VERIFICATION OF KIRCHOFF’S CURRENT LAW   
AND KIRCHOFF’S VOLTAGE LAW   
   
Exp no - 1   
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AIM :   
   
1)To calculate the voltage and current for the given network   
using KVL and KCL respectively.   
2) To verify the obtained values using orcad software   
   
PROBLEM STATEMENT:   
   
1)Calculate V1, V2 and V3 using nodal method.   
2)Calculate I1,I2 and I3 using mesh method.   
   
CIRCUIT DIAGRAM:   
   
  
MANUAL CALCULATION :   
   
   
   
   
  
   
   
  
   
   
   
   
  
SIMULATION CIRCUITS WITH VALUE TAGS   
   
   
   
   
   
   
   
   
   
   
  
   
TABULATION OF MANUAL AND SIMULATION VALUES:   
   
PARAMETERS MANUAL SIMULATION   
V1 4.3872 V 4.387 V   
V2 3.5426 V 3.543 V   
I1 0.0230 A 0.02307 A   
I2 0.003126 A 0.003127 A   
I3 0.01655 A 0.01656 A   
   
   
INFERENCE:   
   
From the above manual calculation and simulation , we can   
conclude that KCL and KVL are verified.   
   
VERIFICATION PAGE WITH FACULTY SIGN: