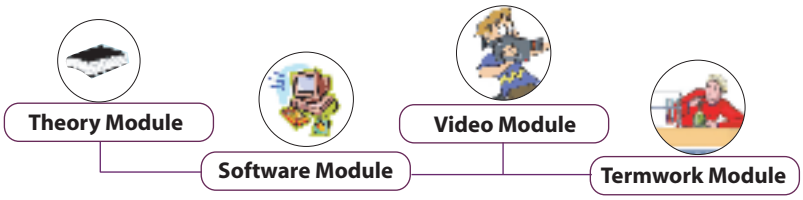
Learning Resources

Learning/Training Resources with Computer Aided Instructions in subject of

Mechanics of Structure

SoftTech ENGINEERS PVT.LTD. Introduces, Global e-Learning System in Education & Training in the form of Learning Resources with Computer Aided Instructions



System Requirement:- IBM-PC Compatible with Window-OS, 128 MB RAM/Multimedia Kit

Theory module

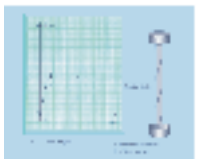
Features : Theory, Figures, Photographs, Animations with controller, Highlighter tool, Note creation facility, Systematic page navigation, Printing facility, Access to numerical modules, Access to Videos at appropriate locations.

Highlights

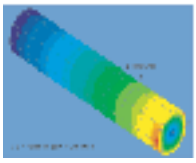
Learn through modular concepts of Finite Element Method for clearing the theoretical concepts

List of Topics

- Stress and Strain
- Elastic Constants
- Principle Planes and Stresses
- Colour Contour diagrams for easy understanding.
- Strain Energy
- Moment of Inertia
- Shear force and Bending Moment
- Bending Stresses in Beams
- Shear Stresses in Beams
- Torsion



- Learn the concept of stress, axial load, Principal of superposition, Hoop stress, etc
- View the concepts of linear strain, lateral strain, bi-axial and tri-axial loading, etc.
- Learn the Analytical method for stresses acting on inclined plane, graphical method for stresses on oblique section, Mohr's circle method.
- Study the concepts of strain energy in a body due to gradually applied load, impact loading, suddenly applied load...



- Learn the perpendicular axis and parallel axis theorems. Calculation of MI for composite sections
- Know how the shear force and bending moment acts, how to draw SFD and BMD.
- Learn Pure bending, theory of simple bending, moment of resistance , section modulus, etc.
- Study the distribution of shear stress for rectangular, circular, triangular, channel and I- sections.

Software Module

Problems to determine stress, strain, modulus of elasticity, elongation of bars, elongation of steel plates, temperature stresses. Calculations for Volumetric strain, Young's modulus, bulk modulus, Poission's ratio. Determination of Principal, normal stress and shear stress. Determination of Resilience. Finding M.I. of simple and cutout sections, composite sections, builtup sections. Calculation of Shear force & bending moment. Stress produced for given load, bending stresses at required section, bending stresses in various types of beams. Calculation of shear stresses in beams, torque in solid and hollow sections...

Termwork Module

Contains assignments on various topics covering Subjective questions, Objective questions, Random selection of objective type questions, Numerical assignments, Video assignments.

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