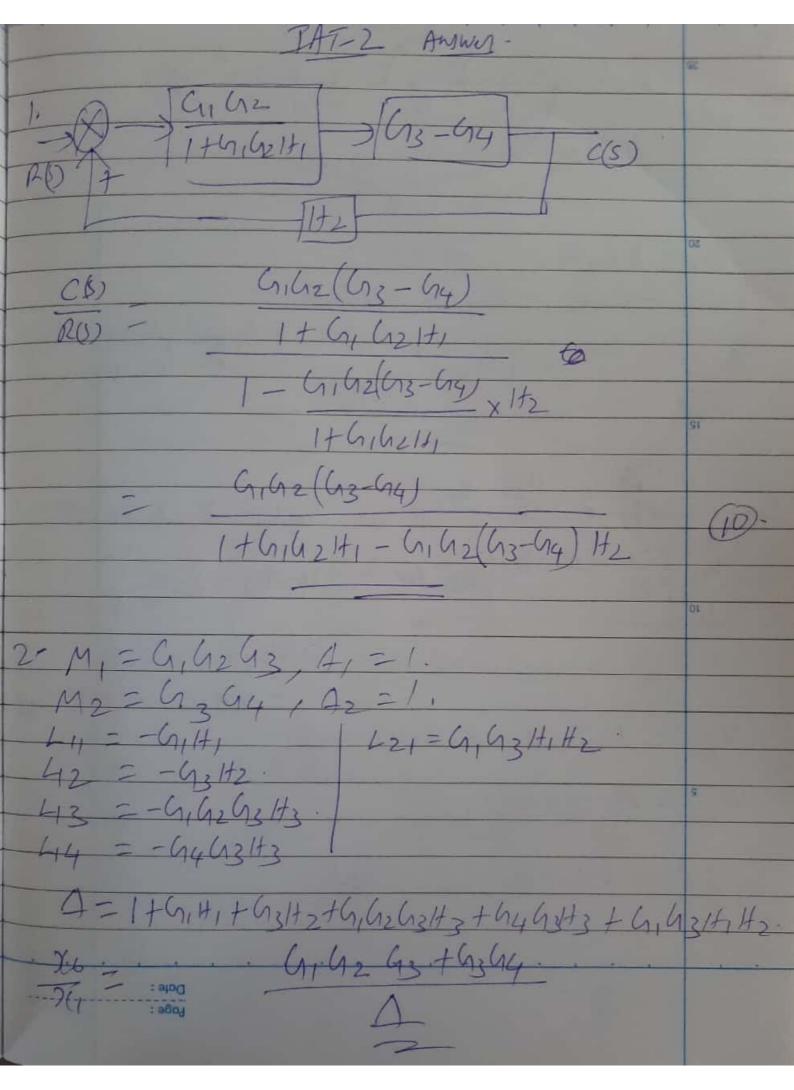


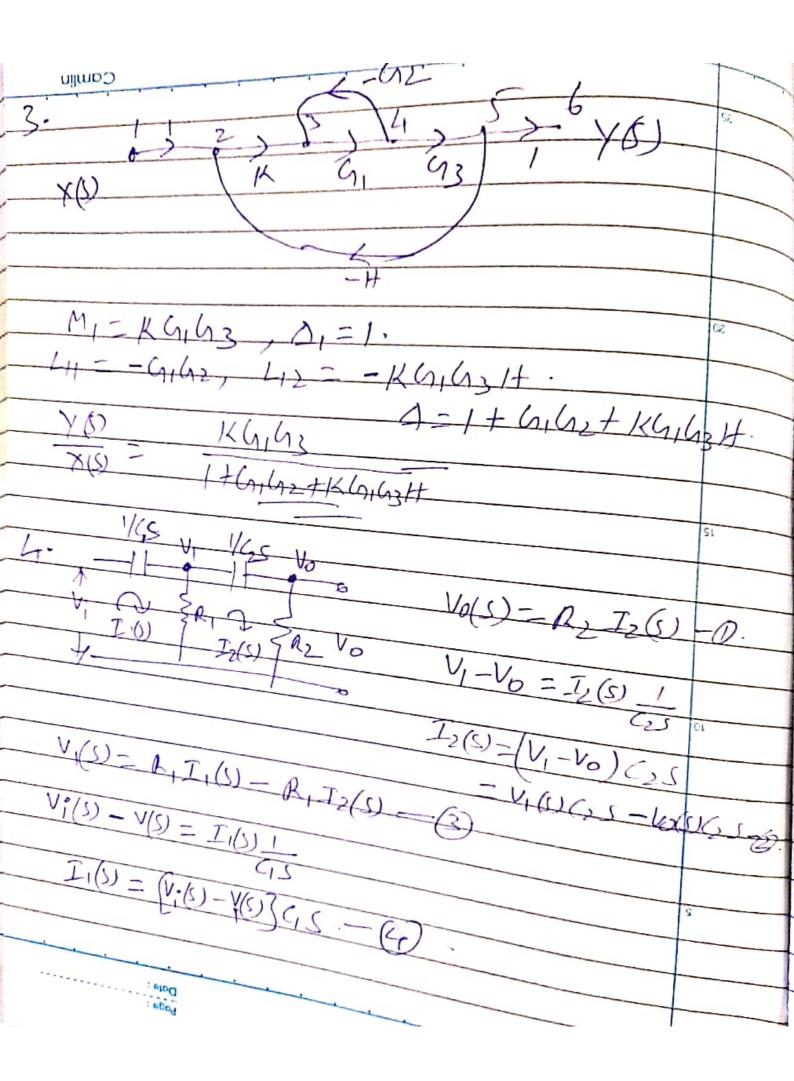


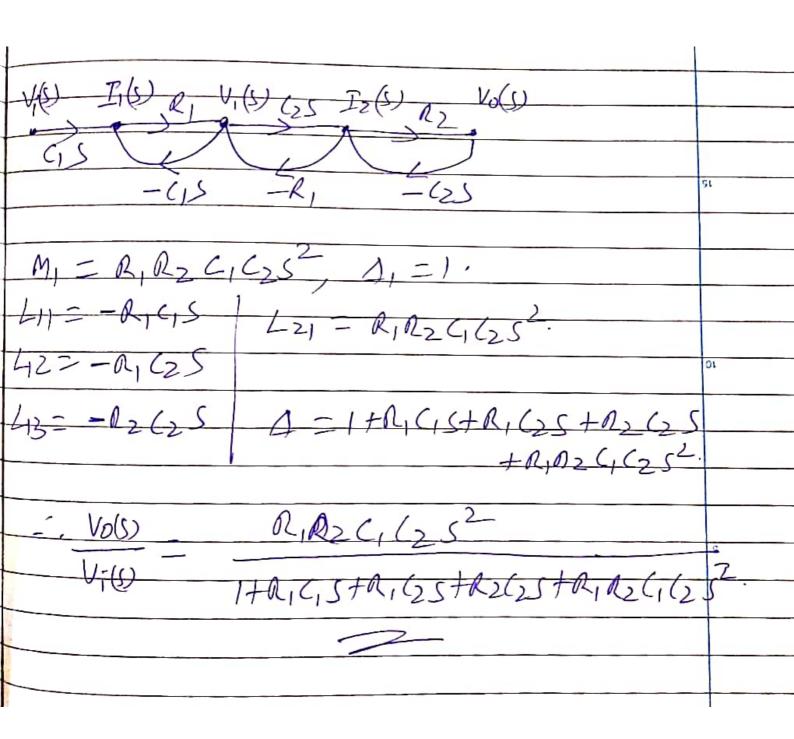
Internal Assesment Test - II

						Code:		17EE61 / 18EE61		
24/06/2021	Duration:	90 mins	Max Marks:	50	Sem:	6th	Bran	ich:	EEE	
Answer Any FIVE FULL Questions										
									OBE	
									CO	RBT
		unction u	sing block dia	agram r	eductio:	n tech	inique	10	CO2	L3
RW).		Fig ((A)	4 J	5	(w)				
Annly the Mason's	Gain formula	to the si	gnal flow gran	sh show	n in fic	r O2 t	o find	10	CO2	L3
		to the sig	gnai now graf	on snow	11 111 118	ς Q 2 ι	O IIIIG	10		LS
	G	4								
x_1 x_2	G_1		_	3	1 v ₅		• x ₆			
	$-H_1$		$-H_2$, in					
		$-H_3$	()							
		Fig (Q2							
				n in fig	Q3 and	deter	mine	10	CO2	L3
X(s) X	→ [K]+	(E)-	G1,	63	* Y(s)				
	Obtain the closed I for the fig Q1 show Apply the Mason's the transfer function The property of the propert	24/06/2021 Duration: Ans Obtain the closed loop transfer for the fig Q1 shown. Apply the Mason's Gain formula the transfer function x_6 / x_1 Draw the signal flow graph for the signal flow graph for the figure $x_1 - x_2 = x_1$	Obtain the closed loop transfer function used for the fig Q1 shown. Apply the Mason's Gain formula to the signer transfer function x_6/x_1 Fig Q Draw the signal flow graph for the block othe transfer function using Mason's gain for the block of the transfer function using Mason's gain for the block	24/06/2021 Duration: 90 mins Max Marks: Answer Any FIVE FULL Obtain the closed loop transfer function using block diagrams for the fig Q1 shown. Apply the Mason's Gain formula to the signal flow graph the transfer function x_6 / x_1 G_1 G_2 G_3 G_4 G_4 G_1 G_2 G_4 G_4 G_1 G_2 G_4 G_1 G_2 G_3 G_4 G_1 G_2 G_1 G_2 G_3 G_4 G_1 G_2 G_3 G_4 G_1 G_1 G_2 G_3 G_4 G_1 G_1 G_2 G_1 G_2 G_3 G_4 G_1 G_1 G_2 G_1 G_2 G_1 G_2 G_1 G_1 G_2 G_1 G_1 G_2 G_1 G_2 G_1 G_2 G_1 G_2 G_1 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_1 G_1 G_1 G_2 G_1 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_1 G_1 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_2 G_1 G_1 G_1 G_2 G_1 G_1 G_2 G_1	Answer Any FIVE FULL Question: 90 mins Marks: 50 Answer Any FIVE FULL Question the closed loop transfer function using block diagram refor the fig Q1 shown. Fig Q1 Apply the Mason's Gain formula to the signal flow graph show the transfer function x_6/x_1 Fig Q2 Draw the signal flow graph for the block diagram shown in fig the transfer function using Mason's gain formula.	24/06/2021 Duration: 90 mins Marks: 50 Sem: Answer Any FIVE FULL Questions Obtain the closed loop transfer function using block diagram reduction for the fig Q1 shown. Fig Q1 Apply the Mason's Gain formula to the signal flow graph shown in figure transfer function x_6/x_1 $G_1 \qquad G_2 \qquad G_3$ $X_1 \qquad X_2 \qquad H_1 \qquad H_2$ Fig Q2 Draw the signal flow graph for the block diagram shown in fig Q3 and the transfer function using Mason's gain formula.	24/06/2021 Duration: 90 mins $\frac{Max}{Marks}$: 50 Sem: 6th Answer Any FIVE FULL Questions Obtain the closed loop transfer function using block diagram reduction teel for the fig Q1 shown. Fig Q1 Apply the Mason's Gain formula to the signal flow graph shown in fig Q2 to the transfer function x_6/x_1 G_1 G_2 G_3 G_4 G_4 G_4 G_4 G_4 G_5 G_6 G_7 G_8 $G_$	24/06/2021 Duration: 90 mins $\frac{Max}{Marks}$: 50 Sem: 6th Branch Answer Any FIVE FULL Questions Obtain the closed loop transfer function using block diagram reduction technique for the fig Q1 shown. Fig Q1 Apply the Mason's Gain formula to the signal flow graph shown in fig