	NADAR	SARASW	ATHI COLLEGE OF ENGINEERING AND TEC	HNOLOGY	<u>, Thei</u>	<u>VI.</u>
Cour /ECE	se/Branc	h : BE	Year / Semester : II/III	Format No.	NAC/TI	LP-07a.13
Subj	ect Code	:EC8391	Subject Name : CONTROL SYSTEMS ENGINEERING	Rev. No.	02	
Unit	Jnit No : 1 Unit Name : MATHEMATICAL MODELLING Date 30.09.202					
			OBJECTIVE TYPE QUESTION BANK			
S						RTI.
No.		Objecti	ve Questions (MCQ /True or False / Fill up with Ch	oices)		DIL
	Cons f-fric	ider a simple tion, M-Mas	e mass spring friction system as given in the figure K1, K2 ar s, F-Force, x-Displacement. The transfer function X(s)/F(s) o	e spring con f the given s	stants system	
1		-m				L3
	will H a) 1/ b) 1/ c) 1/ d) K2	0e (Ms ² +fs+K1.I (Ms²+fs+K1 .I (Ms ² +fs+K1.I 2/(Ms ² +fs+K1	<2) +K2) (2/K1+K2)			
2	The outp a) Consta b) Quadr c) Ramp d) Expon	out of an first ant ratic Functior Function ential Functi	order hold between two consecutive sampling instants is:			L1
3	Which of a) House b) Respir c) Stabili d) Execu	f the followin hold Refrige atory systen zation of ain tion of prog	ng is an example of an open loop system? rator n of an animal pressure entering into the mask ram by computer	nf		L2
4	 A tachometer is added to servomechanism because: a) It is easily adjustable b) It can adjust damping c) It reduces steady state error d) It converts velocity of the shaft to a proportional Dc voltage 					L1
5	A synchro Transmitter is used with control transformer for: a) Feedback b) Amplification c) Error detection d) Remote sensing					L1
6	Backlash a) Under b) Over c c) High le d) Low le	in a stable c damping damping evel oscillatio evel oscillatio	ontrol system may cause:			L1
7	Tachome a) True b) False	eter feedbacl	c in a D.C. position control system enhances stability?			L2

Prepared By: Dr.R.Athilingam/ASP-ECE

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.								
Course/Bra /ECE	anch : BE	E	Year / Semester : II/III	Format No.	NAC/TL	P-07a.13		
Subject Co	de :EC	8391	Subject Name : CONTROL SYSTEMS ENGINEERING	Rev. No.	02			
Unit No	Unit No : 1 Unit Name : MATHEMATICAL MODELLING Date 30.09.20					20		
	OBJECTIVE TVPE OUESTION BANK							
			OBJECTIVE THE QUESTION BANK					
Asser of sin Reaso a) Bo b) Bo c) A is d) A i	tion (A): : nilar ratin on (R): Se onse. th A and I th A and s true but s false bu	Servomo ngs. rvomoto R are tru R are tru : R is fals it R is tr	otors have heavier rotors and lower R/X ratio as compared or should have smaller electrical and mechanical time cons ue and R is the correct explanation of A ue but R is not correct explanation of A se ue	l to ordinary	motors ter	L2		
9 Asser contr Reaso moto a) Bo b) Bo c) A is d) A i	Assertion (A): DC servomotors are more commonly used in armature controlled mode than field controlled mode. Reason (R): Armature controlled Dc motors have higher starting torque than field controlled motors. a) Both A and R are true and R is the correct explanation of A b) Both A and R are true but R is not correct explanation of A c) A is true but R is false							
In cas a) Slo 10 b) Im c) Ver d) Ha	 In case of DC servomotor, the back emf is equivalent to an "electric friction" which tends to: a) Slowly decrease the stability of the system b) Improve stability of the system c) Very rapidly decrease the stability of the system d) Have no effect of stability 							
Whic a) Qu 11 b) Ac c) Co d) No	 Which of the following is not the feature of modern control system? a) Quick response b) Accuracy c) Correct power level d) No oscillation 							
