Control System Laboratory	
Sl. No.	**Title of the Experiments**
01	Familiarization with MAT-Lab control system tool box, MAT-Lab- Simulink tool box & PSPICE.
02	Determination of Step response for first order & Second order system with unity feedback with the help of CRO &calculation of control system specification, Time constant, % peak overshoot, settling time etc. from the response.
03	Simulation of Step response & Impulse response for type-0, type-1 & Type-2 system with unity feedback using MATLAB & PSPICE.
04	Determination of Root locus, Bode plot, Nyquist plot using MATLAB control system tool box for a given system &stability by determining control system specification from the plot.
05	Determination of PI, PD and PID controller action of first order simulated process.
06	Determination of approximate transfer functions experimentally from Bode plot.
07	Evaluation of steady state error, setting time, percentage peak overshoot, gain margin, phase margin with addition of Lead, Lag, Lead-lag compensator.
08	Study of a practical position control system obtaining closed step responses for gain setting corresponding to over-damped and under-damped responses. A. Determination of rise time and peak time using individualized components by simulation. B. Determination of un-damped natural frequency and damping ratio from experimental data.
09	Analysis of performance of Lead, Lag and Lead-Lag compensation circuits for a given system using simulation
10	Determination of Transfer Function of a given system from State Variable model and vice versa
11	Analysis of performance of a physical system using State variable technique by simulation.
12	Study of step response and initial condition response for a single input, two-output system in SV form by simulation.