EE 111

Assignment - 2

1. In figure the 12 V source has been applied for a long time before the switch opens at t = 0. Find and for t > 0. Sketch for 0 ≤ t ≤ 5τ, where τ is the circuit time constant for t > 0.



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2) In figure the 30 V source has been applied for a long time

1. Find and for 0 < t < 1 ms.



1. Find and for t ≤ 1 ms.



1. Find for 0 ≤ t ≤ 25 ms.





3 (a) For the circuit of figure 1 find (t) for t > 0, assuming that the 80 V source has been applied for a very long time. Plot the response for 0 ≤ t ≤ 0.25 s.



(b) Consider now the circuit of figure 2. Find (t) for t > 0. Plot the response for 0 ≤ t ≤ 0.25 s.



(c) Compare the time constants of the circuit of part (a) and (b) for the intervals 0 ≤ t ≤ 60 ms and 60ms ≤ t.