The o a) Re 12 b) Re c) Ou d) Ing	The output of the feedback control system must be a function of: a) Reference input b) Reference output c) Output and feedback signal d) Input and feedback signal					L1		
The p a) Lin 13 b) No c) Lin d) No	orinciple c ear time onlinear ti ear time onlinear ti	of homo invariar me inva variant me inva	geneity and superposition are applied to: t systems riant systems systems riant systems			L1		
14 In cor a) Da b) Da c) Da interr d) On	ntinuous ta may be ta is nece ta is conti mediate p Ily the ref	data sys e contin essarily inuous a processi erence	tems: uous function of time at all points in the system a continuous function of time at all points in the system at the inputs and output parts of the system but not neces ng of the data signal is continuous function of time	sarily during		L2		
A line 15 given a) (s+	ear systen by c(t)=1 2)/(s+1)	n at rest L-e ^{-2t} . Th	is subject to an input signal r(t)=1-e ^{-t} . The response of the e transfer function of the system is:	system for t	>0 is	L3		
Prepared F	By: Dr.	R.Athili	ngam/ASP-FCF	Pa	age 2 of 6			

Subject Code :EC8391 Subject Name : CONTROL SYSTEMS ENGINEERING Rev. No. 02 Unit Name : MATHEMATICAL MODELLING Date 30.09:2020 OBJECTIVE TYPE OUESTION BANK b) (\$+1)/(\$+2)	Course/Bran /ECE	ch : BE	Year / Semester : II/III	Format No.	NAC/TL	P-07a.13.		
Unit No : I Unit Name : MATHEMATICAL MODELLING Date 30.09:2020 OBJECTIVE TYPE QUESTION BANK b) (s+1)/(s+2) c) 2(s+1)/(s+2) of the feedback, the transfer function is given by a) C(s)/R(s)=G(s)/I+G(s)/H(s) 13 b) (s+1)/(s+2) In regenerating the feedback, the transfer function is given by a) C(s)/R(s)=G(s)/I+G(s)/H(s) 13 OBJECTIVE TYPE QUESTION BANK We have double and the provide the transfer function is given by a) C(s)/R(s)=G(s)/I+G(s)/H(s) 13 We not double on the transfer function of a linear element 14 OB to initial conditions are assumed to be colspan="2">to be not loaded If the initial conditions are assumed to be colspan="2">to be not loaded If the initial conditions are assumed to be core out the element is assumed to be not loaded If the initial conditions are assumed to be core out loading is taken into account 19 If the initial conditions are assumed to be core out loading is taken into account <th>Subject Cod</th> <th>e :EC8391</th> <th>Subject Name : CONTROL SYSTEMS ENGINEERING</th> <th>Rev. No.</th> <th>02</th> <th></th>	Subject Cod	e :EC8391	Subject Name : CONTROL SYSTEMS ENGINEERING	Rev. No.	02			
OBJECTIVE TYPE QUESTION BANK b) (s+1)/(s+2) c) Z(s+1)/(s+2) c) Z(s+1)/(s+2) c) (s)/(x)/(x)/(x)/(x)/(x)/(x)/(x)/(x)/(x)/(x	Unit No	:1	Unit Name : MATHEMATICAL MODELLING	Date	30.09.20	20		
b) (s+1)/(s+2) c) 2(s+1)/(s+2) d) (s+1)/(s+2) d) (s+1)/(s+2) c) 2(s)/(s)=(s)(s)(-1)-(s)(H(s) f) C(s)/(s)=(s)(s)(-1)-(s)(H(s) c) C(s)/(s)=(s)(s)(-1)-(s)(H(s) d) C(s)/(s)=(s)(s)(-1)-(s)(H(s) d) C(s)/(s)=(s)(s)(-1)-(s)(H(s) d) D(s)/(s)/(s)=(s)(s)(-1)-(s)(H(s) d) D(s)/(s)/(s)=(s)(s)(-1)-(s)(H(s) d) D(s)/(s)/(s)=(s)(-1)-(s)(H(s) d) D(s)/(s)/(s)=(s)(-1)-(s)(H(s) d) D(s)/(s)/(s)=(s)(-1)-(s)(H(s)) d) D(s)/(s)/(s)=(s)(-1)-(s)(-1)			OBJECTIVE TYPE QUESTION BANK					
c) 2(s+1)/(s+2) c) (c) (s+1)/2(s+2) c) (c) (s+1)/2(s+2) c) (c) (s)/(s)=(s)/1+(s)+(s) c) (c) (s)/(s)=(s)/1+(s)+(s)+(s) c) (c) (s)/(s)=(s)/(s)-(s)+(s) c) (c) (s)/(s)=(s)/(s)-(s)+(s) c) (c) (s)/(s)=(s)/(s)-(s)+(s) c) (c) (s)/(s)=(s)-(s)+(s) c) (c) (s)/(s)=(s) c) (c) (s)/(s)=(s) c) (c) (s)/(s) (s) (s) c) (c) (s)/(s)/(s) (s)	b) (s+1)/(s+2)						
