

Curriculum Plan
Semester-II , 2025-26
B.Sc H Phy I year
PAPER – Electrical Circuit Analysis
(1 Periods per week)
Prof. Sudha Gulati

Topic	Allocation of Lectures	Month wise schedule followed by the Department	Tutorial/Assignment/ Presentation etc.
DC Transient Analysis: Charging and discharging with initial charge in RC circuit, RL circuit with initial current, time constant, RL and RC Circuits with source	3 lectures	January	Problems on DC Transient Analysis, RC and RL circuit
AC Circuit Analysis: Sinusoidal voltage and current, Definitions of instantaneous, peak to peak, root mean square and average values, form factor and peak factor (for half-rectified and full-rectified sinusoidal wave, rectangular wave and triangular wave)	4 lectures	January - February	Problems based on AC Circuit Analysis Assignment
voltage-current relationship in resistor, inductor and capacitor, phasor, complex impedance, power in AC circuits, sinusoidal circuit analysis for RL, RC	4 lectures	Feb. - March	Problems related to AC circuits : RC and RL Revision
RLC Circuits, resonance in series and parallel RLC Circuits (Frequency Response, Bandwidth, Quality Factor), selectivity, application of resonant circuits	4 lectures	March- April	Problems related series and parallel resonance Test Revision