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College of Engineering & Technology

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2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

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College Code: 08



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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Year & Branch: III-B.Tech. I-Sem, I-Mid Examination FEBRUARY-2020

Branch: EEE

Date: 11/02/2020

Subject Name: CONTROL SYSTEMS

Duration: 60 Mins

Course Instructor: Dr.G. Ravi Kumar

Max.Marks:10

COURSE OUTCOME	BLOOMS LEVEL	QUESTION NO.	QUESTIONS	MAR KS
CO1	L4 (Analyze)	1	<p>find the differential equations governing the Mechanical system shown in fig. and determine the transfer function?</p>	4
	L2 (Understanding)	2	<p>OR</p> <p>Expressing the overall transfer function $C(S)/R(S)$ for the system shown in fig</p>	4
CO2	L4 (Analyze)	3	<p>Calculate Mason's gain formula. Obtain the overall transfer function C/R from the signal flow graph shown.</p>	4
	L3 (Apply)	4	<p>OR</p> <p>Judge the below terms, With their expression. a) Rise time b) peak over shot</p>	4
CO3	L2 (Understanding)	5	<p>Write rules of construct ROOT Locus?</p>	2
	L3 (Apply)	6	<p>OR</p> <p>Solving the represented by the following characteristic equation say whether the necessary condition for stability is satisfied or not $s^4+3s^3+4s^2+5s+10=0$</p>	2

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Year & Branch: II-B.Tech. II-Sem,I-Mid Examination FEBRUARY-2020

Branch: EEE

Date:11/02/2020

Subject name: Control system

Duration: 20 mins

Max.marks:10

Name: _____ Hall Ticket No:

L1-Remember, L2—Understanding, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create

All the question followed by L1-Remember level Question answer

1. In an open loop control system []
A) Output independent of control input. B) Output dependent of control input
C) Only system parameter effect on the control output D) none of the above
2. A control system in which the control action is somehow dependent on the output is known as []
A) closed loop system B) semi closed loop system C)open loop system D)none
3. The initial response when tune output is not equal to input is called []
A) Error response B) Transient response C) Dynamic response D) either of the above
4. The output of a feedback control system must be a function of []
A) Input and feedback signal B) output and feedback signal C) reference and input D) reference and output
5. The transient response, with feedback system, []
A) rise slowly B) rise quickly C) decays slowly D) decays quickly
6. In a stable control system backlash can cause which of the following? []
A) Underdaping B) Overdamping C) poor stability at reduced value of open loop gain D) Low-level oscillations
7. In a control system the output of the controller is given to []
A) Final control element B) amplifier C) comparator D) sensor
8. in an automatic control system which of the following elements is not used? []
A) Error detector B) final control element C) sensor D) oscillator
9. A controller, essentially, is a []
A) Sensor B) clipper C) comparator D) amplifier
10. The second derivative input signals modify which of the following? []
A) The time constant of the system B) damping of the systems C) the time constant and suppressed of the system
D) None

Fill in the blanks:

11. Closed loop system is _____ accurate than open-loop system.
12. in a closed loop control system feedback tendency towards oscillations or instability. _____
13. The input which can be independently varied is known as _____.
14. A large time constant corresponds to a _____ system.
15. For a _____ system, damping factor is less than unity.
16. For an over damped system, damping factor is _____.
17. The difference between the actual value and ideal value is known as the system _____.
18. A _____ time constant corresponds to a fast response.
19. A signal other than the reference which affects the performance of the system is called the _____.
20. A standard signal used for comparison in a closed-loop control system is called the _____ input.



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Examination Branch

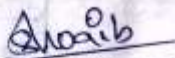
INTERNAL EXAMINATION MAIN ANSWER BOOK

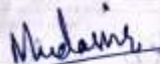
Examination B.Tech/M.Tech/M.B.A Semester II Mid. Date 11/02/2020

Branch : EEE Subject : Control System's

Name of the Student : MOHD SHOAIB MOHAMED Roll No.

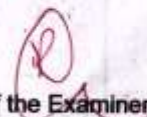
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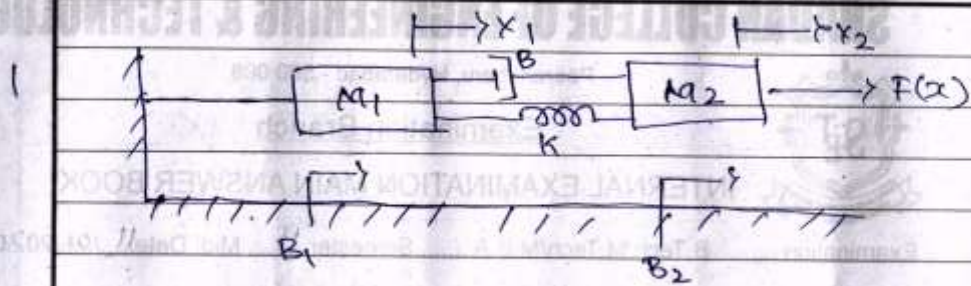

Signature of the Student


Signature of the Invigilator

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FOR EXAMINERS USE ONLY					
Q.No.	a	b	c	d	Total
1	4				4
2					
3	4				4
4					
5					
6	2				2
7					
8					
Total Marks					10

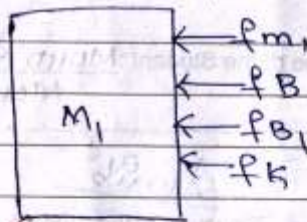

Signature of the Examiner



consider mass m_1 $\rightarrow x_1$

$$f_m = M_1 \frac{d^2 x_1}{dt^2}$$

$$f_b = B \frac{d(x_1 - x_2)}{dt}$$



$$f_{b1} = B_1 \frac{d(x_1)}{dt}$$

$$f_k = k(x_1 - x_2)$$

$$M_1 \frac{d^2 x_1}{dt^2} + B \frac{d(x_1 - x_2)}{dt} + B_1 \frac{d(x_1)}{dt} + k(x_1 - x_2) = 0$$

$$M_1 s^2 x_1(s) + B(s)(x_1(s) - x_2(s)) + B_1(s)(x_1(s)) + k(x_1(s) - x_2(s)) = 0$$

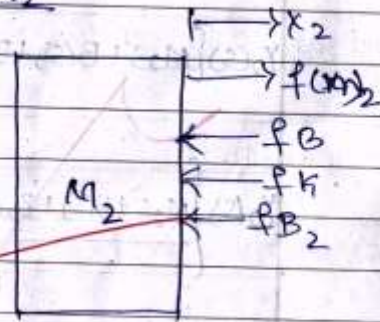
APPLY laplace transform on bothside
we get above equation.

Taking common $X_1(s)$

$$X_1(s) [M_1 + B(s) + B_1(s) + K] - X_2(s) [B(s) + K] = 0$$

$$X_1(s) = \frac{X_2(s) [B(s) + K]}{[M_1 + B(s) + B_1(s) + K]} \rightarrow \textcircled{1}$$

consider mass M_2



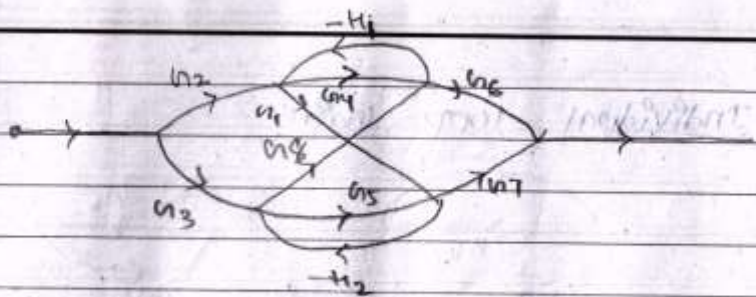
$$f_{m_2} = M_2 \frac{d^2(x_2)}{dt^2}$$

$$f_B = B \frac{d(x_2 - x_1)}{dt}$$

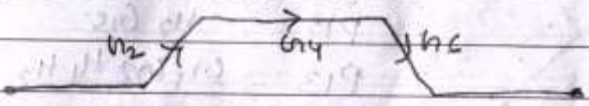
$$f_K = K(x_2 - x_1)$$

$$f_{B_2} = B_2 \frac{d(x_2)}{dt}$$

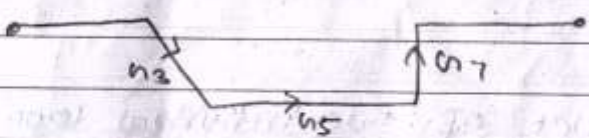
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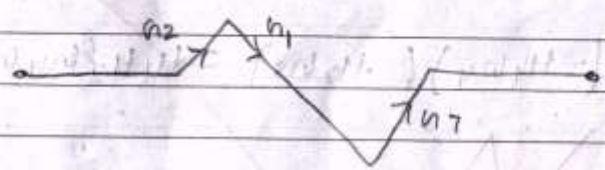
Forward paths



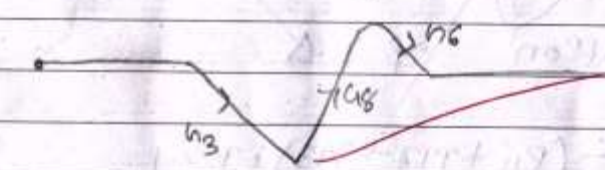
$$P_1 = g_2 g_4 g_6$$



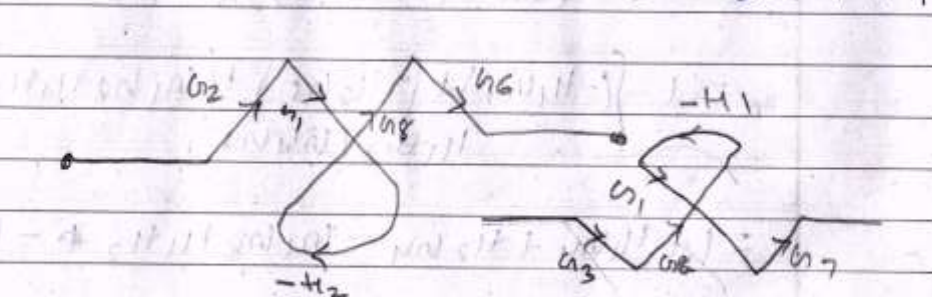
$$P_2 = g_3 g_5 g_7$$



$$P_3 = g_2 g_1 g_7$$

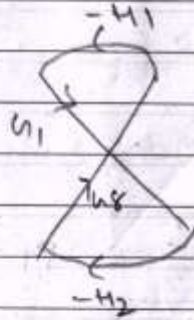
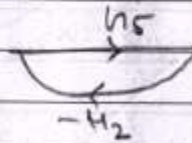
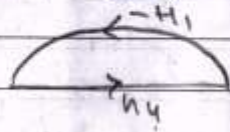


$$P_5 = g_3 g_8 g_6 H_2$$



$$P_6 = -g_3 g_8 g_1 g_7 H_1$$

Individual loop gain



$$P_{11} = -H_1 H_4$$

$$P_{12} = -H_2 G_5$$

$$P_{13} = G_1 G_2 H_1 H_2$$

Product of two individual loop gain

$$P_{21} = (-H_1 H_4)(-H_2 H_5) = H_1 H_2 (H_4 H_5)$$

Calculation of Δ

$$\Delta = 1 - (P_{11} + P_{12} + P_{13}) + P_{21}$$

$$= 1 - \left\{ (-H_1 H_4) + (-H_2 H_5) + (G_1 G_2 H_1 H_2) + H_1 H_2 (H_4 H_5) \right\}$$

$$= 1 + H_1 H_4 + H_2 H_5 - G_1 G_2 H_1 H_2 - H_1 H_2 (H_4 H_5)$$

6

given equation

$$s^4 + 3s^3 + 4s^2 + 5s + 10 = 0$$

s^4	1	4	10
s^3	3	5	0
s^2	22.3	10	0
s^1	-7.87	0	0
s^0	10	0	0

\therefore The given equation is unstable.

$$M_2 \frac{d^2}{dt^2}(x_2) + B \frac{d}{dt}(x_2 - x_1) + B_2 \frac{d}{dt}(x_2) + k(x_2 - x_1) = f$$

