Module 1

Module 2

Module 3

Syllabus : Deflection of statically determinate structures, methods based on energy principles and Castigliano's theorems to evaluate deflection in portal frames, bent up and arch type structures.

Syllabus : Application of Unit Load Method for Calculating slope and deflection of a point on rigid jointed frames.

Syllabus : Application of Unit Load Method for Calculating slope and deflection of a point on pin jointed truss.

Syllabus : Static and Kinematic Indeterminacies : Types of structures occuring in practice, their classification, linear and non-linear behaviour of materials, geometric non-linearity, static and kinematic indeterminacy and indeterminacy of structures

Module 4

Syllabus : Analysis of fixed beam. Application of Clapeyron's theorem of three moments to fixed beam and continuous beam.

Syllabus : Flexibility coefficient and their use in formulation of compatibility equations. Application of flexibility method to propped cantilevers, fixed beams, continuous beams and simple rigid jointed frames.

Module 5

Syllabus : Stiffness coefficients for prismatic members and their use for formulation of equilibrium equations. Application of Direct Stiffness Method to indeterminate beams and simple rigid jointed frames.

Module 6

Chapter 12 : Moment Distribution Method 12-1 to 12-41

Syllabus : Application to Intermediate Beams and simple Rigid Jointed Frames and Frames with inclined member but having only single translation degree of freedom including the effect of support settlement.

Chapter 13 : Plastic Analysis of Structures 13-1 to 13-32

Syllabus : Introduction to plastic analysis, concept of plastic hinge, plastic moment carrying capacity; shape factor, Static and kinematic method of plastic analysis. Determination of collapse load for single and multiple span beams.

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