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1. Tensor Analysis
2. Stress and Strain Analysis
3. Linear Elasticity
4. Solution of Problems in Elasticity by potential and Complex Variables
5. Elastic and Plastic Behavior of Materials
6. Variational Calcuius, Energy Method
7. Viscoelasicity
8. Thermoelasticity
9. Plasticity

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1	Stress-Strain Relationship for an Isotropic Elastic Material, Basic Equation of Elasticity for Isotropic Bodies	80	10	10	0	0
2	Vectors and Tensors del Operator, Transformation of Coordinates	80	10	10	0	0
3	Tensor operations, Quotient Law, Equations of motion Principal Stresses, stress Deviations	80	10	10	0	0
4	Displacement, Velocity, Accelement Deformation Gradient, Strain Tensors, Conpatibility of Strain Components	80	10	10	0	0
5	Equilibrium of An Elastic Body under zero Body Force, Navier's Equation, Applications Of the Theory Of Linear Elasticity	80	10	10	0	0
6	Scalar and Vector Potentials, Equations of Motion in terms of Displacement Potentials	80	10	10	0	0
7	Strain Potential, Harmonic Functions, Galerkin Vector	80	10	10	0	0
8	Biharmonic Function, Galerkin Vector and Neuber-Papkovich Function in Dynamics	80	10	10	0	0
9	Biharmonic Function, Galerkin Vector and Neuber-Papkovich Function in Dynamics	80	10	10	0	0
10	Plane state Stress or Strain, Airy stress Function for Two-Dimensional Problem, Airy, Stress Function in Polor Coordinates, Axially Symmetric Problem	80	10	10	0	0
11	Solution by means of Complex Variable, Cauchy-Riemann Conditions, Kolosov-Muskhelishvili method	80	10	10	0	0
12	Example 1.Plates Bounded by two Concentric Circles and 2.Elliptic Hole in a Plate under Simple Tension Method of Conformal Transformation	80	10	10	0	0
13	Steady-State Response to Moving Load, Galilean transformation, Alternate Method of Solution	80	10	10	0	0
14	Viscoelastic Models, Solution by using Laplace Transformation and Inversion, Kelvin `chain and general Maxwell model	80	10	10	0	0
15	Hereditary Integrals, Correspondence Principle, Viscoelastic beams,	80	10	10	0	0
16	Vibrations-dynamic behavior for a Viscoelastic Bar under Oscillating stress, Complex Compliances, Dissipation, Relations between Compliances, Two-dimensional problems	80	10	10	0	0
17	Minimization of Functional, Ealers' Equation, Plasticity Criteria	80	10	10	0	0
18	Final Examination	0	0	0	0	100