LESSON PLAN-2021-2022 (SUMMER-2022)

SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline-ELECTRICAL	Semester-6TH	Name of teaching faculty-Sasmita kumari das
SUBJECT-CSE (CONTROL SYSTEM)	No of days/ per week class alloted- 4	SEM From date-14/03/2022 No of weeks-
Week	**Class day**	**Theory Topics**
3RD		SIGNAL FLOW GRAPH
	3/14/2022	1.1 Review of block diagrams and transfer functions of multivariable systems.
	3/15/2022	1.1 Review of block diagrams and transfer functions of multivariable systems.
	3/16/2022	1.2 Construction of signal flow graph.
	3/17/2022	solve problem regarding sfg
	3/18/2022	solve problem regarding sfg
4TH	3/21/2022	1.3 Basic properties of signal flow graph.
		1.5 Construction of signal flow graph for control system.
	3/22/2022	**TIME RESPONSE ANALYSIS.**
	3/23/2022	2 . 1 Time response of control system.
	3/24/2022	2 . 2 Standard Test signal.
	3/25/2022	2.2.1. Step signal,
5TH	3/26/2022	2.2.2. Ramp Signal
	3/28/2022	2.2.3. Parabolic Signal
	3/29/2022	2.2.4. Impulse Signal
	3/30/2022	2 . 3 Time Response of first order system with:2.3.1. Unit step response
	3/31/2022	2.3.2. Unit impulse response.
2ND	4/2/2022	2 . 4 Time response of second order system to the unit step input.
	4/4/2022	2.4.1. Time response specification.
	4/5/2022	2.4.2. Derivation of expression for rise time, peak time, peak overshoot
	4/6/2022	settling time and steady state error.
		2.4.3. Steady state error and error constants.
	4/7/2022	2 . 5 Types of control system.[Steady state errors in Type-0, Type-1, Type-2 system
	4/8/2022	continue
3RD	4/9/2022	2 . 6 Effect of adding poles and zero to transfer function.
	4/11/2022	2 . 7 Response with P, PI, PD and PID controller.
	4/12/2022	continue
	4/13/2022	continue
	4/16/2022	ANALYSIS OF STABILITY BY ROOT LOCUS TECHNIQUE
4TH	4/18/2022	. 3 . 1 Root locus concept.
	4/19/2022	3 . 2 Construction of root loci.
	4/20/2022	3 . 3 Rules for construction of the root locus.
		solving numericals
	4/21/2022	solving numericals

	4/22/2022	solving numericals
5TH	4/23/2022	3 . 4 Effect of adding poles and zeros to G(s) and H(s)
	4/25/2022	FREQUENCY RESPONSE ANALYSIS.
	4/26/2022	4 . 1 Correlation between time response and frequency response.
	4/27/2022	4 . 2 Polar plots.
	4/28/2022	examples
	4/29/2022	continue
1ST	4/30/2022	solving numericals
	5/2/2022	solving numericals
	5/4/2022	4 . 3 Bode plots.
	5/5/2022	continue
	5/6/2022	continue
		solving numericals
	5/7/2022	solving numericals
2ND	5/9/2022	4 . 4 All pass and minimum phase system.
	5/10/2022	4 . 5 Computation of Gain margin and phase margin.
	5/11/2022	4 . 6 Log magnitude versus phase plot.
	5/12/2022	4 . 7 Closed loop frequency response.
	5/13/2022	NYQUIST PLOT
3RD	5/14/2022	5.5 Assessment of relative stability.
	5/16/2022	5.1 Principle of argument.
	5/17/2022	5.2 Nyquist stability criterion.
	5/18/2022	5.3 Niquist stability criterion applied to inverse polar plot.
		5.4 Effect of addition of poles and zeros to G(S) H(S) on the shape of Niquist plot.
	5/19/2022	5.6 Constant M and N circle
	5/20/2022	continue
4TH	5/21/2022	continue
	5/23/2022	5.7 Nicholas chart.
	5/24/2022	5.7 Nicholas chart.
		solving numericals
		doubt clearing class

HOD

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