a) (s+1/2(s+2) In regenerating the feedback, the transfer function is given by a) (c(s)/R(s)=G(s)/1+G(s)H(s) 16 b) (C(s)/R(s)=G(s)/1+G(s)H(s) 17 b) both initial conditions are taken into account the element is assumed to be not loaded 17 b) Initial conditions are taken into account the element is assumed to be not loaded 18 b) Initial conditions are assumed to be zero but loading is taken into account 19 Interstem is working but does not store energy 19 b) The system is at rest or no energy is stored in any of its part 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: a) G1G2G3/1-G2G1 a) G1G2G3/1-G1G2G3 20 a) G1G2G3/1-G1G2G3 21 21 21 21	c) 2(s+	1)/(s+2)						
In regenerating the feedback, the transfer function is given by a) C(s)/R(s)=G(s)/1+G(s)H(s) 16 b) C(s)/R(s)=G(s)/1-G(s)H(s) 13 17 b) Initial conditions are diagonal loading are taken into account 14 17 b) Initial conditions are assumed to be zero and the element is assumed to be not loaded 12 17 b) Initial conditions are assumed to be zero and the element is assumed to be not loaded 12 17 b) Initial conditions are assumed to be zero and the element is assumed to be not loaded 12 18 b) The system is at rest but stores energy 12 19 If the initial conditions or a system are inherently zero, what does it physically mean? 13 18 b) The system is at rest but stores energy 12 c) The system is at rest or one energy is stored in any of its part 17 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: 13 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: 13 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: 13 a) G1G2G3/1-G2G1 G3 G3G4 G3G4 c) G1G2G3/1-G1G2G3 G3 G1G2G3/1-G1G2G3 G3	d) (s+1)/2(s+2)						
a) U(s)/R(s)=C(s)/(1+C(s)/(1+G(s))(s) 13 16 b) C(s)/R(s)=C(s)/(1+G(s)/(1+G(s))(s) 13 c) C(s)/R(s)=C(s)/(1+G(s)/(1+G(s))(s) 14 a) Both initial conditions and loading are taken into account 14 b) Initial conditions are tasken into account but the element is assumed to be not loaded 12 c) Initial conditions are assumed to be zero but loading is taken into account 14 d) Initial conditions for a system are inherently zero, what does it physically mean? 15 a) The system is at rest our one energy is stored in any of its part 17 b) The system is at rest or no energy is stored in any of its part 17 c) The system is one reference input 12 consider the block diagram shown below: 14 c) Gis2G4 13 a) Gis2G3/1-Gi2G1 13 b) Gis2G1 14 a) Gis2G3/1-Gi2G3 13 c) Gis2G3/1-GiG2 13 a) Gis2G3/1-GiG2) 13 The transfer function from D(s) to Y(s) is : 13 a) Gis2G3/1-GiG23 13 a) Gis2G3/1-GiG23 13 a) Gis2G3/1-GiG23 13 b) Gis2(1-GiG2G3 13 b	In rege	nerating the f	eedback, the transfer function is given by					
10 US (S)/R(s)=G(s)/1-G(s)/H(s) When deriving the transfer function of a linear element a) Both initial conditions are taken into account but the element is assumed to be not loaded (2) (S)/R(s)=G(s)/1-G(s)/H(s) When deriving the transfer function of a linear element a) Initial conditions are assumed to be zero but loading is taken into account (1) Initial conditions are assumed to be zero but loading is taken into account (2) Initial conditions are assumed to be zero but loading is taken into account (3) Initial conditions are assumed to be zero but loading is taken into account (4) Initial conditions are assumed to be zero but loaded (5) The system is at rest but stores energy (2) The system is at rest or no energy is stored in any of its part (4) The system is working with zero reference input (5) The system is working with zero reference input (7) The system is working with zero reference input (2) The system is working with zero reference input (3) The system is working with zero reference input (4) The system is working with zero reference input (5) G(s) G(s) G(s) G(s) G(s) (5) G(s) G(s) G(s) G(s) G(s) G(s) G(s) G(s	a) C(s)/	R(s) = G(s) / 1 + G(s) / 1 + G(s) = G(s) / 1 + G(s) = G(s) + G((s)H(s)			12		
