

Since Z_f is equal to zero and also Z_1 (positive) and Z_2 (negative) have the same values of impedances. So multiplying the positive sequence impedance i.e Z_{thpu} calculated in S2 with 2 and I_a is the same as calculated above i.e I_{o_shctpu} , the formula becomes

$$Z_{othpu} = (3 \cdot V_t / I_{o_shctpu}) - (2 \cdot Z_{thpu})$$

Since, terminal voltage = 1 p.u

So, $Z_{othpu} = 0.0025 + 0.0121i$

Transformer T1 is zero grounded shown by subscript 0 but there is no change in its impedance. From 'assignment S2' denoted by Z_{T1pu} and also the value of shunt capacitance remains the same.

In positive sequence (S2) we did consider the sixth node because we had a voltage source there but in case of zero sequence there is no voltage source so node 7 will be eliminated and the Y-bus matrix will be of order 6*6. Following the same procedure for the calculation of the Y-bus matrix i.e