Apply Laplace transform on both side

$$M_2 s^2 X_2(s) + B(s)(X_2(s) - X_1(s)) + B_2(s) X_2(s) + k(X_2(s) - X_1(s))$$

$$X_2(s) [M_2 s^2 + B(s) + B_2(s) + k] - X_1(s) [B(s) + k] = f(s)$$

substitute the value of $X_1(s)$ from eq (1)

$$X_2(s) [M_2 s^2 + B(s) + B_2(s) + k] - X_2(s) \frac{[B(s) + k]}{M_1 + B(s) + B_1(s) + k} [B(s) + k] = f(s)$$

$$X_2(s) \left[\frac{M_2 s^2 + B(s) + B_2(s) + k (M_1 + B(s) + B_1(s) + k)}{M_1 + B(s) + B_1(s) + k} \right] - \frac{(B(s) + k)^2}{M_1 + B(s) + B_1(s) + k} = f(s)$$

∴ Transfer function

$$\frac{X_2(s)}{f(s)} = \frac{M_1 + (B + B_2)s + k}{M_2 s^2 + B(s) + B_2(s) + k / (M_1 + B(s) + B_1(s) + k) - (B(s) + k)^2}$$



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Branch: EEE

Date: 11/02/2020

Subject name: Control system

Duration: 20 mins

Max.marks: 10

Name: Muhammad Sohaib Mohiuddin Hall Ticket No:

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9
16
Pd

L1-Remember, L2—Understanding, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create

All the question followed by L1-Remember level Question answer

- In an open loop control system
A) Output independent of control input. B) Output dependent of control input
C) Only system parameter effect on the control output D) none of the above [A] ✓
- A control system in which the control action is somehow dependent on the output is known as
A) closed loop system B) semi closed loop system C) open loop system D) none [B] ✓
- The initial response when tune output is not equal to input is called
A) Error response B) Transient response C) Dynamic response D) either of the above [A] ✓
- The output of a feedback control system must be a function of
A) Input and feedback signal B) output and feedback signal C) reference and input D) reference and output [D] ✓
- The transient response, with feedback system,
A) rise slowly B) rise quickly C) decays slowly D) decays quickly [D] ✓
- In a stable control system backlash can cause which of the following?
A) Underdaping B) Overdamping C) poor stability at reduced value of open loop gain D) Low-level oscillations [D] ✓
- In a control system the output of the controller is given to
A) Final control element B) amplifier C) comparator D) sensor [A] ✓
- in an automatic control system which of the following elements is not used?
A) Error detector B) final control element C) sensor D) oscillator [D] ✓
- A controller, essentially, is a
A) Sensor B) clipper C) comparator D) amplifier [C] ✓
- The second derivative input signals modify which of the following? [D]
A) The time constant of the system B) damping of the systems C) the time constant and suppressed of the system
D) None

Muhammad Sohaib Mohiuddin
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Fill in the blanks:

11. Closed loop system is more accurate than open-loop system.

12. In a closed loop control system feedback tendency towards oscillations or instability. increases

13. The input which can be independently varied is known as command.

A large time constant corresponds to a closed loop system.

15. For a undamped system, damping factor is less than unity.

16. For an overdamped system, damping factor is > 1.

17. The difference between the actual value and ideal value is known as the system error.

18. A small time constant corresponds to a fast response.

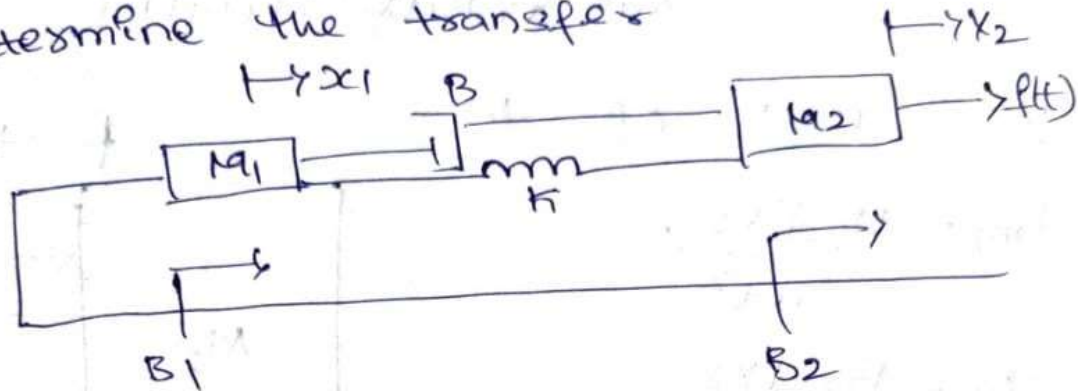
19. A signal other than the reference which affects the performance of the system is called the disturbance.

20. A standard signal used for comparison in a closed-loop control system is called the reference input.

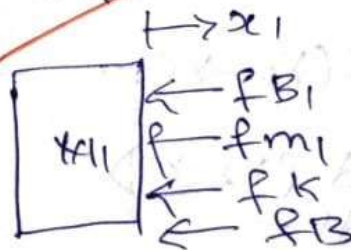
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CONTROL systems

Find the differential equation governing the mechanical system shown in fig
determine the transfer



consider the mass m_1



$$f_{B1} = B_1 \frac{dx_1}{dt}, \quad f_{m1} = M_1 \frac{d^2 x_1}{dt^2}$$

$$f_B = B \frac{d(x_1 - x_2)}{dt}, \quad f_K = K(x_1 - x_2)$$

$$M_1 \frac{d^2 x_1}{dt^2} + B \frac{d(x_1 - x_2)}{dt} + B_1 \frac{dx_1}{dt}$$

$$+ K(x_1 - x_2) = 0$$

Apply Laplace transform

$$M_1 s^2 x_1(s) + B(s)(x_1(s) - x_2(s)) + B_1(s)x_1(s) + K(x_1(s) - x_2(s))$$

$$X_1(s) [M_1 s^2 + (B_1 + B)s + (K_1 + K_2)] - X_2(s) [Bs + K_2] = 0$$

$$X_1(s) = X_2(s) \frac{Bs + K_2}{M_1 s^2 + (B_1 + B)s + (K_1 + K_2)}$$

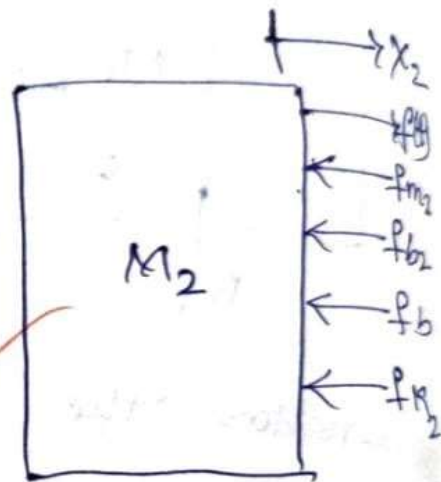
The F.B.D of M_2

$$f_{m2} = M_2 \frac{d^2 x_2}{dt^2}$$

$$f_{b2} = B_2 \frac{dx_2}{dt}$$

$$f_k = K(x_2 - x_1)$$

$$f_b = \frac{d}{dt}(x_2 - x_1)$$



$$M_2 \frac{d^2 x_2}{dt^2} + B_2 \frac{dx_2}{dt} + B \frac{d}{dt}(x_2 - x_1) + K(x_2 - x_1) = 0$$

$$M_2 s^2 x_2(s) + B_2(s)(x_2(s)) + Bs(x_2(s) - x_1(s)) + K(x_2(s) - x_1(s)) = 0$$

$$X_2(s) [M_2 s^2 + B_2(s) + Bs + K] - X_1(s) [Bs + K] = 0$$

Substitute $X_1(s)$

$$X_2(s) [M_2 s^2 + B_2(s) + Bs + k] - \frac{Bs + k_2}{M_1 s^2 + (B_1 + B)s + k_1 + k_2} (Bs + k_2)$$

$$X_2(s) [M_2 s^2 + B_2(s) + Bs + k] - \frac{(Bs + k_2)^2}{M_1 s^2 + (B_1 + B)s + k_1 + k_2} = f(s)$$

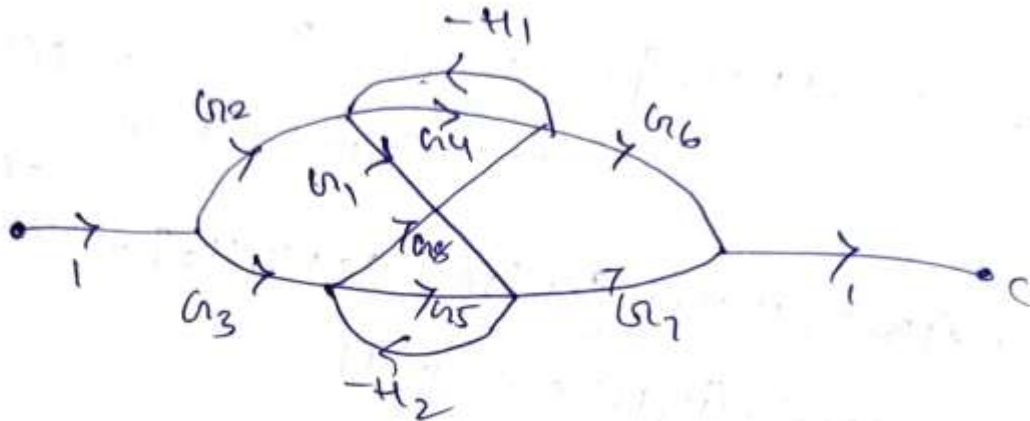
$$\frac{X_2(s) [M_2 s^2 + B_2(s) + Bs + k] [M_1 s^2 + (B_1 + B)s + k_1 + k_2] - (Bs + k_2)^2}{M_1 s^2 + (B_1 + B)s + k_1 + k_2} = f(s)$$

$$\frac{X_2(s)}{f(s)} = \frac{M_1 s^2 + (B_1 + B)s + k_1 + k_2}{[M_2 s^2 + B_2(s) + Bs + k] [M_1 s^2 + (B_1 + B)s + k_1 + k_2] (Bs + k_2)}$$

)

)

