

LESSON PLAN-2023-2024
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline- ELECTRICAL	Semester-6TH	Name of teaching faculty-ARUN KU. PRUSTY
SUBJECT- CSE	No of days/ per week class allotted-	SEM From date-16.01.2024 No of weeks-
Week	Class day	Theory Topics
		SIGNAL FLOW GRAPH
4TH	1/16/2024	1.1 Review of block diagrams and transfer functions of multivariable systems.
	1/17/2024	1.1 Review of block diagrams and transfer functions of multivariable systems.
	1/18/2024	1.2 Construction of signal flow graph.
	1/19/2024	solve problem regarding sfg
	1/20/2024	solve problem regarding sfg
	1/22/2024	1.3 Basic properties of signal flow graph.
	1/23/2024	1.5 Construction of signal flow graph for control system.
	1/24/2024	TIME RESPONSE ANALYSIS.
1ST	1/25/2024	2. 1 Time response of control system.
	1/27/2024	2. 2 Standard Test signal.
	1/29/2024	2.2.1. Step signal,
	1/30/2024	2.2.2. Ramp Signal
	1/31/2024	2.2.3. Parabolic Signal
2ND	2/01/2024	2.2.4. Impulse Signal
	2/02/2024	2. 3 Time Response of first order system with:2.3.1. Unit step response
	2/03/2024	2.3.2. Unit Impulse response.
	2/05/2024	2. 4 Time response of second order system to the unit step input.
	2/06/2024	2.4.1. Time response specification.
	2/07/2024	2.4.2. Derivation of expression for rise time, peak time, peak overshoot
	2/08/2024	Settling time and steady state error.
	2/09/2024	2.4.3. Steady state error and error constants.
	2/10/2024	2. 5 Types of control system. (Steady state errors in Type-0, Type-1, Type-2 system
	2/12/2024	continue
4TH	2/13/2024	2. 6 Effect of adding poles and zero to transfer function.
	2/14/2024	2. 7 Response with P, PI, PD and PID controller.
	2/15/2024	continue
	2/16/2024	continue
	2/19/2024	ANALYSIS OF STABILITY BY ROOT LOCUS TECHNIQUE

	2/20/2024	3. 1 Root locus concept.	
5TH	2/21/2024	3. 2 Construction of root loci.	
	2/22/2024	3. 3 Rules for construction of the root locus.	
	2/25/2024	solving numericals	
1ST	2/26/2024	solving numericals	
	2/27/2024	solving numericals	
	2/28/2024	3. 4 Effect of adding poles and zeros to $G(s)$ and $H(s)$	
	2/29/2024	FREQUENCY RESPONSE ANALYSIS.	
	3/01/2024	4. 1 Correlation between time response and frequency response.	
2ND	3/02/2024	4. 2 Polar plots	
	3/04/2024	examples	
	3/05/2024	continue	
	3/06/2024	solving numericals	
	3/07/2024	solving numericals	
	3/09/2024	4. 3 Bode plots.	
	3RD	3/11/2024	continue
			continue
	3/12/2024	solving numericals	
	3/13/2024	solving numericals	
	3/14/2024	4. 4 All pass and minimum phase system.	
	3/15/2024	4. 5 Computation of Gain margin and phase margin.	
	3/16/2024	4. 6 Log magnitude versus phase plot.	
4TH	3/18/2024	4. 7 Closed loop frequency response.	
	3/19/2024	NYQUIST PLOT	
	3/20/2024	5.5 Assessment of relative stability.	
	3/21/2024	5.1 Principle of argument.	
	3/22/2024	5.2 Nyquist stability criterion.	
	3/23/2024	5.3 Niquist stability criterion applied to inverse polar plot.	
	1ST	3/26/2024	5.4 Effect of addition of poles and zeros to $G(S)$ $H(S)$ on the shape of Niquist plot.
3/27/2024		5.6 Constant M and N circle	
3/28/2024		continue	
3/29/2024		continue	
3/30/2024		5.7 Nicholas chart.	
4/01/2024		5.7 Nicholas chart.	
4/02/2024		solving numericals	
4/03/2024		doubt clearing class	

Manoj K
HOD

Electrical Engineering
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