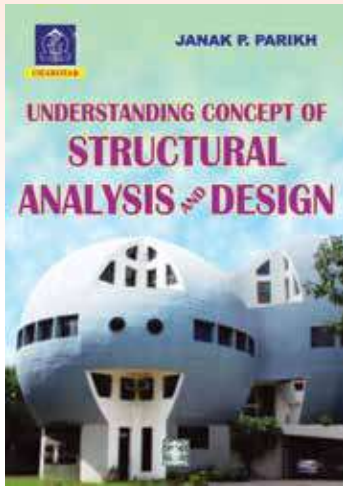


UNDERSTANDING CONCEPT OF STRUCTURAL ANALYSIS AND DESIGN



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Edition : 2nd Edition
ISBN : 9789380358598
Size : 170 mm × 240 mm
Binding : Paperback
Pages : 286 + 16 = 302



ABOUT THE BOOK

The purpose of this book, as the title says, is to explain the concept of the subject matter. The subject is presented in its totality in brief and thereby the reader is given a fair picture of how the subject unfolds and then settles.

The book is by no means a substitute to a textbook, but rather a help to understand one. The book is a natural outcome of an author's experience as a teacher and a structural engineer, and is written in that spirit. The design codes are followed in general, but the emphasis is not on the codes but rather on understanding the principles of design.

In **Part I - 'Analysis'**, attempt is made to explain the behaviour of structures with common examples. Emphasis is made to understand that a structure needs to be approximated to be solved. Further, after understanding how the structure deforms under loads, structures are analyzed by approximate methods. This is also done keeping in mind that solution by approximate method is a great help to verify the solution, especially obtained by computer software.

In **Part II - 'Design'**, importance of form, stiffness, safety etc. is emphasized. Before going into the theory of RCC design, the student is made aware of where the placement of reinforcement is required in the structural member. Comparison of different types of sections in steel and RCC are made to make the student aware of the behaviour of structure and economy of design.

In **Part III - 'Conceptual Analysis and Design of Four Structures'**, are analyzed, designed and detailed on the principles explained in the book.

It is hoped that the book will satisfy the needs of the students preparing for Engineering Degree examinations in Civil Engineering and Architecture of almost 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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