MS applications

MATLAB

P1_1.m - Plotting a time signal based on a known expression and using the derivative function.
Lab1Pb7.m - Plotting time signals which result from a sequential switching circuit, after their expressions have been calculated.
L1_Laplace.m - Plotting time signals which result from the use of the inverse Laplace expressions calculations.
SSMtoTF.m – Conversion from the state space model to the transfer function, no initial conditions.
Ilaplace_Example.m – Using the symbolic variables and the ezplot() function to plot the time solution.
Complex_numbers.m - Example for determining the complex roots of a proper rational function.
HomogenousRespons - Example for plotting the homogenous response based on the general expression calculation.

LABVIEW

M1_1.vi – Plotting the Step response of the RLC series circuit based on the mathematical model.
MM_RC.vi – Plotting the Step response of the RC series circuit, based on the mathematical model.
Lab1Pb9.vi - Plotting the Step response of the RLC parallel circuit, based on the mathematical model.
Lab2EX1_RC.vi – Plotting the Step response of the RC series circuit, based on the state space model approach (uses MathScript).
Lab2EX1_RL_Fara_MathScript.vi – Plotting the response of the RL series circuit, based on the state space model approach, having a rectangular signal at the input.
Lab2EX3_LeadCompensator_MS.vi – Plotting the Step response of the Lead Compensator circuit, based on the state space model approach.
Lab2EX3_LeadCompensator_MM.vi – Plotting the Step response of the Lead Compensator circuit, based on the mathematical model.
Lab2EX1_RLC_Fara_MathScript.vi – Plotting the Step response of the RLC series circuit, based on the state space model approach.
Lab2EX1_RC_Fara_MathScript.vi – Plotting the response of the RC series circuit, based on the state space model approach, having a rectangular signal at the input.
Lab2Pb3.vi - Plotting the Step response of a 3rd order circuit, based on the state space model approach.
RLC_SSM.vi - Plotting the Step response of the RLC series circuit, based on the state space model approach and using MathScript.
LeadCompensator_TF.vi - Plotting the Step response of the Lead Compensator circuit, based on the determined transfer function.
LeadCompensator_SSM.vi - Plotting the Step response of the Lead Compensator circuit, based on the state space model approach.
TF_RLC.vi - Plotting the Step response of the RLC circuit, based on the determined transfer function.
ZerosPolesMap.vi – Plotting the Step response and the Poles and Zeros Map, based on the calculated coefficients of the transfer function.
SSMtoTF.vi – Determining the transfer function coefficients, the Poles and Zeros Map and the Step response starting from the calculated state space model matrices.

MULTISIM

Lab1Pb9.ms11 - RLC parallel circuit schematic.
Lab1Pb7.ms11 – Sequential switching circuit schematic.
Lab1Pb8.ms11 – Sequential switching circuit schematic and oscilloscope usage.
Lab2Pb3.ms11 – 3rd order circuit schematic.