3. Calculate Mason's gain formula. Obtain the overall function C/R from the signal flow graph



MASON'S GAIN FORMULA

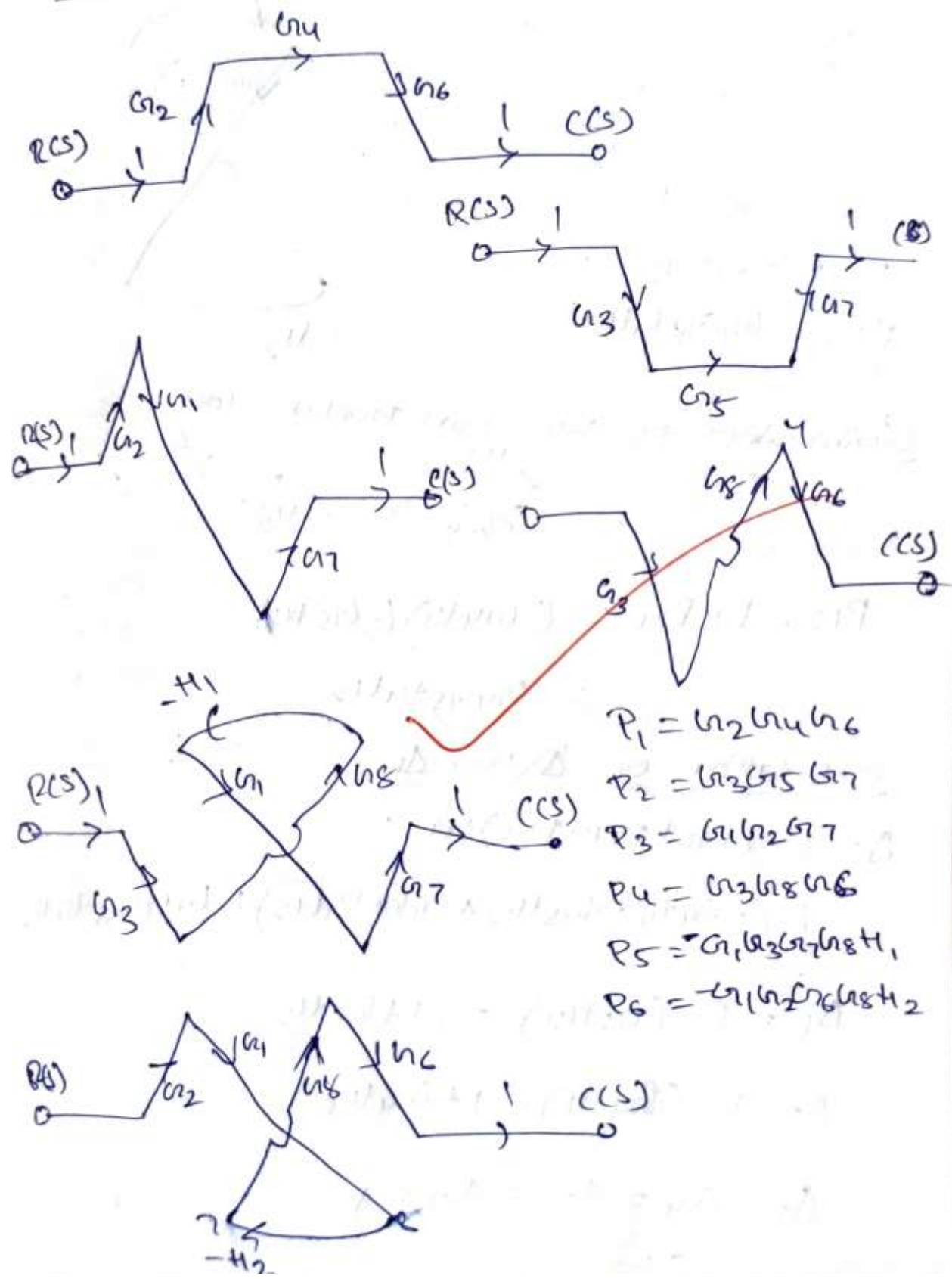
Let $R(s)$ = Input to the system

$C(s)$ = output of the system

Now, Transfer function of the system $T(s) = \frac{C(s)}{R(s)}$

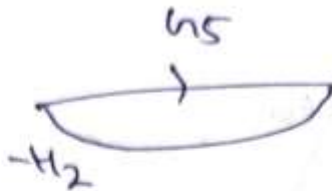
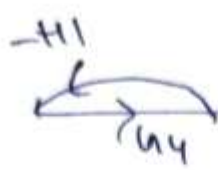
$$\text{overall gain } T = \frac{1}{\Delta} \sum_k P_k \Delta_k$$

Forward path gains



- $P_1 = G_2 G_4 G_6$
- $P_2 = G_3 G_5 G_7$
- $P_3 = G_1 G_2 G_7$
- $P_4 = G_3 G_8 G_6$
- $P_5 = G_1 G_3 G_7 G_8 H_1$
- $P_6 = -G_1 G_2 G_6 G_8 H_2$

Individual loop gain -

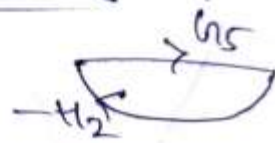
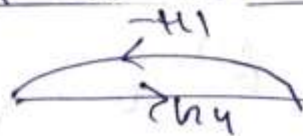


$$P_{11} = -h_4 h_1$$

$$P_{21} = -h_5 h_2$$

$$P_{31} = h_1 h_3 h_4 h_2$$

Gain product of two non touching loop



$$P_{12} = P_{11} P_{21} = (-h_4 h_1) (-h_5 h_2)$$

$$= h_4 h_5 h_1 h_2$$

calculation of Δ and Δ_k

$$\Delta = 1 - (P_{11} + P_{21} + P_{31}) + P_{12}$$

$$= 1 - (-h_4 h_1 - h_5 h_2 + h_1 h_3 h_4 h_2) + h_4 h_5 h_1 h_2$$

$$\Delta_1 = 1 - (h_5 h_2) = 1 + h_5 h_2$$

$$\Delta_2 = 1 - (h_4 h_1) = 1 + h_4 h_1$$

$$\Delta_3 = \Delta_4 = \Delta_5 = \Delta_0 = 1$$

Transfer function T

$$T = \frac{1}{\Delta} \left(\sum_k P_k \Delta_k \right) \quad \therefore \text{Number of forward paths } P_k$$

$$= \frac{1}{\Delta} (P_1 \Delta_1 + P_2 \Delta_2 + P_3 \Delta_3 + P_4 \Delta_4 + P_5 \Delta_5 + P_6 \Delta_6)$$

$$= \frac{1}{\Delta} \left(G_2 G_3 G_6 (1 + G_5 H_2) + G_3 G_5 G_7 (1 + G_4 H_1) + \right.$$

$$G_1 G_2 G_7 + G_3 G_6 G_8 - G_1 G_3 G_7 G_8 H_1 - G_1 G_2 G_4 G_5 H_2$$

$$= \frac{1 + G_4 H_1 + G_5 H_2 - G_1 G_8 H_1 H_2 + G_4 G_5 H_1 H_2}{\Delta}$$

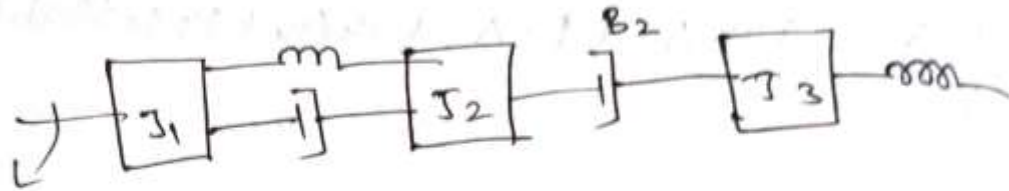
Rules for construction of root locus

Rule 1: The root locus is symmetrical about the real axis

Rule 2: Each branch of the root locus

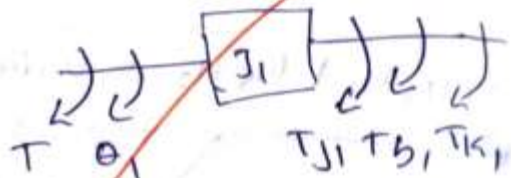
ASSIGNMENT -

write the differential equations governing the mechanical rotational system shown in figure.



Solution

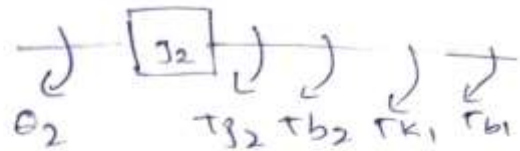
Consider J_1



$$J_1 = J_1 \frac{d^2 \theta_1}{dt^2}, \quad T_{B1} = B_1 \frac{d(\theta_1 - \theta_2)}{dt}$$

$$T_{K1} = K_1 (\theta_1 - \theta_2)$$

$$J_1 \frac{d^2 \theta_1}{dt^2} + B_1 \frac{d(\theta_1 - \theta_2)}{dt} + K_1 (\theta_1 - \theta_2) = T \rightarrow \textcircled{1}$$

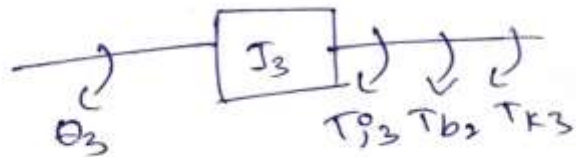


$$T_{j2} = J_2 \frac{d^2 \theta_2}{dt^2}, \quad T_{b2} = B_2 \frac{d(\theta_2 - \theta_3)}{dt}$$

$$T_{k1} = K_1(\theta_2 - \theta_1) \quad T_{b1} = B_1 \frac{d(\theta_2 - \theta_1)}{dt}$$

$$J_2 \frac{d^2 \theta_2}{dt^2} + B_2 \frac{d(\theta_2 - \theta_3)}{dt} + B_1 \frac{d(\theta_2 - \theta_1)}{dt} +$$

$$K_1(\theta_2 - \theta_1) = 0$$



$$T_{j3} = J_3 \frac{d^2 \theta_3}{dt^2}$$

$$T_{b2} = B_2 \frac{d(\theta_3 - \theta_2)}{dt}$$

$$J_3 \frac{d^2 \theta_3}{dt^2} + B_2 \frac{d(\theta_3 - \theta_2)}{dt} + K_3 \theta_3 = 0$$

on replacing the angular displacement by angular velocity in differential equation

$$\frac{d^2\theta}{dt^2} = \frac{d\omega}{dt} \cdot \frac{d\theta}{d\omega} = \omega \text{ and } \theta = \int \omega dt$$

$$J_1 \frac{d\omega_1}{dt} + B_1(\omega_1 - \omega_2) + K_1 \int (\omega_1 - \omega_2) dt = 0$$

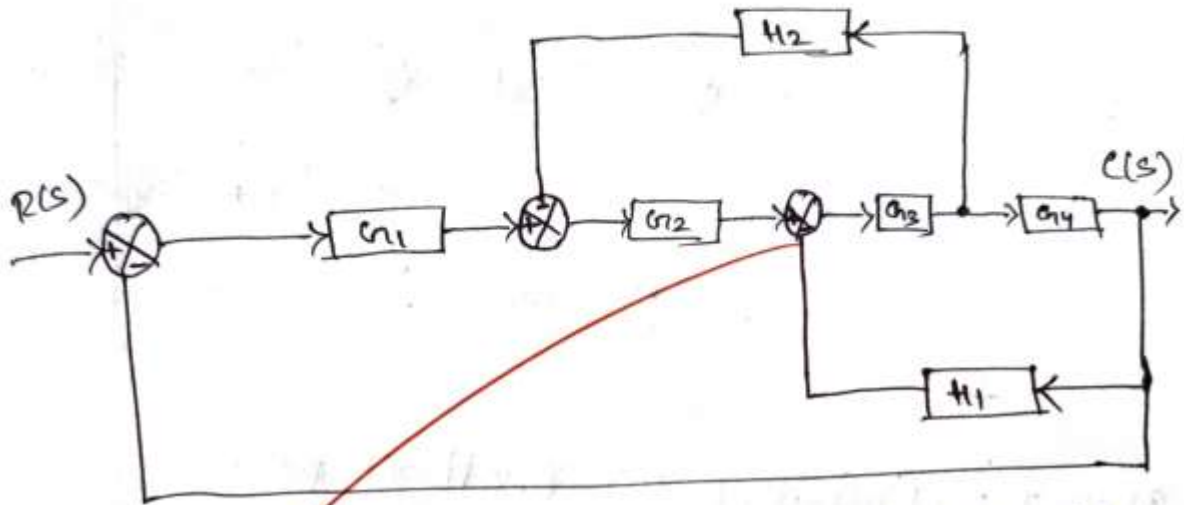
$$J_2 \frac{d\omega_2}{dt} + B_1(\omega_2 - \omega_1) + B_2(\omega_2 - \omega_3) +$$

$$K_1 \int (\omega_2 - \omega_1) dt = 0$$

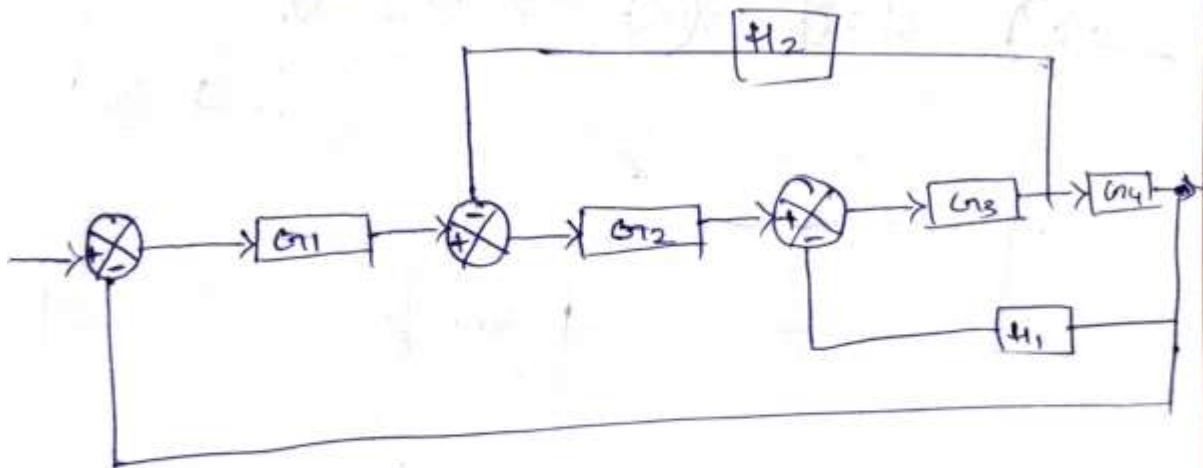
$$J_3 \frac{d\omega_3}{dt} + B_2(\omega_3 - \omega_2) + K_3 \int \omega_3 dt = 0$$

