

**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- E<sub>3</sub>** Verification of Biot-Savart law and Tangent law
- 10- E<sub>6</sub>** Determination of dielectric constant of materials using a parallel plate capacitor
- 11-H<sub>5</sub>** Calibration of a given thermocouple
- 12-H<sub>6</sub>** Determination of the melting point of a solid using the calibration curve obtained in experiment H<sub>5</sub>
- 13- O<sub>5</sub>** Determination of the specific rotation of sugar solution by a polarimeter
- 14-VL-M<sub>3</sub>** Determination of lattice constant of NaCl crystal using an X-ray diffraction simulator
- 15-H<sub>7</sub>** Determination of the mechanical equivalent of heat by the electrical method