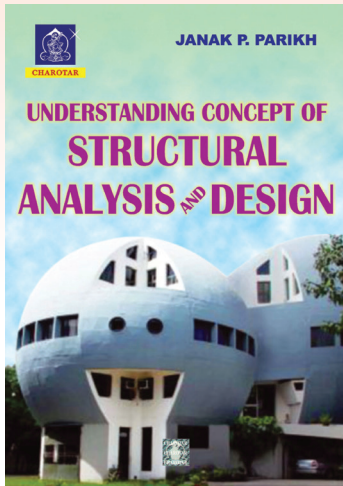


UNDERSTANDING CONCEPT OF STRUCTURAL ANALYSIS AND DESIGN



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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.

CONTENT

PART I - ANALYSIS

- 1: STRUCTURES, FORCES, MOMENT - A COUPLE OF FORCES
- 2: EQUILIBRIUM
- 3: RESISTANCE TO FORCE BY MEMBER - STRESS, STRAIN AND FAILURE
- 4: STRUCTURAL MEMBERS AND THEIR ANALYSIS
- 5: APPROXIMATION OF STRUCTURES AND APPROXIMATE METHODS OF ANALYSIS

PART II - DESIGN

- 6: DESIGN CRITERIA
- 7: FORM, STIFFNESS, STRENGTH AND DEFORMATION
- 8: STEEL STRUCTURES
- 9: RCC STRUCTURES
- 10: STRUCTURAL FRAMING

PART III - CONCEPTUAL ANALYSIS AND DESIGN OF FOUR STRUCTURES

- 11: A LOAD BEARING SINGLE STOREY STRUCTURE
- 12: RCC BUILDING FRAME
- 13: BRACING FOR WIND FORCES IN A STEEL STRUCTURE
- 14: PRELIMINARY COLUMN DESIGN OF 30 STOREYED STEEL TOWER

INDEX

Catalogue Checklist

UNDERSTANDING CONCEPT OF STRUCTURAL ANALYSIS AND DESIGN
DETAILED CONTENTS

PART I - ANALYSIS

Chapter 1 STRUCTURES, FORCES, MOMENT - A COUPLE OF FORCES

- 1.1 FORCE AND DISPLACEMENT DUE FORCE
- 1.2 GRAVITATIONAL FORCE
- 1.3 LOADS
- 1.4 RESULTANT OF TWO PERPENDICULAR FORCES
- 1.5 RESOLUTION OF A FORCE
- 1.6 RESULTANT OF MORE THAN TWO FORCES
- 1.7 MOMENT
- 1.8 MOMENT - A COUPLE OF FORCES, ROTATION DUE TO MOMENT
- 1.9 EFFECT OF TWO EQUAL AND OPPOSITE COUPLES
- 1.10 EFFECT OF COMBINATION OF FORCE AND MOMENT

Chapter 2 EQUILIBRIUM

- 2.1 EQUILIBRIUM
 - 2.1.1 VERTICAL FORCE ON A BODY
 - 2.1.2 HORIZONTAL FORCE ON A BODY ALONG WITH VERTICAL FORCE
 - 2.1.3 MOMENT ON A BODY ALONG WITH HORIZONTAL AND VERTICAL FORCES
 - 2.1.4 MOVING BODY
 - 2.1.5 EQUILIBRIUM CONDITIONS
 - 2.1.6 A LABORATORY SET-UP TO VERIFY EQUILIBRIUM CONDITIONS
- 2.2 SUPPORT
 - 2.2.1 ROLLER SUPPORT
 - 2.2.2 HINGE SUPPORT
 - 2.2.3 FIXED SUPPORT
 - 2.2.4 ANALYSIS OF ROLLER, HINGE AND FIXED SUPPORTS
- 2.3 BEAM
 - 2.3.1 SIMPLE BEAM
 - 2.3.2 CANTILEVER BEAM

Chapter 3 RESISTANCE TO FORCE BY MEMBER - STRESS, STRAIN AND FAILURE

- 3.1 FORCE, EQUILIBRIUM AND STRESS
- 3.2 RESISTANCE, STRESS AND STRAIN
- 3.3 WAYS OF FAILURES OF A STRUCTURAL MEMBER
- 3.4 PULL (DIRECT TENSION)
- 3.5 PUSH (DIRECT COMPRESSION)
- 3.6 CHOP (DIRECT SHEAR)
- 3.7 MATHEMATICAL PROPERTIES OF A SECTION
- 3.8 BENDING (BENDING MOMENT)
- 3.9 TWISTING (TORSIONAL MOMENT)
- 3.10 CLASSIFICATION OF STRESSES

