DISCIPLINE-ELECTRICAL ENGG	SEMESTER-6th	NAME OF THE FACULTY - BASUDEV BARICK	
SUB -GTD	NO OF DAYS PER WEEK CLASS ALLOTED-5	SEMSTER FROM :14/02/2023 to 30/05/2023	
WEEK	CLASS DAY	THEORY	STATUS
1ST	1ST DAY	Classification of Control system	
	2nd DAY	Open loop system & Closed loop system and its comparison	
	3rd DAY	Effects of Feed back and Standard test Signals	
	4th DAY	Servomechanism	
	5th DAY	Transfer Function & Impulse response	
2nd	1ST DAY	Properties, Advantages & Disadvantages of Transfer Function Poles & Zeroes of transfer Function	
	2nd DAY	Simple problems of transfer function of network.	
	3rd DAY	Mathematical modeling of Electrical Systems(R, L, C, Analogous systems	
	4th DAY	Components of Control System & Gyroscope	
	5th DAY	Synchros, Tachometer	
3rd	1ST DAY	DC servomotors	
	2nd DAY	A,C servomotors	
	3rd DAY	Definition: Basic Elements of Block Diagram	
	4th DAY	Canonical Form of Closed loop Systems	
	5th DAY	Rules for Block diagram reduction and Procedure for of Reduction of Block Diagram	
4th	1ST DAY	Simple Problem for equivalent transfer function	
	2nd DAY	Simple Problem for equivalent transfer function	
	3rd DAY	Basic Definition in Signal Flow Graph & properties	
	4th DAY	Construction of Signal Flow graph from Block diagram	
	5th DAY	Mason's Gain formula	
5th	1ST DAY	Simple problems in Signal flow graph for network	
	2nd DAY	Time response of control system.	
	3rd DAY	Standard Test signal Step signal,Ramp Signal Parabolic Signal Impulse Signal	
	4th DAY	3 Time Response of first order system with Unit step response	
	5th DAY	4 Time Response of first order system with Unit impulse response	
6th	1ST DAY	Time response of second order system to the unit step input.	
	2nd DAY	Time response specification	
	3rd DAY	Derivation of expression for rise time, peak time, peak overshoot, settling time and steady state error	
	4th DAY	Steady state error and error constants.	
	5th DAY	Types of control system.[Steady state errors in Type-0, Type-1, Type-2 system]	
7th	1ST DAY	Response with P, PI, PD and PID controller.	
	2nd DAY	CLASS TEST -1	
	3rd DAY	Root locus concept.	
	4th DAY	Root locus concept.	
	5th DAY	Construction of root loci.	

WEEK	CLASS DAY	THEORY	STATUS
8th	1ST DAY	Construction of root loci.	
	2nd DAY	Rules for construction of the root locus.	
	3rd DAY	Rules for construction of the root locus.	
	4th DAY	Root locus construction of a open loop transfer function	
	5th DAY	Root locus construction of a open loop transfer function	
9th	1ST DAY	Effect of adding poles and zeros to G(s) and H(s).	
	2nd DAY	Effect of adding poles and zeros to G(s) and H(s).	
	3rd DAY	frequency response analysis	
	4th DAY	frequency response analysis	
	5th DAY	Correlation between time response and frequency response.	
10th	1ST DAY	polar plots	
	2nd DAY	polar plots	
	3rd DAY	bode plots	
	4th DAY	bode plots	
	5th DAY	all pass and minimum phase system	
11TH	1ST DAY	Computation of Gain margin and phase margin	
	2nd DAY	Computation of Gain margin and phase margin	
	3rd DAY	Log magnitude versus phase plot.	
	4th DAY	Log magnitude versus phase plot.	
	5th DAY	Closed loop frequency response.	
12th	1ST DAY	Closed loop frequency response.	
	2nd DAY	NYQUIST PLOT	
	3rd DAY	NYQUIST PLOT	
	4th DAY	Principle of argument.	
	5th DAY	Principle of argument.	
13th	1ST DAY	Nyquist stability criterion.	
	2nd DAY	Nyquist stability criterion.	
	3rd DAY	Niquist stability criterion applied to inverse polar plot.	
	4th DAY	Niquist stability criterion applied to inverse polar plot.	
	5th DAY	Effect of addition of poles and zeros to G(S) H(S) on the shape of Niquist plot.	
14th	1ST DAY	Effect of addition of poles and zeros to G(S) H(S) on the shape of Niquist plot.	
	2nd DAY	Assessment of relative stability.	
	3rd DAY	Assessment of relative stability.	
	4th DAY	Constant M and N circle	
	5th DAY	Constant M and N circle	
15th	1ST DAY	Constant M and N circle	
	2nd DAY	Nicholas chart.	
	3rd DAY	CLASS TEST 2	
	4th DAY	REVISION CLASS FOR SEMSTER	
	5th DAY	REVISION CLASS FOR SEMSTER	