Determine the overall transfer function

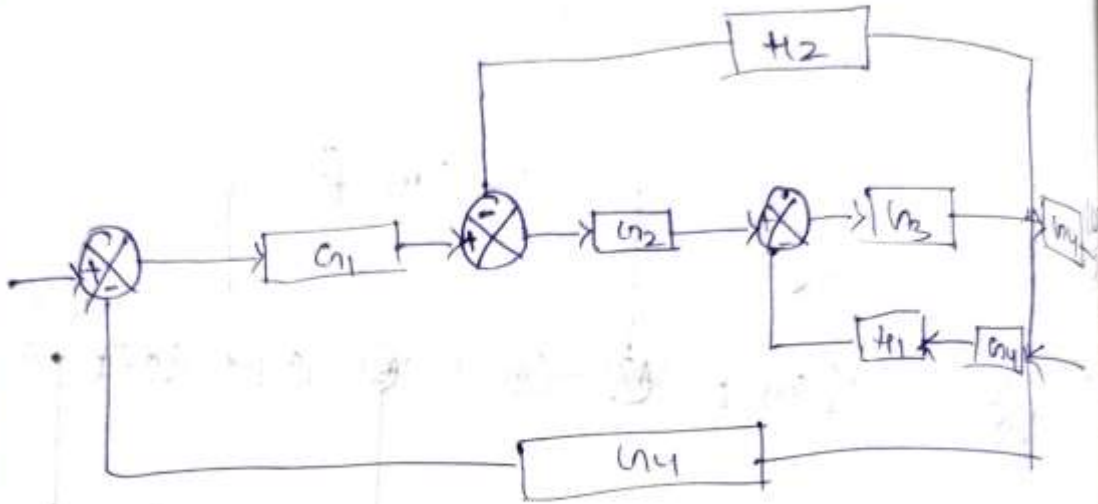
$$\frac{C(s)}{R(s)}$$



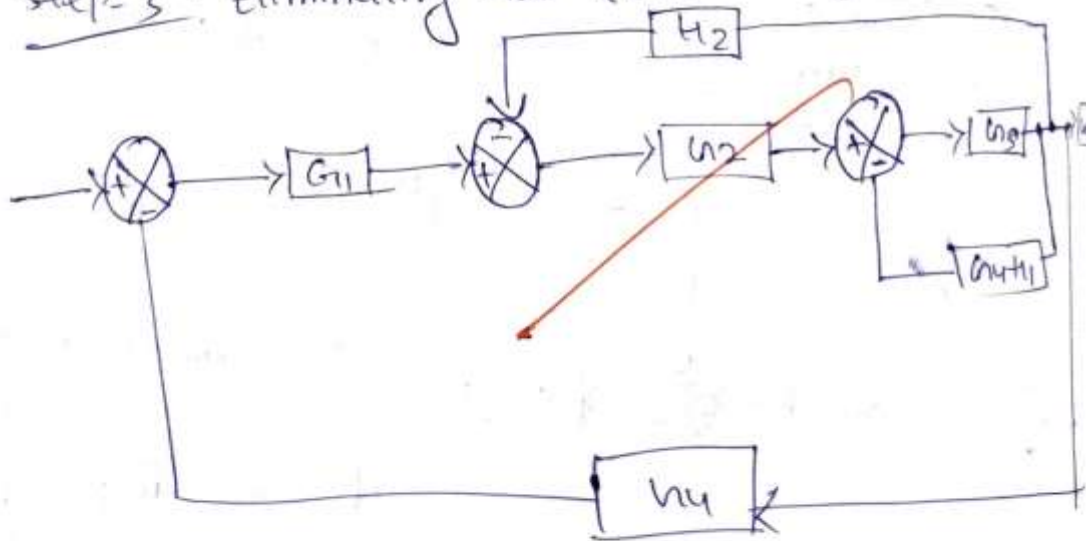
STEP-1 Moving the branch point before the block



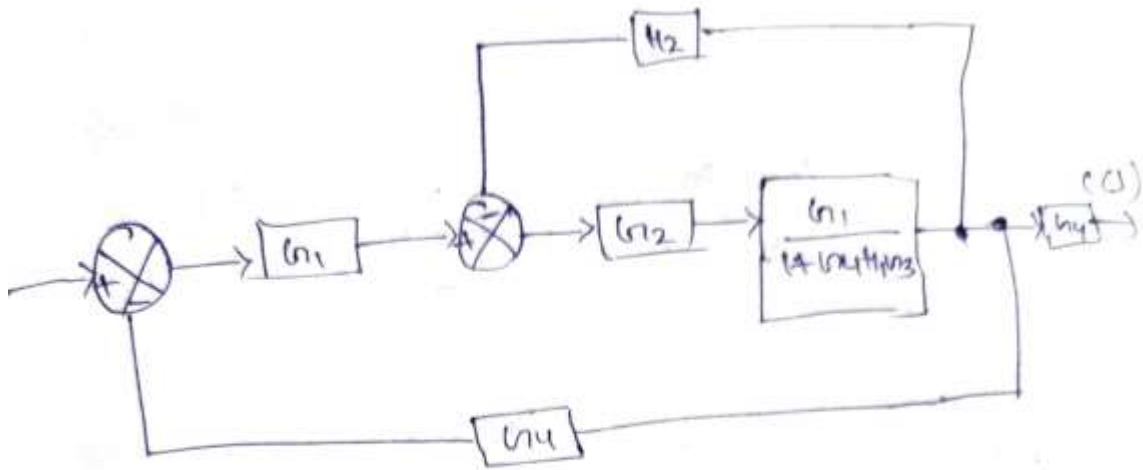
Step-2 :- combining the blocks in cascade and rearranging the branch points



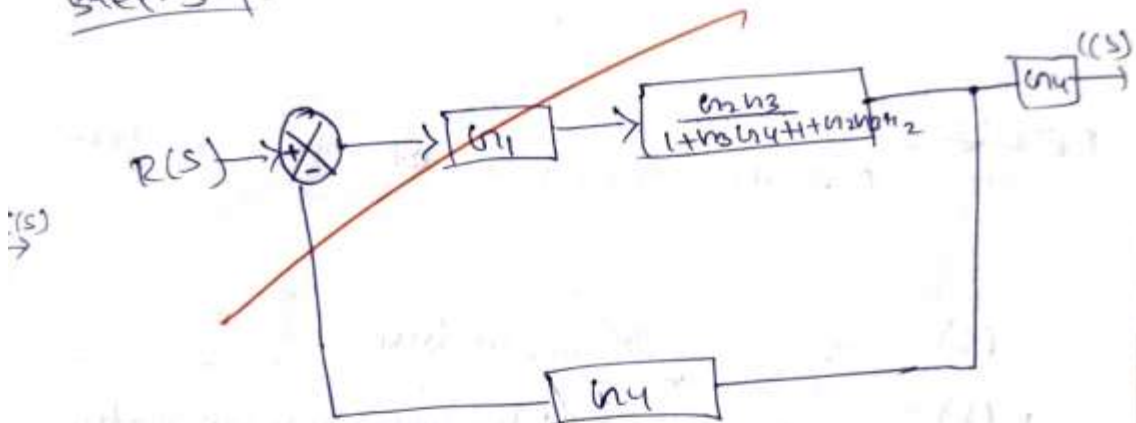
Step-3 : Eliminating the feedback path



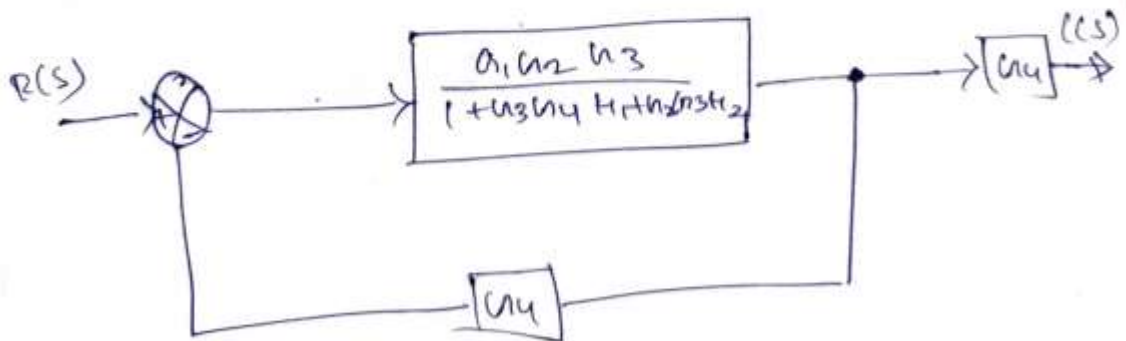
Step-4 | -



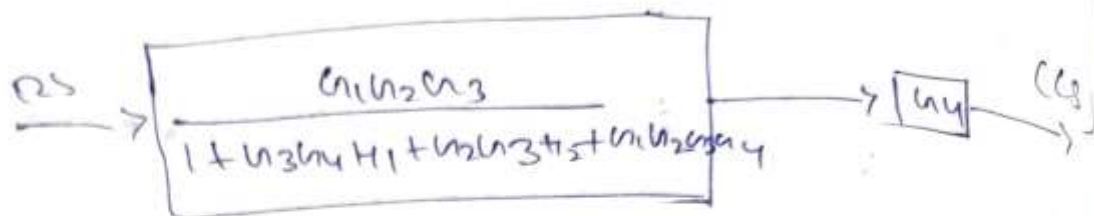
Step-5 | -



Step-6 : Eliminating the feed back path



Step 7 Combining the blocks in cascade



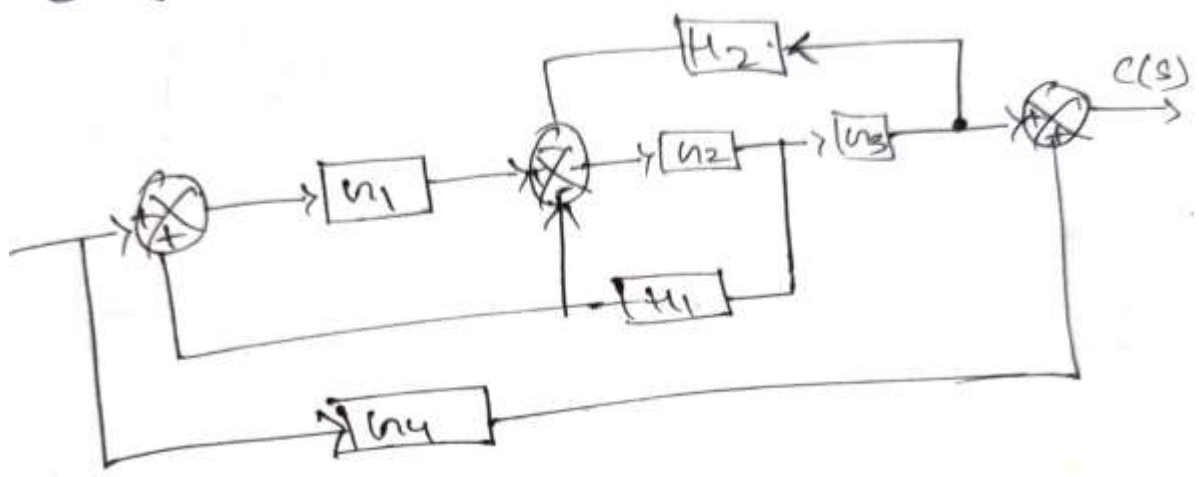
$$\frac{C(s)}{R(s)} = \frac{G_1G_2G_3G_4}{1 + G_3G_4H_1 + G_2G_3H_2 + G_1G_2G_3G_4}$$

