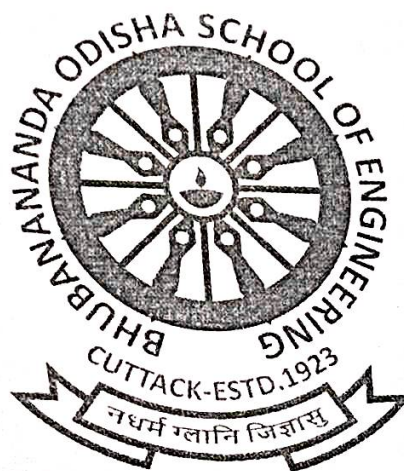


**DEPARTMENT OF APPLIED ELECTRONICS &
INSTRUMENTATION ENGG.**

**LESSON PLAN
OF
CONTROL SYSTEM (TH.4)
4TH SEMESTER
ACADEMIC YEAR: 2025-26 (SUMMER)**

**BY
RASHMITA GOUDA
LECTURER STAGE - I(AE&I)**



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Period	Date	Topic to be overed
1	24.12.2025	UNIT-1:Open loop-and closed loop control systems: Feedback principle
2	26.12.2025	Transfer function of LTI systems-Mechanical and Electromechanical systems
3	30.12.2025	Force voltage and force current analogy.
4	01.01.2026	Block diagram representation - block diagram reduction –
5	01.01.2026	Block diagram reduction problems
6	02.01.2026	Signal flow graph - Mason's gain formula - characteristic equation.
7	06.01.2026	Signal flow graph problem
8	08.01.2026	Signal flow graph - Mason's gain formula - characteristic equation.
9	09.01.2026	RIVISION OF UNIT-1
10	13.01.2026	CLASS TEST-1
11	15.01.2026	UNIT-2:Time domain analysis of control systems: Standard test signals
12	16.01.2026	Transient and steady state responses - time domain specifications - first order systems.
13	20.01.2026	Step responses of first order systems.
14	22.01.2026	Transient and steady state responses - time domain specifications - second order systems.
15	27.01.2026	Transient and steady state responses - time domain specifications - second order systems.
16	30.01.2026	Step responses of second order systems.
17	03.02.2026	Step responses of second order systems.
18	05.02.2026	RIVISION OF UNIT-2
19	06.02.2026	UNIT-3: Error analysis Steady state error analysis - static error coefficient of type 0, 1, 2 systems
20	10.02.2026	Static error coefficient of type 0, 1, 2 systems
21	12.02.2026	Dynamic error coefficients.
22	13.02.2026	Concept of stability
23	17.02.2026	Time response for various pole locations -
24	19.02.2026	Stability of feedback system - Routh's stability criterion.
25	20.02.2026	Problems on Routh's stability criterion.
26	24.02.2026	Problems on Routh's stability criterion.
27	26.02.2026	RIVISION OF UNIT-3

27 03.02.2026 Step responses of second order systems.

28	27.02.2026	UNIT-4: Root locus and Polar plot 4.1 General rules for constructing Root loci –
29	05.03.2026	Stability from root loci - effect of addition of poles and zeros. Lag,
30	06.03.2026	Lead and Lead-Lag compensators,
31	10.03.2026	Lead and Lead-Lag compensators,
32	12.03.2026	General rules for constructing Polar Plot ,
33	13.03.2026	Problems on Polar Plot
34	17.03.2026	Nyquist stability criterion-
35	19.03.2026	Nichols chart - Non-minimum phase system - transportation lag.
36	20.03.2026	RIVISION OF UNIT-4
37	24.03.2026	CLASS TEST-2(UNIT-3&UNIT-4)
38	26.03.2026	UNIT-5:Frequency domain analysis Frequency domain specifications
39	31.03.2026	Analysis based on Bode plot - Log magnitude vs. phase plot,
40	02.04.2026	Problems on Bode Plot
41	07.04.2026	State space model
42	09.04.2026	State space model
43	10.04.2026	State Transition matrix
44	16.04.2026	RIVISION OF UNIT-5
45	17.04.2026	Question Answer Discussion

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Signature of Faculty


Signature of HOD