TUTE 2
NETWORK ANALYSIS AND SYNTHESIS
DEPARTMENT OF ELECTRICAL AND INSTRUMENTATION

Q.1. A graph is shown in figure 1. Find the Tie-set and cut-set matrices and obtain the KCL and KVL equations.

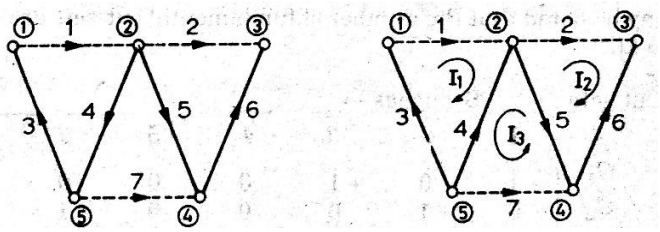

Figure 1.

Q.2. For the resistive network shown in figure 2. Obtain the cut-set matrix.

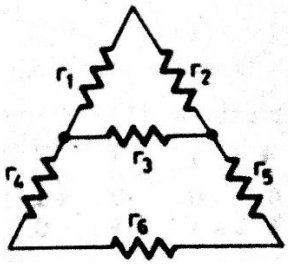

Figure 2.

Q.3. Obtain the Tie-set matrix of the circuit shown in figure 3. Also find number of links

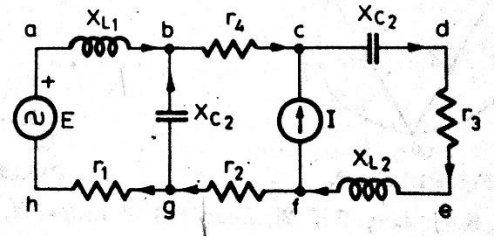

Figure 3.

Q.4. Draw a graph of the network shown in figure 4 select a tree to write fundamental loop matrix. Form loop equation and find loop currents and branch currents.

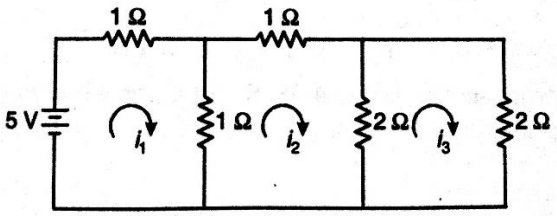

Figure 4.

Q.5. show the cut-sets from the graph of the network shown in figure 5 and develop the fundamental cut-set matrix

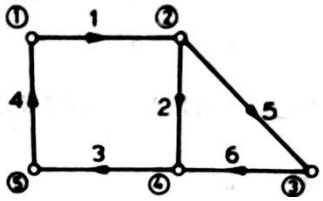

Figure 5.