Result

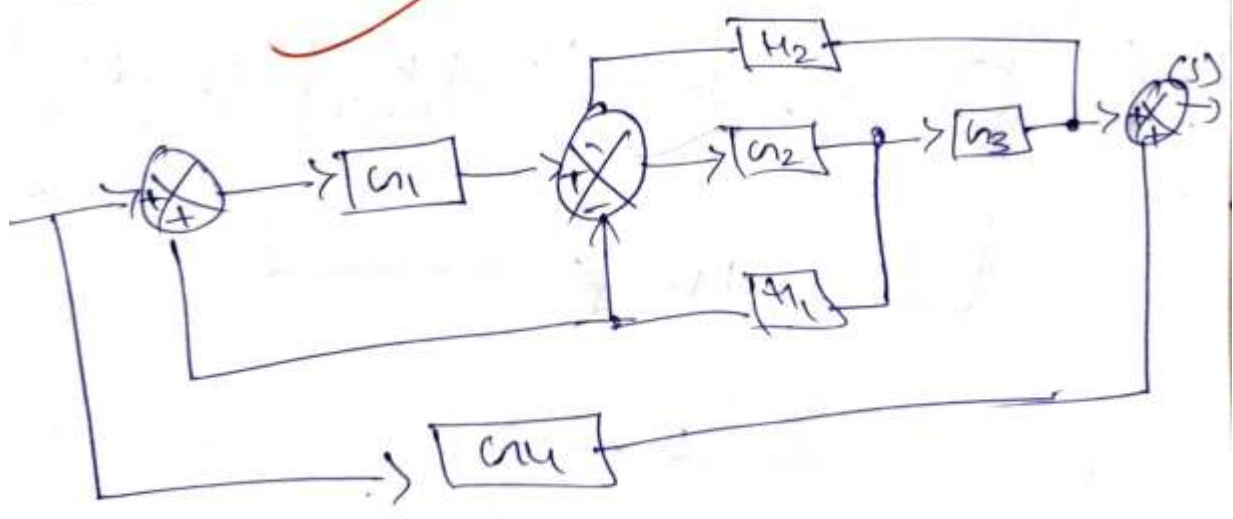
The overall function of the system

$$\frac{C(s)}{R(s)} = \frac{G_1G_2G_3G_4}{1 + G_3G_4H_1 + G_2G_3H_2 + G_1G_2G_3G_4}$$

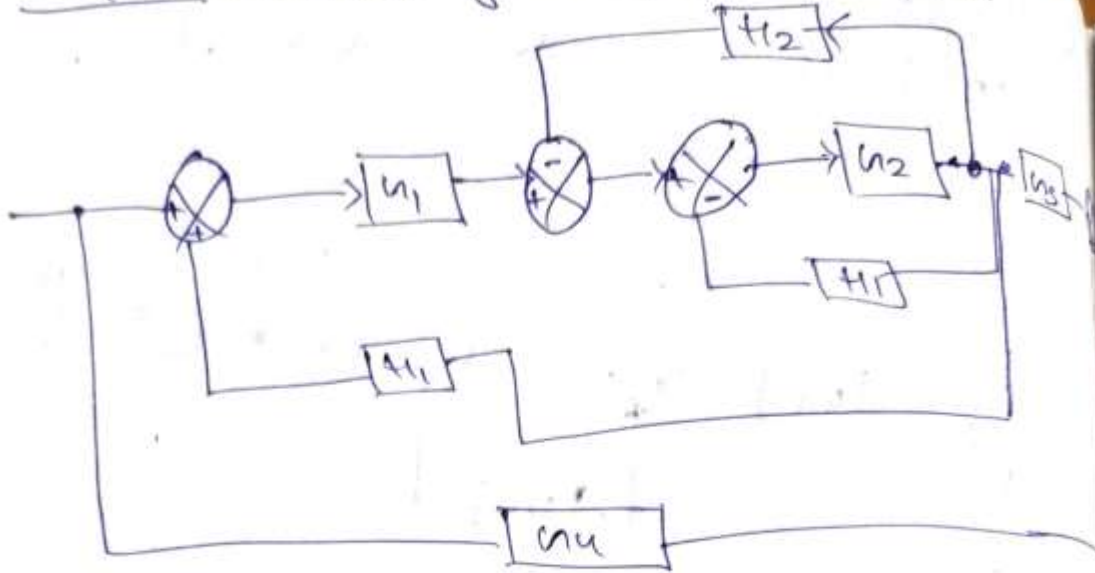
Obtain the closed loop transfer function $C(s)/R(s)$ of the system whose block diagram is shown.



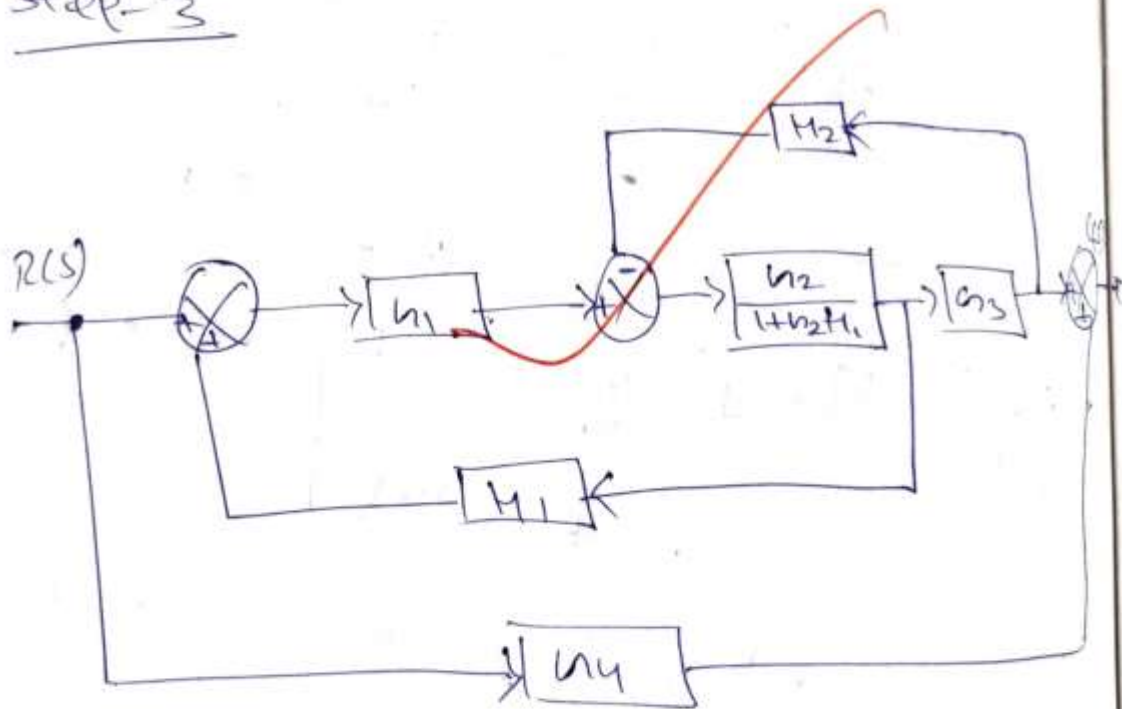
Step-1 ~~splitting the summing point~~ and ~~rearranging the branch point~~



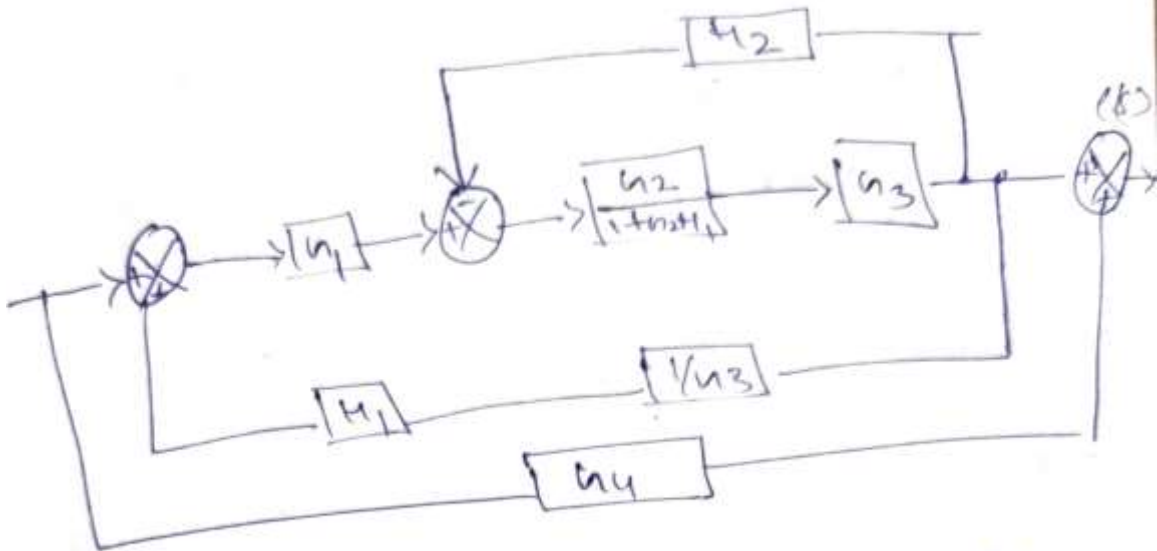
Step-2 Eliminating the feedback path



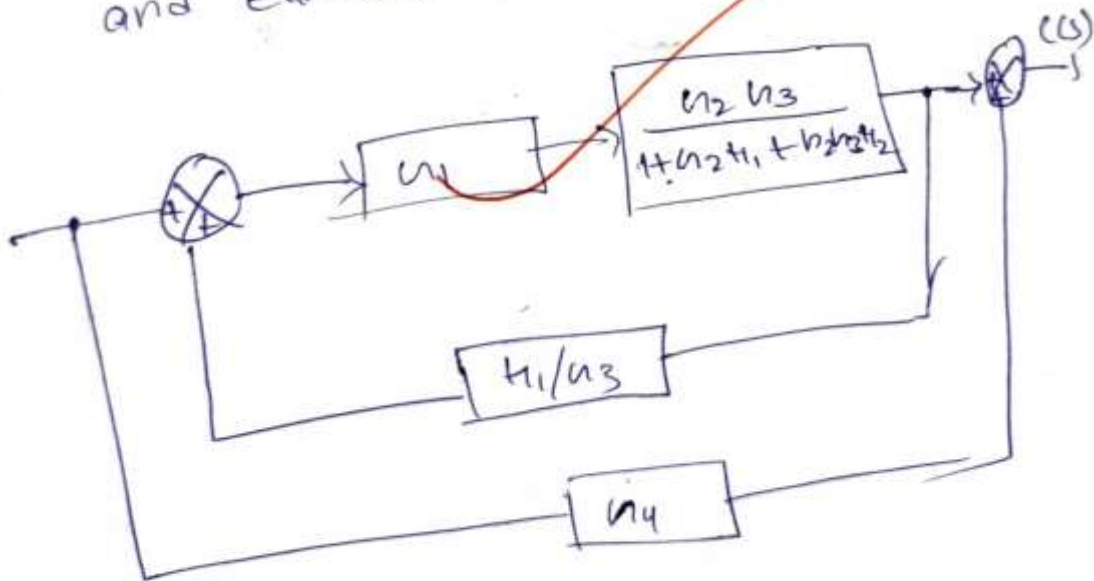
Step-3



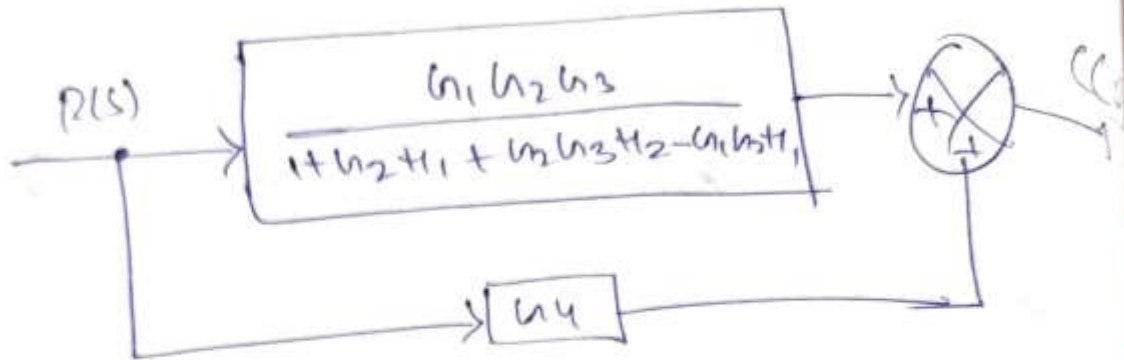
STEP-4



STEP-5 combining the blocks in cascade and eliminating feed back



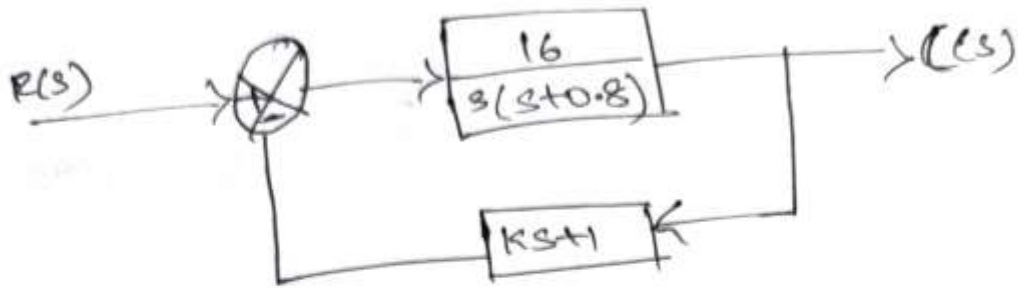
Step-6 Primarily forward path



Result :-

$$\frac{C(s)}{R(s)} = \frac{G_1 G_2 G_3}{1 + G_2 T_1 + G_2 G_3 T_2 - G_1 G_2 T_1} + G_4$$

