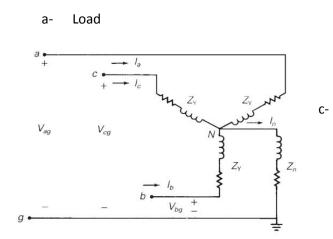
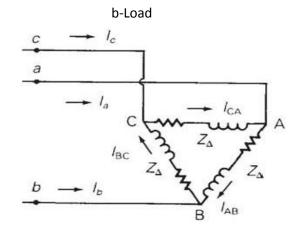
## Çankaya University Electrical & Electronics Engineering Department EE 324 Power Systems Homework # 3

EE 324 Power Systems Homework # 3 Due: 13.05.2018

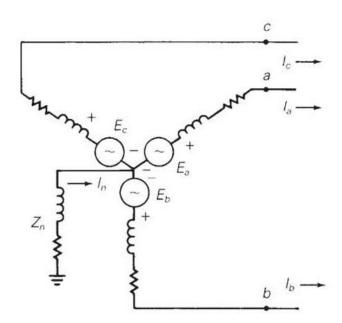
1-Derive the Zero, positive and negative sequence networks for the following;

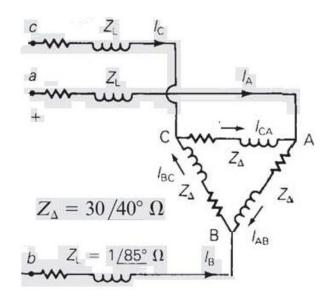




c-Synchronous Generator







2-

A Y-connected voltage source with the following unbalanced voltage is applied to the balanced line and load of (d)

$$\begin{bmatrix} V_{ag} \\ V_{bg} \\ V_{cg} \end{bmatrix} = \begin{bmatrix} 277/0^{\circ} \\ 260/-120^{\circ} \\ 295/+115^{\circ} \end{bmatrix} \text{ volts}$$

The source neutral is solidly grounded. Using the method of symmetrical components, calculate the source currents  $I_a$ ,  $I_b$ , and  $I_c$ .