QUESTION BANK SUMMER 2022

CONTROL SYSTEM ENGINEERING

6TH SEM ELECTRICAL

2 mark Questions

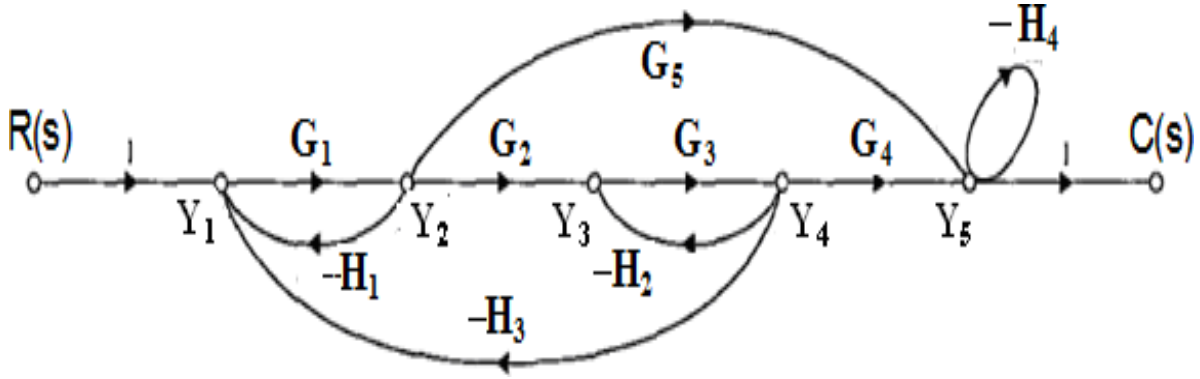
1. What is control system?
2. What are the two major types of control system?
3. Define open loop control system.
4. Define closed loop control system
5. What are the components of feedback control system?
6. Define transfer function.
7. What are the basic elements used for modeling mechanical translational system?
8. Name two types of electrical analogous for mechanical system.
9. What is Block Diagram?
10. What is the basis for framing the rules of block diagram reduction technique?
11. What is a signal flow graph?
12. What is transmittance?
13. What is sink and source?
14. Define non touching loop.
15. Write Masons Gain formula.
16. Write the analogous electrical elements in force voltage analogy for the elements of mechanical translational system.
17. What is servomechanism?
18. Why is negative feedback invariably preferred in closed loop system?
19. 24. What is transient response?
20. What is steady state response?
21. What is an order of a system?
22. Define Damping ratio.
23. List the time domain specifications.

24. Define Delay time.
25. Define Rise time.
26. Define peak time.
27. Define peak overshoot..
28. Define Settling time.
29. What is the need for a controller
30. What are the different types of controllers?
31. What is Proportional controller?
32. What is PI controller?
33. What is PD controller
34. What is the significance of integral controller and derivative controller in a PID controller?
35. Why derivative controller is not used in control systems
36. Define Steady state error.
37. What is the drawback of static coefficients
38. What is step signal?
39. What is ramp signal?
40. What is a parabolic signal?
41. What are the three constants associated with a steady state error?
42. What are the main advantages of generalized error coefficients?
43. What are the effects of adding a zero to a system?
44. State-Magnitude criterion.
45. What is a dominant pole?
46. What is stepper motor?.
47. What is servomotor?
48. Name the test signals used in control system.
49. What is Synchros?
50. What is linear system ?

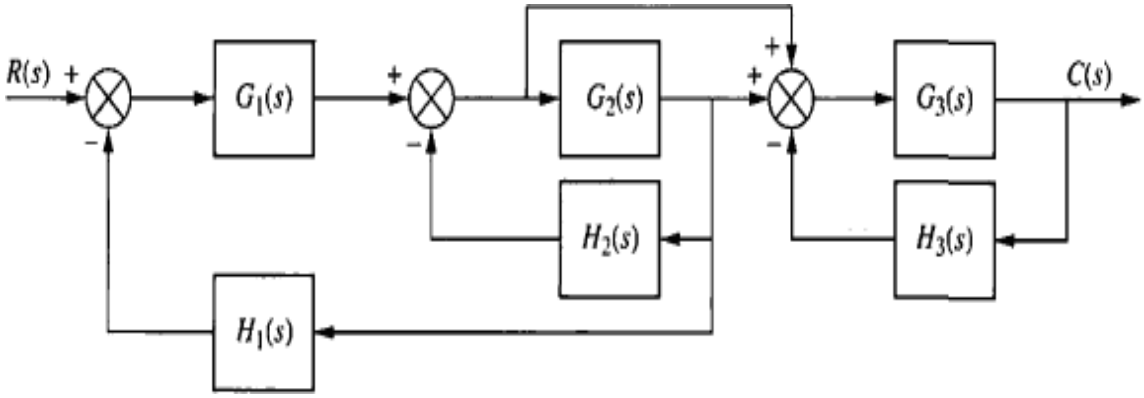
5mark

1. Compare between open loop and closed loop control system ?
2. Explain the rules for block diagram reduction technique ?

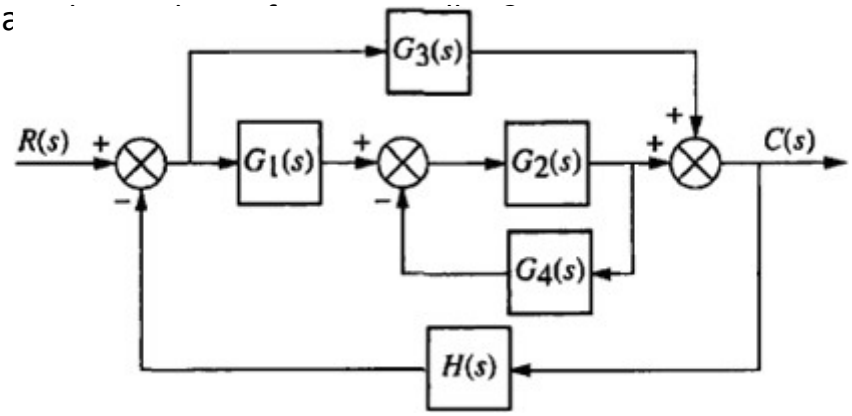
3. Explain the properties, advantages ,and disadvantages of transfer function ?
4. Explain the properties of signal flow graph ?
5. Explain the effect of feedback on control system ?
6. Using Mason's gain formula, obtain the transfer function of a system whose signal flow graph is given in Figure



7. Represent the block diagram of Figure by its SFG.
8. Simplify the given block diagram as shown in Figure (6) to a single block and obtain its



9. Expla



10. Explain the working of ac servo motor ?
11. Explain the working of dc servo motor ?

10mark questions

1. Obtain the Bode plot of the system given by the transfer function G(s)=
2. Draw the Bode plot of the transfer function G(s)=