

CE 601 – Theory of Structures –I

Unit. I

Moment distribution method in analysis of frames with sway, analysis of box frames, analysis of portals with inclined members, analysis of beams and frames by Kani's method.

Unit. II

Plastic analysis of beams and frames.

Unit. III

Analysis of tall frames, wind and earthquake loads, codal provisions for lateral loads. Approximate analysis of multistory frames for vertical and lateral loads.

Unit. IV

Matrix method of structural analysis: force method and displacement method..

Unit. V

Influence lines for intermediate structures, Muller Breslau principle, Analysis of Beam-Columns.

Reference Books :-

1. Wang C.K. Intermediate structural analysis, McGraw Hill, New York.
2. Kinney Streling J. Indeterminate structural Analysis, Addison Wesley.
3. Reddy C.S., Basic Stgructural Analysis, Tata McGraw Hill Publishing Company, New Delhi.
4. Norris C.H., Wilbur J.B. & Utkys. Elementary Structural Analysis, M.Graw Hill Int.l, Tokyo.
5. Weaver W & Gere JM, Matrix Methods of Framed Structures, CBS Pub. & Distributors, Delhi