Consider the block diagram given in the following figure, the expression of C/R is: 10 Cisi23(1-Gisi2) 11 Consider the block diagram given in the following figure, the expression of C/R is: 12 Cisi23(1-Gisi2) 13 Cisi23(1-Gisi2) 14 Cisi23(1-Gisi2) 15 Cisi23(1-Gisi2) 16 Cisi23(1-Gisi2) 17 Cisi23(1-Gisi2) 18 Cisi23(1-Gisi2) 19 Consider the block diagram given in the following figure, the expression of C/R is: 19 Cisi23(1-Gisi2) 10 Cisi23(1-Gisi2) 11 Cisi23(1-Gisi2) 12 Cisi23(1-Gisi2) 13 Cisi23(1-Gisi2) 14 Cisi23(1-Gisi2) 15 Cisi23(1-Gisi2) 16 Cisi23(1-Gisi2) 17 Cisi23(1-Gisi2) 18 Cisi23(1-Gisi2) 19 Cisi23(1-Gisi2) 10 Cisi23(1-Gisi2) 11 Cisi23(1-Gisi2) 12 Cisi23(1-Gisi2) 13 Cisi23(1-Gisi2) 14 Cisi23(1-Gisi2) 15 Cisi23(1-Gisi2) 16 Cisi23(1-Gisi2) 17 Cisi23(1-Gisi2) 18 Cisi23(1-Gisi2) 19 Cisi23(1-Gisi2) 19 Cisi23(1-Gisi2) 10 Cisi23(1-Gisi2) 10 Cisi23(1-Gisi2) 11 Cisi23(1-Gisi2) 12 Cisi23(1-Gisi2) 13 Cisi23(1-Gisi2) 14 Cisi23(1-Gisi2)		R(s)=G(s)F(s)/ R(s)=G(s)/1+G	(s)H(s)			LS		
When deriving the transfer function of a linear element a) Both initial conditions and loading are taken into account b) Initial conditions are taken into account but the element is assumed to be not loaded [2] 17 b) Initial conditions are assumed to be zero and the element is assumed to be not loaded [2] (a) Initial conditions are assumed to be zero and the element is assumed to be not loaded [3] The system is at rest but stores energy [2] 18 b) The system is at rest or no energy is stored in any of its part [3] [3] The system is at rest or no energy is stored in any of its part [4] 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: [3] [3] 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: [3] [3] 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: [3] [3] 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: [3] [3] 19 If the block diagram given in the following figure, the expression of C/R is: [3] [3] 20 a) G1G2G3/1-G1G2 [3] [3] [3] [4] 20 a) G1G2G3/1-G1G2 [3] [3] [4] [4]	d) C(s)	/R(s)=G(s)/1-G	(s)H(s)					
a) Both initial conditions and loading are taken into account L2 i) Initial conditions are taken into account but the element is assumed to be not loaded L2 c) Initial conditions are assumed to be zero but loading is taken into account d) Initial conditions are assumed to be zero and the element is assumed to be not loaded L2 d) Initial conditions for a system are inherently zero, what does it physically mean? a) The system is at rest but stores energy L2 18 b) The system is at rest or no energy is stored in any of its part d) The system is working but does not store energy L2 19 b) The system is working but does not store energy consider the block diagram shown below: Consider the block diagram shown below: Consider the block diagram shown below: L3 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: a) G2G364 c) G1G2G4 d) G3G4 20 G2G4 G3G3/1-G2G1 G3G3/1-G1G2G3 L3 20 G1G2G3/1-G1G2G3 G1G2/G3/1-G1G2G3 L3 21 G3G4/1-G1G2G3 G3G4/1-G1G2G3 L3 21 G3G4/1-G1G2G3 G1G2/G3/1-G1G2G3 L3 21 G3G4/1-G1G2G3 G1G2/G3/1-G1G2/1-G1G2G3 G1G2/G3/1-G1G2/1-G1G2/1-G1G2/1-G1G2/1-	When	deriving the tr	ansfer function of a linear element					
