curve for a given thermocouple.
- 10-H<sub>6</sub>** Determination of the melting point of a solid using the calibration curve obtained in experiment H<sub>5</sub>.
- 11-E<sub>3</sub>** To verify Biot-Savart law and Tangent law.
- 12-G<sub>3</sub>** Determination of the rigidity modulus of the material of a wire by the static method.
- 13-O<sub>5</sub>** Determination of the specific rotation of sugar solution by a polarimeter.
- 14-H<sub>7</sub>** Determination of the mechanical equivalent of heat by the electrical method.