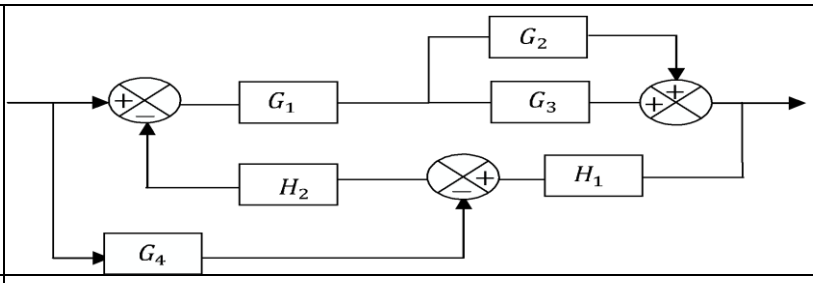
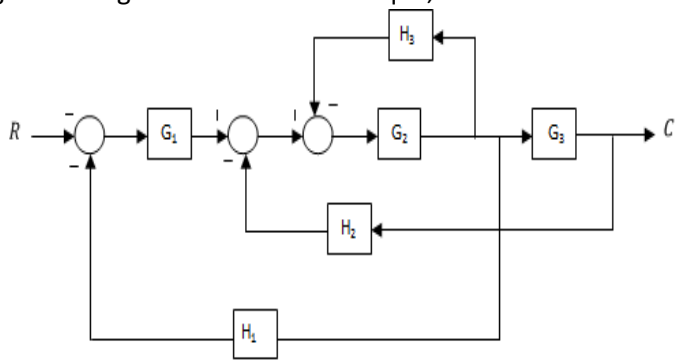
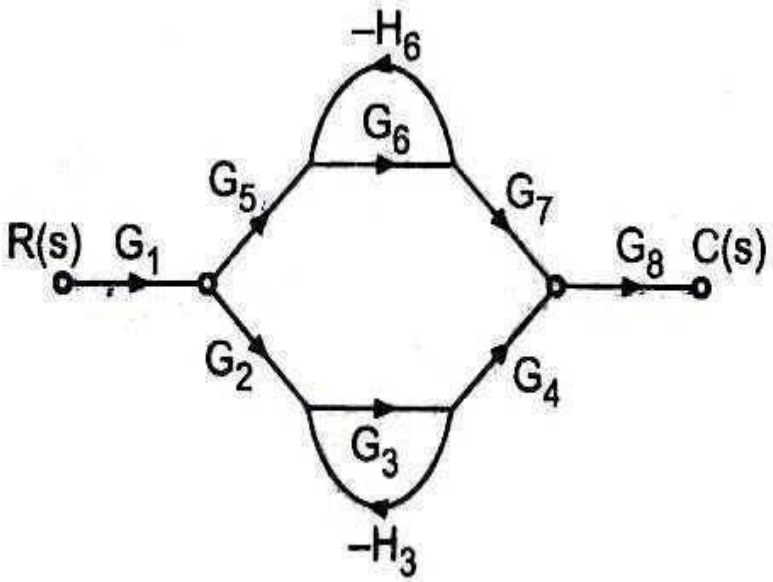
RAVINDRA COLLEGE OF ENGINEERING FOR WOMEN

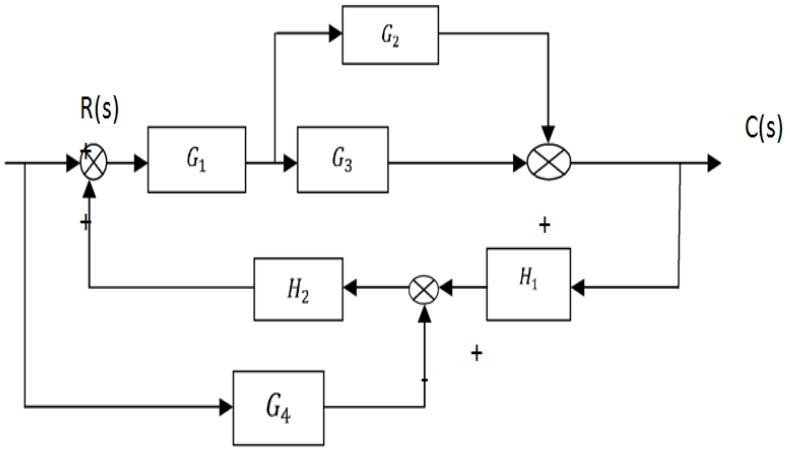
II B tech -II Semester (R19)
Branch: ECE
Academic Year: 2020-21
Subject : Control Systems Engineering (19A02404)

UNIT-I

	QUESTIONS (SHORT)	CO	Cognitive Level
1	Distinguish between open loop and closed loop systems	C214.1	Understand
2	What is the effect of positive feedback on stability?	C214.1	Understand
3	What are the advantages of closed loop systems?	C214.1	Remember
4	Explain the effect of feedback on stability.	C214.1	Understand
5	Classify the control systems.	C214.1	Remember
6	In force-voltage analogy, list out the analogous quantities.	C214.1	Remember
7	List the analogous quantities in torque-current analogy.	C214.1	Remember
8	Define control system and explain with one example.	C214.1	Remember
9	What do you mean by feedback? Why negative feedback is preferred in control systems?	C214.1	Understand
10	How the sensitivity is influenced by feedback?	C214.1	Understand
11	The feedback can increase or decrease the overall gain. Justify.	C214.1	Understand
12	Differentiate translational and rotational systems.	C214.1	Understand
13	Define servo mechanism and give two examples.	C214.1	Understand

	QUESTIONS (ESSAY)	CO	Cognitive Level
1	(a) Compare and contrast 'open loop control systems' and 'closed loop control systems'. (b) Explain about the classification of control systems.	C214.1	Understand
2	With the help of necessary diagrams, describe the constructional and operational features of A.C Servo Motors. Derive the transfer function between the rotor position and error signal of an A.C Servo motor.	C214.1	Understand
3	Draw the signal flow graph and find the transfer function.	C214.1	Apply

			
4	(a) Write Mason's gain formula and explain the meaning of all the terms in the formula. (b) Draw the circuit diagram of armature-controlled D.C Motor. Derive its transfer function.	C214.1	Understand
5	Using block diagram reduction technique, find the transfer function. 	C214.1	Understand
6	(a) Derive the transfer function of field controlled DC servo Motor. (b)Derive the transfer function of armature controlled DC servo Motor.	C214.1	Remember
7	Derive the overall transfer function C/R from the signal flow graph shown. 	C214.1	Understand
8	Find the transfer function using block diagram techniques.	C214.1	Understand

			
9	Explain the operation of synchro error detector and derive the transfer function.	C214.1	Understand