IES COLLEGE OF TECHNOLOGY, BHOPAL
B.E. (Seventh Semester) Assignment I
(Electrical & Electronics Eng.Branch)
Communication Engineering (EX-601)

Date of issue: 11/01/2014   **Date of submission: 20/01/2014**
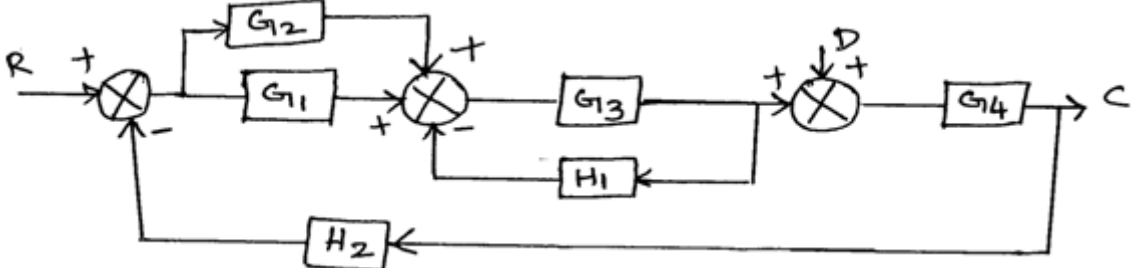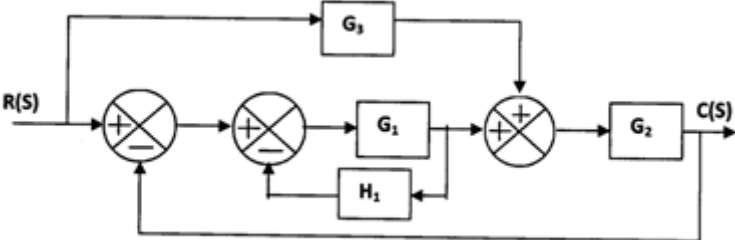
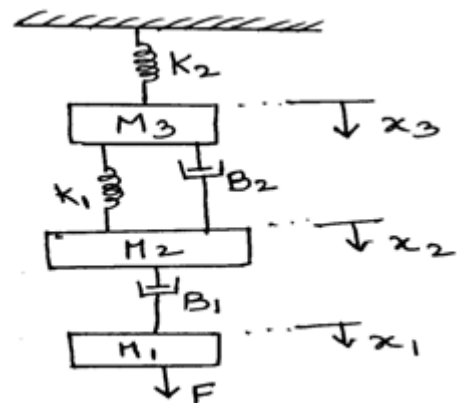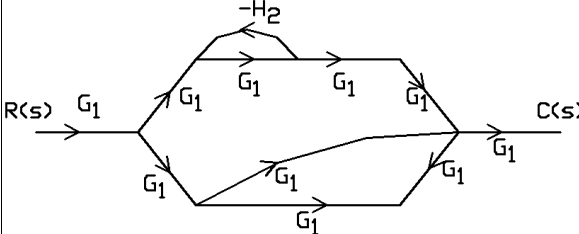|	
1	What is convolution? Explain convolution in frequency domain.
2	Prove that Dirac comb is its own Fourier transform.
3	Write ten properties of Fourier transform.
4	State and prove time scaling property and frequency shifting property of Fourier transform.
5	Find the Fourier transform of:- • e^{-bt} • $Cos2\pi ft$ • $Sin2\ \pi ft$

IES COLLEGE OF TECHNOLOGY, BHOPAL
B.E. (Seventh Semester) Assignment I
(Electrical & Electronics Eng.Branch)
Control System (EX-602)

Date of issue: 11/01/2014   **Date of submission: 20/01/2014**

1	Using masons gain formula determine the ratio C/R for the system represented by the following diagram
2	Determine the overall transfer function of the following diagram

3	Obtain the response of unity feedback system whose open loop transfer function is G(S) = 4 / {s (s + 5)} and when the input is unit step.
4	Obtain the analogous electrical network for the following:
5	Find the transfer function of the given block diagram by using Mason's gain formula

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B.E. (Seventh Semester) Assignment I
(Electrical & Electronics Eng.Branch)
S &P (EX-603)

Date of issue: 11/01/2014   **Date of submission: 20/01/2014**

Q1	What is short circuit? What is the difference between short circuit and an overload?
Q2	Write short note on current limiting reactors? Classify them on the basis of their type and location.
Q3	Describe positive, negative and zero sequence network in power system. What is their significance?
Q4	A 25 MVA, 13.2 KV generator, with solidly grounded neutral has a sub-transient reactance of 0.25 p.u. the negative and zero sequence reactance are 0.35 and 0.1 p.u. respectively. A single line to ground fault occurs at the terminals of the generators when it is operating at rated voltage and disconnected from the system. Find the fault current and line to line voltages neglect resistance.
Q5	Find the value of the reactance per phase external to a 20 MVA, 10KV, 50hz, 3-phase generator such that the steady state current on short circuit shall not exceed 8 times the full load current. The internal reactance of generator is 5%.

IES COLLEGE OF TECHNOLOGY, BHOPAL
B.E. (Seventh Semester) Assignment I
(Electrical & Electronics Eng.Branch)
EI (EX-604)

Date of issue: 11/01/2014   **Date of submission: 20/01/2014**

Q1	What is oscilloscope and describe its parts?
Q2	Draw block diagram of CRO?
Q3	Derivation of electrostatic focusing?
Q4	What are lissajous figure? How are they obtained on CRO?
Q5	Write application and advantages of CRO?

IES COLLEGE OF TECHNOLOGY, BHOPAL
B.E. (Seventh Semester) Assignment I
(Electrical & Electronics Eng.Branch)
ECM (EX-605)

Date of issue: 11/01/2014   **Date of submission: 20/01/2014**

1	Describe the energy accounting and analysis also explains auditing and targeting.
2	Discuss the energy management and qualities s & function of energy managers.
3	Explain Loss of energy in material flow.
4	What is Maximizing system efficiency and energy performance?
5	Describe the Material load energy balance diagram with their example.