

EECS / CSE 70A Final Exam Grading Rubric

Each incorrect or missing units or incorrect result causes losing 1 point.

Problem 1.

Step	Points
Finding Thevenin voltage	4
Finding Norton current	4
Finding Equivalent resistant	2
Final results each (voltage, current and resistor) including units	1+1+1
Drawing the equivalent Thevenin circuit	1
Drawing the equivalent Norton circuit	1
Total	15

Problem 2.

Step	Points
Find the capacitor voltage at $t < 0$	2
Find the capacitor voltage at $t = \infty$	4
Find the time constant	4
Give the generic formula for $V_C(t)$ when $t > 0$	2
Find the final numerical expression for $V_C(t)$	3
Give the generic formula for $i_C(t)$	2
Find the final numerical result for $i_C(t)$	3
Total	20

Problem 3.

Step	Points
Write the impedance voltage relationship between V_1 and V_S (or find V_1 using KVL/KCL in terms of V_S)	6
Carryout the calculation and result for V_1 (magnitude and phase each half of the total points)	4
Convert the derived phasor of V_1 to time domain signal	3
Write the impedance voltage relationship between V_2 and V_S or V_1 (or find V_1 using KVL/KCL in terms of V_1 or V_S)	5
Carryout the calculation and result for V_1 (magnitude and phase each half of the total points)	4
Convert the derived phasor of V_2 to time domain signal	3
Total	25

Problem 4.

Step	Points
Find the transfer function using impedance division or KVL/KCL	12
Find the transfer function value at infinite frequency	4
Find the transfer function value at 0 frequency	4
Total	20

Problem 5.

Step	Points
Calculating the amplitude for the first signal V_{in1} and result	4
Calculating the phase for the first signal V_{in1} and result	4
Calculating the amplitude for the second signal V_{in2} and result	4
Calculating the phase for the second signal V_{in2} and result	4
Sum the results and final answer	4
Total	20