



MECHANICS OF SOLIDS

[ENTIRELY IN SI UNITS]

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ABOUT THE BOOK

Many Universities have adopted this subject for general stream for all first year engineering students. Therefore, in this textbook titled Mechanics of Solids, approach is to study systematically the fundamentals of Mechanics of Solids and their application to engineering problems which comprises of Statics from Applied Mechanics and a few topics from Strength of Materials.

The conspectus of the book is:

Chapter 01 and 02 gives Introduction of Mechanics; fundamental concepts and principles; Scalars, Vectors and Tensors; SI units, Vectors etc.

Chapter 03 to 07 Mechanics of Rigid Bodies: Fundamentals of Statics etc.

Chapter 08 gives Types of Loads, Beams, Supports and Support Reactions etc.

Chapter 09 Trusses; Chapter 10 Graphics statics

Chapter 11 and 12 Properties of Lines and Areas, Distributed forces, Centre of Gravity and Moment of Inertia.

Chapter 13 and 14 Friction; Chapter 15 Simple Machines

Chapter 16 to 28 Mechanics of deformable bodies or Strength of Materials

Chapter 16 to 19 consist Simple stresses and strains

Chapter 20, 21 and 22 Principal stresses and strains

Chapter 23 and 28 Physical, Mechanical Properties and Testing of Structural Materials.

Chapter 24 and 25 Shear forces and Bending Moments

Chapter 26 and 27 Stresses in Beams.

The book within its 768 + 20 pages, It comprise the following:

- * 975 Neatly drawn sketches
- * 40 Useful tables
- * 489 Fully illustrated worked examples
- * 558 Unsolved examples with answers and
- * 26 Questions at the ends of chapters

The salient features of the book are:

- * Simple, lucid and easy language;
- * Step-by-step treatment of the subject;
- * Comprehensive presentation;
- * Entirely in SI units.

The text-matter has been arranged systematically to satisfy the need of the First Year Engineering Students (Common to all branches) and also Architecture Students of all the Indian Universities, Diploma examinations conducted by various Boards of Technical Education, Certificate courses as well as for the A.M.I.E., U.P.S.C., G.A.T.E., I.E.S. and other similar competitive and professional examinations. It should also be an immense use to practising Civil Engineers.

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