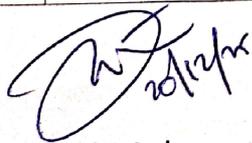


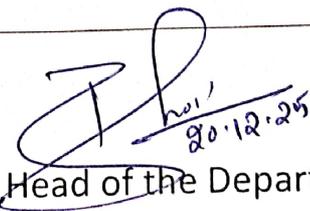
ACADEMIC SESSION: 2025-26

Discipline: Electrical engineering	Semester: 4 th	Name of the Teaching Faculty: Sri Chandramani Mahapatra (Lect. Stage II)
Subject: Linear Control System Lab	No. of days / week class allotted	Semester From date: 22/12/2025 to 18/04/2026 Nos. of Weeks per semester: 15
Week	Class Day	Laboratory/ Practical Topics
1 ST	1 st	1. Different Toolboxes in software,
	2 nd	2. Introduction to Control Systems Toolbox.
2 ND	1 st	3. Determine transpose, inverse values of given matrix.
	2 nd	3. Determine transpose, inverse values of given matrix. Cont.
3 RD	1 st	4. Plot the pole-zero configuration in s-plane for the given transfer function.
	2 nd	4. Plot the pole-zero configuration in s-plane for the given transfer function. Cont.
4 TH	1 st	REVISION
	2 nd	5. Plot unit step response of given transfer function and find peak overshoot, peak time.
5 TH	1 st	5. Plot unit step response of given transfer function and find peak overshoot, peak time. Cont.
	2 nd	6. Plot unit step response and to find rise time and delay time.
6 TH	1 st	6. Plot unit step response and to find rise time and delay time. Cont.
	2 nd	REVISION
7 TH	1 st	7. Plot root locus of given transfer function and to find out S, Wd, Wn at given root & to discuss stability. Cont.
	2 nd	7. Plot locus of given transfer function, locate closed loop poles for different values of k.
8 TH	1 st	8. Plot locus of given transfer function, locate closed loop poles for different values of k. Cont.
	2 nd	8. Plot root locus of given transfer function and to find out S, Wd, Wn at given root & to discuss stability
9 TH	1 st	REVISION
	2 nd	9. To study speed Torque characteristics of • AC servo motor

10 TH	1 st	9.To study speed Torque characteristics of • DC servomotor.
	2 nd	10. To study and demonstrate • Simple motor driven closed loop DC position control system. • Simple closed loop speed control system.
11 TH	1 st	10. To study and demonstrate • Simple motor driven closed loop DC position control system. • Simple closed loop speed control system.
	2 nd	REVISION
12 th	1 st	11. To study the lead, lag, lead-lag compensators and to draw their magnitude and phase plots.
	2 nd	11. To study the lead, lag, lead-lag compensators and to draw their magnitude and phase plots.
13 th	1 st	11. To study the lead, lag, lead-lag compensators and to draw their magnitude and phase plots.
	2 nd	12. To study behavior of 1st order, 2nd order type 0, type 1 system. • Step, ramp and Impulse response of first order systems. • Step, ramp and Impulse response of second order
14 th	1 st	12. To study behavior of 1st order, 2nd order type 0, type 1 system. • Step, ramp and Impulse response of first order systems. • Step, ramp and Impulse response of second order
	2 nd	12. To study behavior of 1st order, 2nd order type 0, type 1 system. • Step, ramp and Impulse response of first order systems. • Step, ramp and Impulse response of second order
15 th	1 st	REVISION
	2 nd	RECORD SUBMISSION



Chandramani Mahapatra
Lect. Stage-II (Electrical Engg.)



Head of the Department
Electrical Engg., GP Sonapur