A positional control system with velocity feedback is shown in fig



Solution:-

The closed loop transfer function $\frac{C(s)}{R(s)} =$

$$\frac{G(s)}{1+G(s)+H(s)}$$

$$\frac{C(s)}{R(s)} = \frac{\frac{16}{s(s+0.8)}}{1 + \frac{16}{s(s+0.8)}(Ks+1)} = \frac{16}{s(s+0.8)+16(Ks+1)}$$

$$= \frac{16}{s^2 + 0.8s + 16Ks + 16} = \frac{16}{s^2 + (0.8 + 16K)s + 16}$$

The values of k and ω_n are obtained by comparing the system transfer function with standard form

$$\frac{C(s)}{R(s)} = \frac{\omega_n^2}{s^2 + 2\zeta\omega_n s + \omega_n^2} = \frac{16}{s^2 + (0.8 + 16\zeta)s + 16}$$

on comparing we get

$$\omega_n^2 = 16$$

$$k = \frac{2\zeta\omega_n - 0.8}{16}$$

$$\therefore \omega_n = 4 \text{ rad/sec}$$

$$\frac{C(s)}{R(s)} = \frac{16}{s^2 + (0.8 + 16 \times 2)s + 16} = \frac{16}{s^2 + 4s + 16}$$

The response in s domain $C(s) = R(s)$

$$= \frac{16}{s^2 + 4s + 16}$$

For unit step input $R(s) = \frac{16}{s(s^2 + 4s + 16)}$

$$C(s) = \frac{16}{s(s^2+4s+16)} = \frac{A}{s} + \frac{Bs+C}{s^2+4s+16}$$

The residue A is obtained by multiply C(s) by s and letting s=0

$$A = C(s) \times s |_{s=0} = \frac{16}{s^2+4s+16} |_{s=0} = \frac{16}{16} = 1$$

$$\frac{16}{s(s^2+4s+16)} = \frac{A}{s} + \frac{Bs+C}{s^2+4s+16}$$

$$16 = A(s^2+4s+16) + (Bs+C)s$$

$$16 = As^2 + 4As + 16A + Bs^2 + Cs$$

on equating the coefficient of s^2

$$\text{we get } 0 = A+B \quad \therefore B = -A = -1$$

$$0 = 4A+C \quad \therefore C = -4A = -4$$

$$C(s) = \frac{1}{s} + \frac{-s-4}{s^2+4s+16} = \frac{1}{s} + \frac{s+4}{s^2+4s+16}$$

$$= \frac{1}{s} + \frac{s+2+2}{(s+2)^2+12} = \frac{1}{s} + \frac{s+2}{(s+2)^2+12} + \frac{2}{\sqrt{12}}$$

$$\frac{\sqrt{12}}{(s+2)^2+12}$$

The time domain response is obtained by taking Laplace transform (1)

$$C(s) = \mathcal{L}^{-1}(CCS) = \mathcal{L}^{-1} \left\{ \frac{1}{s} \frac{-s+2}{(s+2)^2+12} - \frac{2}{\sqrt{12}} \frac{\sqrt{12}}{(s+2)^2+12} \right\}$$

$$= 1 - e^{-2t} \cos \sqrt{12} t - \frac{2}{2\sqrt{2}} e^{-2t} \sin \sqrt{12} t$$

$$= 1 - e^{-2t} \left[\frac{1}{\sqrt{3}} \sin(\sqrt{12} t) + \cos(\sqrt{12} t) \right]$$

Damped frequency
Oscillation

$$\left. \begin{aligned} \omega_d &= \omega_n \sqrt{1-\zeta^2} \\ &= 4 \sqrt{1-0.5^2} \\ &= 3.464 \text{ rad/sec} \end{aligned} \right\}$$

$$\text{Rise time } t_r = \frac{\pi - \theta}{\omega_d} = \frac{\pi - 1.047}{3.464} = 0.6046 \text{ sec}$$

$$\text{Peak time } t_p = \frac{\pi}{\omega_d} = 0.907 \text{ sec}$$

1. maximum overshoot } $M_p = \frac{-\zeta T}{\sqrt{1-\zeta^2}} \times 100 = e^{\frac{-0.5 \times T}{\sqrt{1-0.5^2}}} \times 100$
 $= 0.163 \times 100 = 16.3\%$

for $\zeta = 0.5$ error settling time $t_d = 3T = 3 \times 1.5 = 4.5 \text{ sec}$
 $t_d = 4T = 4 \times 0.5 = 2 \text{ sec}$

RULES FOR CONSTRUCTING ROOT LOCUS

Rule 1: Root locus is symmetrical about real axis

Rule 2: Each branch of root locus from open loop pole to $K=0$, $K=\infty$

Rule 3: segments of real axis having an odd number of open loop their right parts of root locus

Rule 4: $n-m$ roots locus branches that end to infinity

$$\phi_A = \frac{180^\circ(2q+1)}{n-m} \quad q = 0, 1, 2, \dots, n-m$$

Rule-5 - The point of intersection of asymptotes with the real axis

$$\sigma = \sigma_A \text{ where}$$

$$\sigma_A = \frac{\text{sum of poles} - \text{sum of zeros}}{n - m}$$

Rule-6 - The breakaway and breakin points of root locus are determined by $dk/ds = 0$

Rule-7 - The angle of departure from a complex

$$\phi_1 = \pm 180^\circ (2q+1) + \phi, \quad q = 0, 1, 2, 3$$

$$\phi_2 = \pm 180^\circ (2q+1) + \phi, \quad q = 0, 1, 2, 3$$

Rule-8 - The points of intersection of root locus branches with imaginary axis can be determined by $s = j\omega$

Rule-9 - The open-loop gain K at point $s = s_a$ on the root

$$K = \frac{\prod_{i=1}^n |s_a + p_i|}{\prod_{j=1}^m |s_a + z_j|}$$

For unity feedback control system the open loop transfer function

$$G(s) = \frac{10(s+2)}{s^2(s+1)} \text{ Find}$$

(a) the position, velocity and acceleration errors

(b) the steady state errors when input

$$R(s) = \frac{3}{s} - \frac{2}{s^2} + \frac{1}{3s^3}$$

Solution

The error signal $E(s) = \frac{R(s)}{1+G(s)H(s)}$

Given that $R(s) = \frac{3}{s} - \frac{2}{s^2} + \frac{3}{3s^3}$

$$G(s) = \frac{10(s+2)}{s^2(s+1)} \quad H(s) = 1$$

$$E(s) = \frac{\frac{3}{s} - \frac{2}{s^2} + \frac{1}{3s^3}}{1 + \frac{10(s+2)}{s^2(s+1)}} = \frac{\frac{3}{s} - \frac{2}{s^2} + \frac{1}{3s^3}}{\frac{s^2(s+1) + 10(s+2)}{s^2(s+1)}}$$

$$= \frac{3}{s} \left[\frac{s^2(s+1)}{s^2(s+1)} \right] - \frac{2}{s^2} \left[\frac{s^2(s+1)}{s^2(s+1)+10(s+2)} \right] +$$

$$\frac{1}{3s^3} \left[\frac{s^2(s+1)}{s^2(s+1)+10(s+2)} \right]$$

The steady state error can be obtained from

$$e_{ss} = \lim_{s \rightarrow 0} s \left[\frac{3}{s} \left[\frac{s^2(s+1)}{s^2(s+1)+10(s+2)} \right] - \frac{2}{s^2} \left[\frac{s^2(s+1)}{s^2(s+1)+10(s+2)} \right] \right.$$

$$\left. + \frac{1}{3s^3} \left[\frac{s^2(s+1)}{s^2(s+1)+10(s+2)} \right] \right]$$

$$\lim_{s \rightarrow 0} \left[\frac{3s^2(s+1)}{s^2(s+1)+10(s+2)} - \frac{2s(s+1)}{s^2(s+1)+10(s+2)} \right.$$

$$\left. + \frac{(s+1)}{3s^2(s+1)+30(s+2)} \right] = 0 - 0 + \frac{1}{60}$$

Solve represented by the following characteristic can say whether the necessary for stability is satisfied or not.

$s^4 + 3s^3 + 4s^2 + 5s + 10 = 0$

s^4	1	4	10
s^3	3	5	0
s^2	7.33	10	0
s^1	7.84	0	
s^0	10		

It is unstable.

G. Ganesan
5

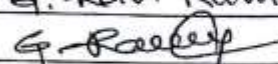
SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY

Peerancheru, Hyderabad- 08

Internal Marks of II B.Tech II Sem EEE I Mid Exams Feb- 2020

Subject – CONTROL SYSTEMS

MAXIMUM MARKS - 25

HT.No	Name of the student	I MID			
		MID	QUIZ	ASSIGNMENT	TOTAL
18081A0201	MD ABDUL FAJAL	7	6	5	18
18081A0203	MOHD ABDUL SAMI	8	6	5	19
18801A0203	MOHAMMED MUSADDIQH FURKHAN	10	6 1/2	5	22
19085A0201	GEETLA MANMADH	10	9	5	24
19085A0202	HAFIZ SYED MAHMOOD AHSAN	7	8 1/2	5	21
19085A0203	KALLERU SANDEEP KUMAR	10	6 1/2	5	22
19085A0205	MOHAMMED ABDUL SOHEL	10	8 1/2	5	24
19085A0206	MOHAMMED INAYATHULLAH	AB	AB	05	05
19085A0207	MOHAMMED YAMEEN	10	8 1/2	5	24
19085A0208	MOHD HASEEBUDDIN KHAN	10	8 1/2	5	24
19085A0209	MOHD SHOAB MOHIUDDIN	10	9	5	24
19085A0210	MUBASSIR AFFAN	9	9	5	23
19085A0211	SYED FARAZUDDIN	10	8	5	23
19085A0212	SHAIK YASEEM AKRAM	10	9	5	24
19085A0213	MOHAMMED RIZWAN	9	8 1/2	5	23
	Number of students present	14			
	Number of students absent	01			
	Name of the staff member	Dr. G. Ravi Kumar			
	Signature of staff member				



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
HYDERABAD-500085**

Shadan College of Engineering and Technology(08)
B.Tech - R18 - II Year - II Semester
ELECTRICAL AND ELECTRONICS ENGINEERING
Final University Consolidated Internal Marks Report-Date- 2020-11-23 11.04.38

HNT0	15407	15409	15411	15427	154AK	154AN	154AU	154BG	154BW
18081A0201	14	14	14	95	21	16	16	23	20
18081A0203	21	21	21	91	22	17	20	24	22
18801A0203	18	22	22	92	24	19	20	19	22
19085A0201	22	23	23	92	24	21	23	24	22
19085A0202	24	25	25	90	23	21	20	22	22
19085A0203	22	21	22	90	24	21	23	24	23
19085A0205	23	24	23	90	24	21	22	24	23
19085A0206	23	22	23	91	19	19	18	19	17
19085A0207	24	25	25	90	24	22	23	25	23
19085A0208	22	23	24	91	24	19	22	24	23
19085A0209	22	23	23	92	24	20	19	20	24
19085A0210	18	22	23	90	24	18	21	25	23
19085A0211	23	24	24	89	24	19	22	23	22
19085A0212	23	23	23	91	19	19	22	23	22
19085A0213	23	23	23	92	24	18	17	21	20
Total:15	322	335	338	136 16	344	290	308	340	328

Note : '-' indicates student is absent for the exam.

