

**BASICS OF ELECTRICAL CIRCUITS**  
Midterm II

1. (– pts ) For the circuit given in Figure 1, obtain the equations to analysis the circuit using Chord (Line) current method such that unknown variables are  $i_3$  and  $i_4$  ( $V_6 = \alpha i_1$  ).
2. (– pts ) For the circuit given in Figure 2, obtain the equations to analysis the circuit using Generalized Branch Voltages method such that unknown variables are  $V_1$  and  $V_2$  ( $i_5 = i_7$  ).