17 b) Initial conditions are taken into account but loading is taken into account 12 c) Initial conditions are assumed to be zero but loading is taken into account 13 d) Initial conditions for a system are inherently zero, what does it physically mean? 14 a) The system is at rest but stores energy 12 iii the initial conditions for a system are inherently zero, what does it physically mean? 15 b) The system is at rest or no energy is stored in any of its part 16 d) The system is working with zero reference input 12 Consider the block diagram shown below: If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: a) G2G3G4 b) G2C4 G2C4 c) G1G2G4// G1G2G3/1-G2G1 G3 c) G1G2G3/1-G1G2G3 G1G2/3-G1G2 c) G1G2G3/1-G1G2 13 a) G1G2G3/1-G1G2 13 c) G1G2G3/1-G1G2 13 c) G1G2G3/1-G1G2 13 c) G1G2/3-G1G2 13 c) G1G2G3/1-G1G2 13 c) G1G2/3-G1G2 13 c) G1G2G3/1-G1G2 13 c) G1G2/3-G1G2 13	a) Both	initial conditi	ons and loading are taken into account					
 c) Initial conditions are assumed to be zero but loading is taken into account d) Initial conditions for a system are inherently zero, what does it physically mean? a) The system is working but does not store energy b) The system is working with zero reference input c) The system is working with zero reference input c) The system function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: a) G2G3G4 b) G2G4 c) G1G2G3/1-G2G1 b) G1G2/1-G1G2G3 c) G1G2G3/1-G2G1 b) G1G2/1-G1G2G3 c) G1G2G3/1-G1G2G3 d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : 	17 b) Initia	al conditions a	re taken into account but the element is assumed to be not	t loaded		L2		
0) Initial conductors are assumed to be zero and the element is assumed to be not loaded if the initial conditions for a system are inherently zero, what does it physically mean? a) The system is working but does not store energy 18 b) The system is working but does not store energy 12 c) The system is working with zero reference input 19 If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: a) G1G2G3(4 b) G2G4 c) G1G2C3/1-G2G1 b) G1G2/1-G1G2G3 c) G1G2G3/1-G2G1 b) G1G2/1-G1G2G3 c) G1G2G3/1-G1G2G3 c) G1G2/G3(1-G1G2G3 c) G1G2/G3(1-G1G2G3 c) G1G2/G3(1-G1G2G3 c) G1G2/G3(1-G1G2G3 c) G1G2/G3(1-G1G2G3	c) Initia	al conditions a	re assumed to be zero but loading is taken into account					
a) The system is at rest but stores energy c) The system is at rest but stores energy c) The system is at rest or no energy is stored in any of its part d) The system is at rest or no energy is stored in any of its part d) The system is working with zero reference input Consider the block diagram shown below:	d) Initia	al conditions a	re assumed to be zero and the element is assumed to be no					
18 b) The system is working but does not store energy L2 18 b) The system is working with zero reference input L2 19 Consider the block diagram shown below: Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+G1G2G3 Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+X. Then X is: Image: Consider the system is given by T(s)=G1G2+G2G3/1+G1G2G3 Image: Consis is	a) The	system is at re	stor a system are innerently zero, what does it physically i	liedii:				
c) The system is at rest or no energy is stored in any of its part d) The system is working with zero reference input Consider the block diagram shown below:	18 b) The	b) The system is working but does not store energy						
d) The system is working with zero reference input Consider the block diagram shown below: 19 19 19 19 19 19 19 19 10 10 10 10 10 10 10 10 10 10	c) The	system is at re	st or no energy is stored in any of its part					
Consider the block diagram shown below: 19 19 19 19 19 11 14 15 16 16 16 16 16 16 16 16 16 16	d) The	system is worl	ing with zero reference input					