Subject Code	Subject Name
154AK	CONTROL SYSTEMS
15409	DIGITAL ELECTRONICS LAB
154AN	DIGITAL ELECTRONICS
15411	ELECTRICAL MACHINES LAB II
15407	CONTROL SYSTEMS LAB
154BW	POWER SYSTEM I
154BG	LAPLACE TRANSFORMS, NUMERICAL METHODS & COMPLEX VARIABLES
15427	CONSTITUTION OF INDIA
154AU	ELECTRICAL MACHINES II

Signature Of Principal with Date & Office seal



[Signature]
PRINCIPAL
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-86, T.S.
College Code: 08

[Signature]
PRINCIPAL
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-86, T.S.
College Code: 08

Sample Day-to-Day Lab Evaluation Form

- Continuous assessment system is also implemented for assessment of laboratory work. The assessment is done on the basis of submission of laboratory records, understanding of the experiment through oral viva voce questions and participation in performing the experiment. Neatness of the laboratory record book is also given weightage in the assessment.
- There shall be a continuous evaluation during a semester for 25 sessional marks and 50 end semester examination marks.
- Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned.
- The end semester examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the examination branch of the University.

Table: Laboratory Continuous Assessment Form:

S. No.	Roll Number	Day-to-Day Performance (15 Marks)	Lab Internal Test (10 Marks)	Total (25 Marks)

Md. Haseeb
PRINCIPAL
Shadran College of Engineering & Technology
Peeran Charu, Hyderabad-50, T.S.
College Code: 08



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk

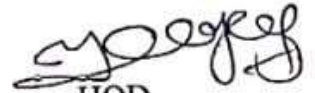
Date: _____

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: - 28th December, 2018

CIRCULAR

This is to inform that all the students of B.Tech IV –II semester shall bring a one page abstract regarding the industrial oriented mini project and submit it to the academic coordinator on or before on 4th January 2019 without fail.



HOD

Dr MOHAMMED ILIYAS

Dr. MOHAMMED ILIYAS
Professor & H.O.D., E.C.E. Dept.
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-91, T.S.



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk






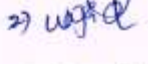
Date: _____

Minutes of meeting

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 5th January 2019

List of Attendees:

1. Dr.MD Iliyas-HOD-ECE 
2. Dr.Shaik Saidulu - Project Coordinator 
3. Dr.G Ravi Kumar - Member 
4. Mohammed Abdul Mubeen - Member 
5. Project Guides
1) 
2) 


- The students were asked to submit the abstracts for the topics of their relevant domain.
- The students were divided into batches and guides were allotted to the respective Batches
- The students were briefed about the different domains in the electronics field such as vlsi design embedded systems and digital image processing.

Adjournment:-

The meeting was adjourned by the head of department ECE at 12:50 pm .the next meeting is scheduled on 22th January 2019.

Copy to:-

- Principal
- Student Notice Board


DR. MOHAMMED ILIYAS

Professor & H.O.D., E.C.E. Dept

Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-91, T.S.

Peerancheru, Himayath Sagar Road, Hyderabad – 500086, Telangana.

Contact No: 080-29886471, 29886408

Rubrics for Project Work-I Review



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

Permitted by Govt.of.TS, Approved by AICTE and Affiliated to J.N.T.U Hyderabad

Project review on Analysis

Department of Electronics and Communication Engineering	Project Work Evaluation (I-Round)	Year: 2018-2019 Semester: I / II
--	--	---

Class: IV Year B.Tech II Semester

Branch:

Section:

1. Batch Number:

2. PROJECT REVIEW COMMITTEE (PRC):

S. No.	Category	Name & Designation
1.	Head of the Department	
2.	Senior Faculty Member From Other Department	
3.	Senior Faculty Member1	
4.	Senior Faculty Member2	
5.	Project Guide	

3. Date(s) of evaluation:

4. Evaluation component:

(Please tick the appropriate item below)

Project Work Outline.

Work Progress and Achievement.

Mid Semester Progress (Source code and rough copy of report).

Final Progress Report.

5. First Round Project Work Evaluation Sheet:

Batch Number: _____

Title of the Project: _____

Source of the Project: *Own idea / paper from journal / paper from a magazine /industry /Smart India Hackathon etc.*

If other, specify:

Method of Evaluation:


Assessment Examination: Yes / No

Type of presentation: Blackboard / Power point

Questions in class room: Yes / No

Any other:

(Please Specify)


PRINCIPAL
 Shadan College of Engineering & Technology
 Peeran Cheni, Hyderabad-50, T.S.
 College Code: 08

S. No.	Roll Number	Name	Marks Awarded				
1							
2							
3							
4							
5							
RUBRICS			Student wise marks				
			1	2	3	4	5
1.	Understanding background and topic (2M)						
2.	Abstract (2M)						
3.	Specifies Project goals (2M)						
4.	Literature Survey (2M)						
5.	Project Planning (2M)						
6.	Presentation skills (2M)						
7.	Summaries algorithms and highlights the Project features (3M)						
8.	Specifies the testing platforms and benchmark systems (2M)						
9.	Technical Design (2M)						
10.	Summarizes the ultimate findings of the Project (2M)						
11.	Question and Answer (4M)						
	Marks (25)						
Date:							
Remarks by Project Review Committee (PRC):							

Signature of the PRC Members							
HOD	Senior Member from other programme	Member1	Member 2	Project Guide			


PRINCIPAL
 Shadan College of Engineering & Technology
 Peeran Choru, Hyderabad-50, T.S.
 College Code: 03



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

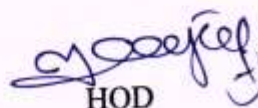
Established by SHADAN EDUCATIONAL SOCIETY.
Approved by A.I.C.T.E and Affiliated to JNTUH, Hyderabad.
Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ^{Date:}

Date:- 16th January, 2019

CIRCULAR

This is to inform that all the students of B.Tech IV –II semester that a technical seminar will be conducted on 13th February 2019, all the students should submit the technical seminar report to the academic coordinator on or before 11th February 2019 without fail.


HOD

Dr MOHAMMED ILIYAS

Dr. MOHAMMED ILIYAS
Professor & H.O.D., E.C.E. Dept.
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-91, T.S.



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk



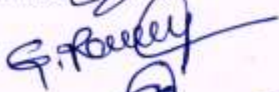


Date: _____

Minutes of meeting

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 22nd January 2019

List of Attendees:

1. Dr.MD Iliyas-HOD-ECE 
2. Dr. Shaik Saidulu - Project Coordinator 
3. Dr. G Ravi Kumar - Member 
4. Mohammed Abdul Mubeen - Member 
5. Project Guides 

- The students submitted the abstracts for the topics of their relevant domain.
- The students were divided into batches and guides were allotted to the respective Batches
- The students gave their overview of their respective abstracts .

Adjournment:-

The meeting was adjourned by the head of department ECE at 11:45 am. The next meeting is scheduled on 4th March 2019.

Copy to:-

- Principal
- Student Notice Board


Dr. MOHAMMAD ILIYAS
Professor & HOD, ECE Dept



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Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk

Date: _____

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date:- 12th March, 2019

CIRCULAR

This is to inform that all the students of B.Tech IV –II semester that a Comprehensive Viva will be conducted on 20th March 2019, all the students should be present without fail.

HOD

Dr. MOHAMMED ILIYAS

Dr. MOHAMMED ILIYAS
Professor & H.O.D., E.C.E. Dept.
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-91, T.S.

S. No.	Roll Number	Name	Marks Awarded				
1							
2							
3							
4							
5							
RUBRICS			Student wise marks				
			1	2	3	4	5
12.	Abstract (2M)						
13.	Work to be completed in Review - I (2M)						
14.	Architecture / System Design (4M)						
15.	Summaries the techniques implemented / to be implemented (2M)						
16.	Contribution of the Candidate (4M)						
17.	Results obtained and Summaries the ultimate findings of the Project (3M)						
18.	Implementation (50 Percentage) (4M)						
19.	Presentation skills (2M)						
20.	Question and Answer (2M)						
	Marks (25)						
Date:							
Remarks by Project Review Committee (PRC):							

Signature of the PRC Members							
HOD	Senior Member from other programme	Member1	Member 2	Project Guide			


PRINCIPAL
 Shadan College of Engineering & Technology
 Peeran Charu, Hyderabad-50, T.S.
 College Code: 08

S. No.	Roll Number	Name	Marks Awarded				
1							
2							
3							
4							
5							
RUBRICS			Student wise marks				
			1	2	3	4	5
12.	Abstract (2M)						
13.	Work to be completed in Review - I (2M)						
14.	Architecture / System Design (4M)						
15.	Summaries the techniques implemented / to be implemented (2M)						
16.	Contribution of the Candidate (4M)						
17.	Results obtained and Summaries the ultimate findings of the Project (3M)						
18.	Implementation (50 Percentage) (4M)						
19.	Presentation skills (2M)						
20.	Question and Answer (2M)						
	Marks (25)						
Date:							
Remarks by Project Review Committee (PRC):							

Signature of the PRC Members							
HOD	Senior Member from other programme	Member1	Member 2	Project Guide			


PRINCIPAL
Shadan College of Engineering & Technology
 Peeran Cheru, Hyderabad-50, T.S.
 College Code: 03



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY



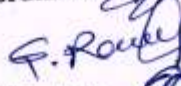


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Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk

Date: _____

Minutes of meeting

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
Date: 4th March 2019

List of Attendees:

1. Dr.MD Ilyas-HOD-ECE 
2. Dr.Shaik Saidulu - Project Coordinator 
3. Dr.G Ravi Kumar - Member 
4. Mohammed Abdul Mubeen - Member 
5. Project Guides 


- The students demonstrated the working of the project kits.
- The students explained the working procedure to their respective guides who were allotted to the respective batches.
- The students were briefed about any modifications which can be incorporated into the project.
- The outputs of the projects were evaluated by the respective guides.
- The students were asked to submit the project documentation .

Adjournment:-

The meeting was adjourned by the head of department ECE at 12:15 pm. The next meeting is scheduled on 10th April 2019.

Copy to:-

- Principal
- Student Notice Board


Dr. MD ILYAS
Professor & H.O.D., E.C.E. Dept.
Shadan College of Engineering & Technology
Peerancheru, Hyderabad - 500086, T.S.

Rubrics for Project Work-III Review



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

Permitted by Govt.of.TS, Approved by AICTE and Affiliated to J.N.T.U Hyderabad

Project review on Implementation

Department of Computer Science and Engineering / Information Technology	Project Work Evaluation (III-Round)	Year: 2018-2019 Semester: I / II
--	--	---

Class: IV Year B.Tech II Semester

Branch:

Section:

6. Batch Number:

7. PROJECT REVIEW COMMITTEE (PRC):

S. No.	Category	Name & Designation
1	Head of the Department	
2.	Senior Faculty Member From Other Department	
3.	Senior Faculty Member1	
4.	Senior Faculty Member2	
5.,	Project Guide	

8. Date(s) of evaluation:

9. Evaluation component:

(Please tick the appropriate item below)

Project Work Outline.

Work Progress and Achievement.

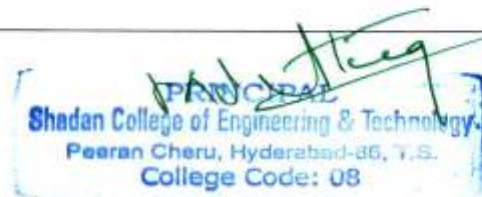
Mid Semester Progress (Source code and rough copy of report).

Final Progress Report.

