SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
COIMBATORE-35
Accredited by NBA-AICTE and Accredited by NAAC – UGC with A+ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

19EEB302/ POWER SYSTEMS – II
III YEAR / VI SEMESTER
UNIT-I: POWER FLOW ANALYSIS

COMPARISON OF GS METHOD AND NR METHOD

S.No	G.S	N.R
1	Require large number of iterations to reach convergence	Require less number of iterations to reach convergence.
2	Computation time per iteration is less	Computation time per iteration is more
3	It has linear convergence characteristics	It has quadratic convergence characteristics
4	The number of iterations required for convergence increases with size of the system	The number of iterations are independent of the size of the system
5	Less memory requirements	More memory requirements.

❖ Advantage of Gauss Seidel Method

i. Calculation are simple.

ii. Programming task is lesser.

iii. Used for small size system.

❖ Disadvantage of Gauss Seidel Method

i. Not suitable for larger systems

ii. Required more no.of. iterations to reach convergence.

iii. Convergence time increases with size of the system.

❖ Advantage of Newton – Raphson Method

i. suitable for large size system.

ii. It is faster, reliable &the results are accurate.

iii. No.of. Iteration are less to reach convergence & also iterations are independent of the no.of.buses.

❖ Disadvantage of Newton – Raphson Method

i. Programming logic is complex than GS Method

ii. Required more memory.

iii. No.of.calculation per iteration are higher than GS method

RECAP....

...THANK YOU