$19 f \text{ the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: a) G2G3G4 b) G2G4 c) G1G2G4 d) G3G4 For the block diagram given in the following figure, the expression of C/R is: 13 f \text{ the transfer function from D(s) to Y(s) is :} f \text{ for X is } f \text{ transfer function from D(s) to Y(s) is :} f \text{ for X is } f \text{ for X is } $	Consid	er the block di	agram shown below:					
19 19 19 19 11 f the transfer function of the system is given by $T(s)=G1G2+G2G3/1+X$. Then X is: a) $G2G3G4$ b) $G2G4$ c) $G1G2G4$ d) $G3G4$ For the block diagram given in the following figure, the expression of C/R is: 13 20 a) $G1G2G3/1-G2G1$ b) $G1G2/G3/1-G2G1$ b) $G1G2/G3/1-G1G2G3$ c) $G1G2G3/1-G1G2G3$ d) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ c) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ c) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ c) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ c) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ d) $G1G2/G3(1-G1G2G3)$ f the transfer function from D(s) to Y(s) is : 13 14 15 15 16 16 16 17 16 16 16 16 16 16 16 16 16 16	H0(5)	G1						
19 19 19 19 19 19 19 19 19 19			**					
19 19 19 19 19 19 19 19 19 19			ar Empowerment 7					
If the transfer function of the system is given by T(s)=G1G2+G2G3/1+X. Then X is: a) G2G3G4 b) G2G4 c) G1G2G4 d) G3G4 For the block diagram given in the following figure, the expression of C/R is:	19	→ G3	→ × ← G4 ←			L3		
a) 626364 b) 6264 c) 616264 d) 6364 For the block diagram given in the following figure, the expression of C/R is:	If the t	ransfer functio	n of the system is given by T(s)=G1G2+G2G3/1+X. Then X is	5:	h			
b) G2C4 c) G1G2G4 d) G3G4 For the block diagram given in the following figure, the expression of C/R is: $\begin{array}{c} & & \\ & & $	a) G2G	3G4	- Conservath: College	1				
c) G10204 d) G3G4 For the block diagram given in the following figure, the expression of C/R is: 20 a) G1G2G3/1-G2G1 b) G1G2/1-G1G2G3 cisi c) G1G2/G3/1-G1G2G3 d) G1G2/G3(1-G1G2G3 d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : 21	c) G1G	4	i. Palazwarui Philede	u				
For the block diagram given in the following figure, the expression of C/R is:	d) G3G	4						
20 $a) G1G2G3/1-G2G1$ $b) G1G2/1-G1G2G3$ $c) G1G2G3/1-G1G2G3$ $d) G1G2/G3(1-G1G2)$ The transfer function from D(s) to Y(s) is : 21 $P(s) + P(s) + P(s)$	For the	block diagran	given in the following figure, the expression of C/R is:	V				
20 a) G1G2G3/1-G2G1 b) G1G2/1-G1G2G3 c) G1G2G3/1-G1G2G3 d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : 21 $R(s) \rightarrow (3 + 2) + (3 + 2) + (2 + 3)$	R(s							
20 a) G1G2G3/1-G2G1 b) G1G2/1-G1G2G3 c) G1G2G3/1-G1G2G3 d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : 21 R(s) + (x) +								
20 a) G1G2G3/1-G2G1 b) G1G2/1-G1G2G3 c) G1G2G3/1-G1G2G3 d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : 21 $\xrightarrow{R(s)} \xrightarrow{V} \xrightarrow{J} \xrightarrow{J} \xrightarrow{L3} \xrightarrow$	20							
b) G1G2/1-G1G2G3 c) G1G2G3/1-G1G2G3 d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : $21 \qquad \qquad$	20 a) G1G	a) G1G2G3/1-G2G1						
c) G1G2G3/1-G1G2G3 d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : 21	b) G1G	2/1-G1G2G3						
d) G1G2/G3(1-G1G2) The transfer function from D(s) to Y(s) is : 21 R(s) (3) (3) (3) (3) (3) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	c) G1G	2G3/1-G1G2G	3					
The transfer function from D(s) to Y(s) is : 21 $R(s) + T = T = T = T = T = T = T = T = T = T$	d) G1G	2/G3(1-G1G2)						
21 $\xrightarrow{R(3)}{3}$ $\xrightarrow{U(3)}{2(3s+1)}$ $\xrightarrow{C(3)}{2}$ L3	The tra	nsfer function	from D(s) to Y(s) is :					
			U(8)					
	21 R(s)							
		•¥,→Li						
4								

Course /ECE	/Branch	: BE	Year / Semester : II/III	Format No.	NAC/TL	P-07a.13.	
