PSA_Test1

The respondent's email (**u19ee015@eed.svnit.ac.in**) was recorded on submission of this form.

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Ybus is always invertible. State whether this statement is true or false with justification.

Ybus is always symmetric. State whether this statement is true or false with justification.

False. Ybus will not always be symmetrical. It will be unsymmetrical when there is use of phase shifting transformer

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If we include transformer in any line of the given network then the size of original Ybus will not change. State whether this statement is true or false with justification.

If some network has N buses and L number of lines then number of Zero element is Ybus for that network is

N * N - (N - 2*L)

Higher value of diagonal elements of Ybus is good for the network. State whether this statement is true or false with justification.

false

Zbus is sparse matrix. State whether this statement is true or false with justification.

False, Zbus is not a sparse matrix because number of zero elements are less than non zero elements in z bus matrix

How we can modify given Zbus for tripping of a line in existing network. You should not answer as forming Zbus again from beginning for modified network

What is the importance of diagonal elements of Zbus.

with the help of diagonal elements we can get thevenin impedances, which can be used to calculate the current into the fault.

In short circuit analysis, why loads are neglected?

In short circuit analysis loads are neglected because magnitude of short circuit current which flows from conventional rotating machines is greater than the short circut current magnitude which is being changed by the loads. Also short-circuit currents are greatly out of phase with load currents.

What are the objectives of short circuit analysis.

Objetive of short circuit analysis is to provide current protection devices that prevents injury which also minimize damage to system components, and limit the extent and duration of service interruption during equipment failures. It is used for determinning the steady state solution of a linear network that is balanced with three phase excitation. Such an analysis provides currents and voltage in a power system during the faulted condition.

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