10. First Round Project Work Evaluation Sheet:

<p style="text-align: center;">Batch Number: _____</p> <p>Title of the Project: _____</p> <p>Source of the Project: <i>Own idea / paper from journal / paper from a magazine /industry /Smart India Hackathon etc.</i></p> <p>If other, specify:</p> <p>Method of Evaluation:</p> <p style="padding-left: 20px;">Assessment Examination: Yes / No</p> <p style="padding-left: 20px;">Type of presentation: Blackboard / Power point</p> <p style="padding-left: 20px;">Questions in class room: Yes / No</p> <p style="padding-left: 20px;">Any other:</p> <p style="padding-left: 20px;">(Please Specify)</p>

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S. No.	Roll Number	Name	Marks Awarded				
1							
2							
3							
4							
5							
RUBRICS			Student wise marks				
			1	2	3	4	5
1.	Abstract (2M)						
2.	Work to be completed in Review - I (2M)						
3.	Architecture / System Design (4M)						
4.	Summaries the techniques implemented / to be implemented (2M)						
5.	Contribution of the Candidate (4M)						
6.	Results obtained and Summaries the ultimate findings of the Project (3M)						
7.	Implementation (50 Percentage) (4M)						
8.	Presentation skills (2M)						
9.	Question and Answer (2M)						
	Marks (25)						
Date:							
Remarks by Project Review Committee (PRC):							

Signature of the PRC Members							
HOD	Senior Member from other programme	Member1	Member 2	Project Guide			

S. No.	Roll Number	Name	Marks Awarded				
1							
2							
3							
4							
5							
RUBRICS			Student wise marks				
			1	2	3	4	5
1.	Abstract (2M)						
2.	Work to be completed in Review - I (2M)						
3.	Architecture / System Design (4M)						
4.	Summaries the techniques implemented / to be implemented (2M)						
5.	Contribution of the Candidate (4M)						
6.	Results obtained and Summaries the ultimate findings of the Project (3M)						
7.	Implementation (50 Percentage) (4M)						
8.	Presentation skills (2M)						
9.	Question and Answer (2M)						
	Marks (25)						
Date:							
Remarks by Project Review Committee (PRC):							

Signature of the PRC Members							
HOD	Senior Member from other programme	Member1	Member 2	Project Guide			

Indu

PRINCIPAL
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-86, T.S.
College Code: 08



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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Approved by A.I.C.T.E and Affiliated to JNTUH, Hyderabad.
Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk

Date: _____

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date:- 29th March ,2019

CIRCULAR

This is to inform that all the students of B.Tech IV –II semester should present their major and industrial oriented mini projects on 16th April 2019; all the students should submit their Project kits and attested Project Thesis to the academic coordinator on or before 16th April 2019 without fail.



HOD

Dr MOHAMMED ILIYAS

Dr. MOHAMMED ILIYAS
Professor & H.O.D., E.C.E. Dept.
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-91, T.S.



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk

Date: _____

Minutes of meeting

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 10th April 2019

List of Attendees:

1. Dr.MD Ilyas-HOD-ECE
2. Dr.Shaik Saidulu - Project Coordinator
3. Dr.G Ravi Kumar - Member
4. Mohammed Abdul Mubeen - Member
5. Project Guides

- The students submitted the project documentation and errors which were found out were corrected.
- The students were asked to submit the corrected hard bound documentation and submit on 15 th april 2019.

Adjournment:-

The meeting was adjourned by the head of department ECE at 11:40 pm .

Copy to:-

- Principal
- Student Notice Board

DR. MOHAMMAD ILIYAS
Professor & H.O.D., E.C.E. Dept.
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad, T.S.

Rubrics for Project Work-FINAL Review



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

Permitted by Govt.of.TS, Approved by AICTE and Affiliated to J.N.T.U Hyderabad

Project review on Developing

Department of Computer Science and Engineering / Information Technology	Project Work Evaluation (IV-Round)	Year: 2018-2019 Semester: I / II
--	---	---

Class: IV Year B.Tech II Semester

Branch:

Batch Number:

PROJECT REVIEW COMMITTEE (PRC):

S. No.	Category	Name & Designation
1	Head of the Department	
2	Senior Faculty Member	
3	Senior Faculty Member1	
4	Senior Faculty Member2	
5	Senior Faculty Member3	
6	Project Guide	

11.

Date(s) of evaluation:

12.Evaluation component:

(Please tick the appropriate item below)

Project Work Outline.

Work Progress and Achievement.

Mid Semester Progress (Source code and rough copy of report).

Final Progress Report.

13. First Round Project Work Evaluation Sheet:


PRINCIPAL
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-50, T.S.
College Code: 08

Batch Number: _____

Title of the Project: _____

Source of the Project: *Own idea / paper from journal / paper from a magazine / industry / Smart India Hackathon etc.*

If other, specify: _____

Method of Evaluation:

Assessment Examination: Yes / No

Type of presentation: Blackboard / Power point

Questions in class room: Yes / No

Any other: _____

(Please Specify)

S. No.	Roll Number	Name	Marks Awarded				
1							
2							
3							
4							
5							
RUBRICS			Student wise marks				
			1	2	3	4	5
1	Abstract (2M)						
2	Work to be completed in Review - I (2M)						
3	Architecture / System Design (4M)						
4	Summaries the techniques implemented / to be implemented (2M)						
5	Contribution of the Candidate (4M)						
6	Results obtained and Summaries the ultimate findings of the Project (3M)						
7.	Implementation (50 Percentage) (4M)						
8.	Presentation skills (2M)						
9.	Question and Answer (2M)						
	Marks (25)						
Date: _____							
Remarks by Project Review Committee (PRC):							

Signature of the PRC Members							

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PRINCIPAL
 Shaden College of Engineering & Technology
 Beeren Cheru, Hyderabad-03, T.S.
 College Code: 08

HOD	Senior Member from other programme	Member1	Member 2	Project Guide

P. Aditya
PRINCIPAL
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad 50, T.S.
College Code: 08

Rubrics for Technical Semester



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B.Tech IV Year II SEMESTER:: 2019-2020

TECHNICAL SEMINAR EVALUATION FORM

Class & Branch : _____
 Subject Name : _____ SEMINAR
 Subject Code : _____ A80089
 Roll Number : _____
 Student Name : _____
 Seminar Title : _____
 Date of presentation: : _____

S. No.	RUBRICS	Marks
1	EVALUATION OF THE TECHNICAL REPORT (SEMINAR REPORT) (15 M)	
	a. Punctuality in submission of report and discussion	/2
	b. Resources from which the seminar have been based	/2
	c. Report submission	/3
	d. Lay out, and content of Presentation	/3
	e. Depth of the students knowledge in the subject	/5
	Total	/15
2	EVALUATION OF THE PRESENTATION (35 M)	
	a. Contents	/10
	b. Delivery	/10
	c. Relevance and interest the topic creates	/5
	d. Ability to involve the spectators	/5
	e. Question answer session	/5
	Total	/35
3	SUPERVISOR MARKS	/20
4	SENIOR FACULTY MARKS	/15
5	ADMIN IN-CHARGE / ACADEMIC IN-CHARGE / HOD MARKS	/15
	GRAND TOTAL	/100

Additional Comments:

Signature of the Evaluators

SEMINAR SUPERVISOR

SENIOR FACULTY MEMBER

HEAD OF THE DEPARTMENT





SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B.Tech IV Year II SEMESTER:: 2019-2020

COMPREHENSIVE VIVA FORM

Class & Branch : _____
Subject Name : _____ Comprehensive viva
Subject Code : _____ 12865
Roll Number : _____
Student Name : _____
Date of presentation: : _____

S.NO	H.T. NO	NAME OF THE STUDENT	MARKS AWARDED
1			
2			
3			
4			
5			
6			
7			
8			
9			

Signature and Name faculty
(Internal faculty)

Signature and Name faculty
(External faculty)

64

Md. Arif
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-50, T.S.
College Code: 03



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD, HYDERABAD-500085
SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY(08)
University External Exam Final Award List
R15- IV Year B.Tech II Semester Regular
ELECTRONICS AND COMMUNICATION ENGINEERING, SECTION-A
COMPREHENSIVE VIVA (12865)

Maximum Marks: 100

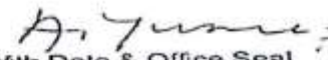
Date: 2019-05-01 10.53.26

S.No	HTNO	MARKS AWARDED
1	15081A0401	97
2	15081A0403	96
3	15081A0406	97
4	15081A0407	94
5	15081A0408	94
6	15081A0410	93
7	16085A0401	92


Signature of External Examiner


Signature of Internal Examiner




Signature of The Principal With Date & Office Seal
PRINCIPAL
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-66, T.S.
College Code: 08


Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-66, T.S.
College Code: 08

Rubrics for Industrial Oriented Mini Project Work Review



SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

Permitted by Govt.of.TS, Approved by AICTE and Affiliated to J.N.T.U Hyderabad

Project review on Designing

Department of Electronics and communication engineering	Mini Project Work Evaluation (I-Round)	Year: 2019-2020 Semester:IV-II
--	---	---

Class: IV Year B.Tech II Semester

Branch:

Section:

14.

Batch Number:

15. PROJECT REVIEW COMMITTEE (PRC):

S. No.	Category	Name & Designation
6.	Head of the Department	
7.	Senior Faculty Member From Other Department	
8.	Senior Faculty Member1	
9.	Senior Faculty Member2	
10.	Project Guide	

Date(s) of evaluation:

16.

17.Evaluation component:
(Please tick the appropriate item below)

Project Work Outline.

Work Progress and Achievement.

Mid Semester Progress (Source code and rough copy of report).

Final Progress Report.

18. First Round Project Work Evaluation Sheet:

Batch Number: _____

Title of the Project: _____

Source of the Project: *Own idea / paper from journal / paper from a magazine /industry /Smart India Hackathon etc.*

If other, specify:

Method of Evaluation:

Assessment Examination: Yes / No

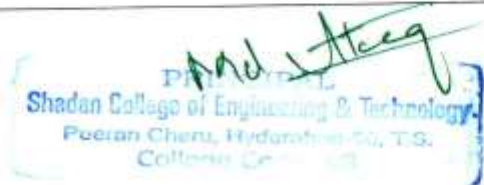
Type of presentation: Blackboard / Power point

Questions in class room: Yes / No

Any other:

(Please Specify)

66



S. No.	Roll Number	Name	Marks Awarded				
1							
2							
3							
4							
5							
RUBRICS			Student wise marks				
			1	2	3	4	5
12.	Abstract (4M)						
13.	Work to be completed in Review (4M)						
14.	Architecture / System Design (8M)						
15.	Summaries the techniques implemented / to be implemented (4M)						
16.	Contribution of the Candidate (8M)						
17.	Results obtained and Summaries the ultimate findings of the Project (6M)						
18.	Implementation (50 Percentage) (8M)						
19.	Presentation skills (4M)						
20.	Question and Answer (4M)						
Marks (50)							
Date:							
Remarks by Project Review Committee (PRC):							

Signature of the PRC Members							
HOD	Senior Member from other programme	Member1	Member 2	Project Guide			


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 Peeran Cheru, Hyderabad-80, T.S.
 College Code: 08



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B.Tech IV Year II SEMESTER:: 2019-2020

INDUSTRIAL ORIENTED MINI PROJECT FORM

Class & Branch : _____
Subject Name : Industrial Oriented Mini Project
Subject Code : _____
Roll Number : _____
Student Name : _____
Date of presentation: : _____

S.NO	H.T. NO	NAME OF THE STUDENT	MARKS AWARDED
1			
2			
3			
4			
5			
6			
7			
8			
9			

Signature and Name faculty
(Internal faculty)

Signature and Name faculty
(External faculty)

68


PRINCIPAL
Shadan College of Engineering & Technology
Peeran Choru, Hyderabad - 500 075
College



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD, HYDERABAD-500085
SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY(08)
University External Exam Final Award List
R15- IV Year B.Tech II Semester Regular
ELECTRONICS AND COMMUNICATION ENGINEERING,SECTION-A
INDUSTRY ORIENTED MINI PROJECT (12866)

Maximum Marks: 50

Date: 2019-05-01 10.53.31

S.No	HTNO	MARKS AWARDED
1	15081A0401	48
2	15081A0403	46
3	15081A0406	46
4	15081A0407	45
5	15081A0408	45
6	15081A0410	46
7	16085A0401	43

Signature of External Examiner

Signature of Internal Examiner



Signature of The Principal With Date & Office Seal

[Handwritten Signature] 7/5/19
Shadan College of Engineering & Technology
Peeran Cheru, Hyderabad-80, T.S.
College Code: 08