Q2 to find the transfer function x_6/x_1 G_1 G_2 G_3 G_4	24/06/2021 Duration: 90 mins Max Marks: 50 Sem: 6th Branch: Answer Any FIVE FULL Questions Mark Obtain the closed loop transfer function using block diagram reduction technique for the fig Q1 shown. Fig Q1 Apply the Mason's Gain formula to the signal flow graph shown in fig Q2 to find the transfer function x_6/x_1 G_1 G_2 G_3 G_4 G_3 G_4 G_4 G_4 G_4 G_4 G_5 G_4 G_5 G_6 G_7 G_8	24/06/2021 Duration: 90 mins Max Marks: 50 Sem: 6th Branch: EEI Answer Any FIVE FULL Questions Marks Oi Oi Oi Oi Oi Oi Oi O

4	Draw the signal flow graph for the electrical network shown in fig Q4 and find its transfer function	10	CO2	L3
	VI RIMA R2 W			
	Fig Q4			
5	Obtain the expression for time response of the first order system subjected to unit step input and unit impulse input.	10	CO3	L4
6	Determine the output response of second order system for critically damped system and input is unit step.	10	CO3	L4
7	Obtain the output response of unity feedback system whose open loop transfer function is $G(s) = \frac{4}{s(s+5)}$ and when the input is unit step. Also determine the undamped natural frequency, Damping ratio and damped natural frequency		CO3	L4







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t/	
5) Stell ((t)=1-e17 A=1, B=-1	52
& (s) = a (s) 1/T	
S+1/T	
Impulse at = Le	
Impulse (t) - 1 e	CS
	100
6. Critially S=1. A=1, C=-1,	
$C(t)=1-e\left(1+\omega_{n}t\right)$ $B=-\nu_{n}$	
	St
7. c(t)=1-40t+10t A=1,B=4,C=	1.
3 3	3
$C(S)$ L_1 wn^2	
R(s) - 52+55+4 = 52+25wn5+wn2	
STEDEN TON	01
$\omega_n^2 = 4$. $2\delta\omega_n = 5$.	
wn:2 rad/se 5=5=5=5=1=25	
$w_{n}^{2}=4$. $25w_{n}=5$. $w_{n}=2 \text{ rad/se}$ $S=5=5=5=1.25$ 2+2=4=1.25	
1.1 1.2 11.02	
$\frac{1}{2} = \frac{1 - (1 - 25)^2}{2 \sqrt{1 - (1 - 25)^2}}$	S
2 VI-(