Subject	t Code	:EC8391	Subject Name : CONTROL SYSTEMS ENGINEERING	Rev. No.	02		
Unit No)	:1	Unit Name : MATHEMATICAL MODELLING	Date	30.09.20	020	
			OBJECTIVE TYPE OUESTION BANK				
a b c d T) 2/3s+7) 2/3s+1) 6/3s+7) 2/3s+6 he close	d loop gain	of the system shown in the given figure is :				
22 a b	R(s)) -9/5) -6/5					L3	
23 a) 9/5 he adva ach com) True	ntage of blo ponent to t	ck diagram representation is that it is possible to evaluate t he overall performance of the system.	the contribu	ition of	L2	
24 b	he overa) Sum of) Produc) Differe) Divisio	all transfer f individual g ct of individ nce of indiv n of individu	unction from block diagram reduction for cascaded blocks i gain ual gain idual gain ual gain	s :		L1	
25 b	he overa) Sum o f) Produc) Differe) Divisio	all transfer f f individual et of individu nce of indiv n of individu	unction of two blocks in parallel are : gain Jal gain idual gain Jal gain	of		L1	
26 26 d	Transfer function of the system is defined as the ratio of Laplace output to Laplace input considering initial conditions a) 1 b) 2 c) 0 d) infinite					L1	
27 27 a b c) 10/11s) 10/11s) 10/11) 100/11) 100/11	owing block	a diagram, G1=10/s G2=10/s+1 H1=s+3, H2=1. The overall to	ransfer fund	tion is	L3	

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/ECE	e/Branch	i : BE	Year / Semester : II/III	Format No.	NAC/TI	LP-07a.13	
Subjec	t Code	:EC8391	Subject Name : CONTROL SYSTEMS ENGINEERING	Rev. No.	02		
Unit N	0	:1	Unit Name : MATHEMATICAL MODELLING	Date	30.09.20	020	
			OBJECTIVE TYPE QUESTION BANK				
i	a) Forwai	d gain					
	b) Touchi	ng loops					
(c) Non to	uching loop	S				
(d) Feedba	ack gain					
	Signal flo	w graphs:					
i i	a) They a	pply to linea	ir systems				
34 1	b) The eq	uation obta	ned may or may not be in the form of cause or effect			L1	
(c) Arrows	are not imp	ortant in the graph				
	u) mey c Signal flo	annot be con	reliable to find transfer function than block diagram reduc	tion techni	0110		
35	a) True	w grapiis are			que.	12	
	b) False					62	
-	The relat	ionship betw	veen an input and output variable of a signal flow graph is g	iven by the	net gain		
I	between	the input an	d output node is known as the overall		U		
26	a) Overall gain of the system						
³⁰	b) Stability						
(c) Bandwidth						
(d) Speed						
	Use maso	on's gain for	nula to calculate the transfer function of given figure:				
		_	02				
		X1 G.	X2 1 X2 C				
- I							
37	-н						
i	a) G1/1+G2H						
	b) G1+G2/1+G1H						
	d) None of the mentioned						
	Use maso	on's gain for	mula to find the transfer function of the given figure:	1.11			
	0.00 1110.00	and Barrier	G ₁	V			
	x_1 G_2 x_2						
	$R \longrightarrow \phi \phi \phi \phi c$						
38							
	-n						
li	a) G1+G2						
	b) G1+G1/1-G1H+G2H						
	c) G1+G2	/1+G1H+G2	н				
						1	