

Power System Analysis

References:

- 1- **Electric Power System**, B.M.Weedy, 1977 by John Wiley.
- 2- **Power System Analysis**, John J. Grainger & William D. Stevenson, 1994 by McGraw-Hill.
- 3- **Generation of Electrical Energy**, B.R.Gupta , 1988.
- 4- **Power System Analysis and Design**, J.Duncan Glover & Mulukutla S. Sarma, 2002 by Brooks/Cole.
- 5- **Power System Stability and Control**, P.Kundur, 1994.

Syllabus:

- Power system representation.
- Per unit system.
- Balanced and unbalanced faults.
- Symmetrical fault calculations.
- Symmetrical components.
- Unsymmetrical faults.
- Power system dynamics.
- Synchronous machine in power system.
- Steady state stability, transient & dynamic.
- Power system load flow problems.
- Direct methods involving inversion of the nodal admittance matrix, iterative methods Gauss-Seidal method ,Newton Raphson method.
- Protection-current transformer.
- Different types of relays.
- Circuit breakers.