

## Department of Electronics & Communication Engineering

Faculty of Engineering, Integral University, Lucknow

### Quiz 1

#### Power System Analysis (EE-602)

Candidate Name & Roll Number :

Date : - March - 2013

Maximum Marks : 10

Group: Pre Final Year : Electrical & Electronics Engineering

1. For the power system shown in the figure below, the specifications of the components are the following:

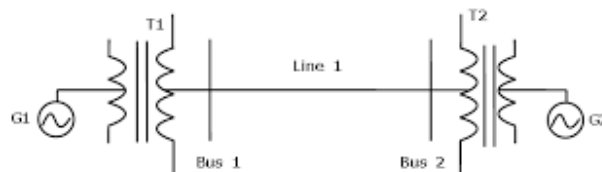
G1: 25kV,100MVA,X=9%

G2: 25kV,100MVA,X=9%

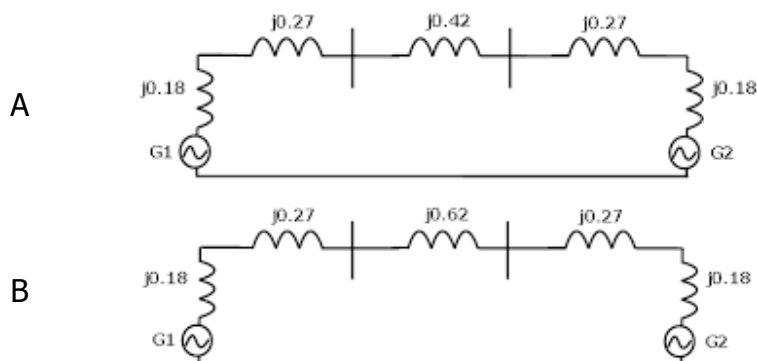
T1: 25kV/220kV,90MVA,X=12%

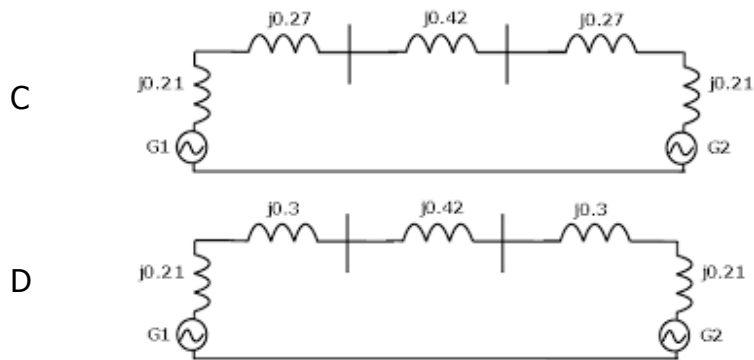
T2: 220kV/25kV,90MVA,X=12%

Line1: 220kV, X=150 ohms.



Choose 25kV as the base voltage at the generator G1 and 200MVA as the MVA base. The impedance diagram is.....Options A, B, C, D are given below





2. A square matrix is called singular if its
  - (a) determine is unity
  - (b) determinant is zero
  - (c) determinant is infinity
  - (d) rank is unity
  
3. Gauss-Seidel iterative method can be used for solving a set of
  - (a) linear differential equations only
  - (b) linear algebraic equation only
  - (c) both linear and nonlinear algebraic equations
  - (d) both linear and nonlinear differential equations
  
4. Subtransient current due to a fault in an alternator is –
  - (a) initial current,
  - (b) initial symmetrical r.m.s. current.
  - (c) initial peak current,
  - (d) none of the above.
  
5. In power system studies, stability of a machine, means -
  - (a) its capability to maintain synchronism with the system,
  - (b) its steadiness of speed,
  - (c) its steadiness of load,
  - (d) all the above.

6. Stability limit of a power system, means -
- (a) maximum disturbance it can tolerate,
  - (b) maximum power flow with stability,
  - (c) both of above,
  - (d) none of above.
7. Steady-state stability limit of a power system is maximum flow of power possible without losing stability, when -
- (a) power is maintained constant,
  - (b) power is increased very gradually,
  - (c) excitation is suddenly altered,
  - (d) excitation is maintained constant.
8. The whole line performance, can be determined by -
- (a) sending-end circle diagram,
  - (b) receiving-end circle diagram,
  - (c) universal circle diagram,
  - (d) all the above.
9. Equal area criterion of stability is not applicable to -
- (a) single machine system,
  - (b) two machine system,
  - (c) multimachine system,
  - (d) all the above.
10. Transient stability limit of a power system is maximum flow of power possible without losing stability, when the power is changed suddenly.
- (a) True,
  - (b) false,
  - (c) partially true,
  - (d) nonsense.