Chapter 4 STRUCTURAL MEMBERS AND THEIR ANALYSIS

- 4.1 INTRODUCTION
- 4.2 COLUMN ACTION AND COLUMN ANALYSIS
- 4.3 BEAM ACTION
 - 4.3.1 BEAM ANALYSIS - CANTILEVER BEAM
 - 4.3.2 SHEAR FORCE V AND BENDING MOMENT M AT A SECTION X
- 4.4 BEAM COLUMN ACTION
 - 4.4.1 BEAM COLUMN ANALYSIS
 - 4.4.2 COMPARISON OF BEAM, COLUMN, BEAM-COLUMN AND SHAFT ANALYSIS
- 4.5 PIN, CHAIN - A SERIES OF PINS
- 4.6 TRUSS
 - 4.6.1 TRUSS - BEAM ACTION

- 4.6.2 WALL CRANE, A TRUSS ACTION
- 4.7 DETERMINATE AND INDETERMINATE STRUCTURES
- 4.8 ARCH
 - 4.8.1 COMPARISON OF ARCH AND BEAM ANALYSIS
- 4.9 CABLE
- 4.10 CYLINDRICAL SHELLS
 - 4.10.1 SPHERICAL SHELL
- 4.11 STRESSES DUE TO COLUMN, BEAM AND BEAM-COLUMN ACTION
- 4.12 FREE BODY DIAGRAM
 - 4.12.1 ANALYSIS : MEMBER AND MEMBER-END ACTION

Chapter 5 APPROXIMATION OF STRUCTURES AND APPROXIMATE METHODS OF ANALYSIS

- 5.1 INTRODUCTION
- 5.2 APPROXIMATION OF STRUCTURE FOR ANALYSIS
- 5.3 SIMPLE AND FIXED ENDED BEAM AND COLUMN
- 5.4 SLAB
- 5.5 APPROXIMATION OF TRUSS FOR ANALYSIS
- 5.6 APPROXIMATE ANALYSIS OF AN INDETERMINATE TRUSS TYPE STRUCTURE CARRYING LATERAL LOAD
- 5.7 MAKING INDETERMINATE BEAM/FRAME A DETERMINATE ONE
- 5.8 APPROXIMATE ANALYSIS OF A FIXED END BEAM
- 5.9 APPROXIMATE ANALYSIS OF A PROPPED CANTILEVER BEAM
- 5.10 M AND V DIAGRAMS OF SOME BEAM MEMBERS LOADED WITH UNIFORMLY DISTRIBUTED LOAD
- 5.11 APPROXIMATE ANALYSIS OF 2 SPAN CONTINUOUS BEAM
- 5.12 BEAMS - DEFLECTED SHAPE OF BEAM UNDER LOADING AND CORRESPONDING SHAPE OF M AND V DIAGRAMS
- 5.13 FRAME
 - 5.13.1 SHEAR WALL STRUCTURE
- 5.14 APPROXIMATE ANALYSIS OF A SINGLE PORTAL FRAME WITH HINGED ENDS SUPPORTING GRAVITY LOADS
- 5.15 APPROXIMATE ANALYSIS OF A SINGLE PORTAL WITH FIXED ENDS SUPPORTING GRAVITY LOADS
- 5.16 APPROXIMATE ANALYSIS OF A SINGLE PORTAL WITH HINGED ENDS SUPPORTING LATERAL LOADS
- 5.17 APPROXIMATE ANALYSIS OF A SINGLE PORTAL WITH FIXED ENDS SUPPORTING LATERAL LOADS
- 5.18 APPROXIMATE ANALYSIS OF MULTIPLE PORTAL FRAME WITH LATERAL LOAD (PORTAL METHOD OF ANALYSIS)
- 5.19 COMPARISON OF APPROXIMATE AND EXACT ANALYSIS OF HINGED PORTAL WITH GRAVITY LOAD
- 5.20 COMPARISON OF APPROXIMATE AND EXACT ANALYSIS OF FIXED PORTAL WITH GRAVITY LOAD
- 5.21 COMPARISON OF APPROXIMATE AND EXACT ANALYSIS OF HINGED PORTAL WITH LATERAL LOAD
- 5.22 COMPARISON OF APPROXIMATE AND EXACT ANALYSIS OF FIXED PORTAL WITH LATERAL LOAD
- 5.23 APPROXIMATE ANALYSIS OF 2 HINGED ARCH

PART II - DESIGN

Chapter 6 DESIGN CRITERIA

- 6.1 INTRODUCTION
- 6.2 BEAUTY AND FORM
- 6.3 STABILITY
 - 6.3.1 RETAINING WALL AND STABILITY
 - 6.3.2 CANTILEVER BEAM AND STABILITY
- 6.4 SAFETY AND EFFICIENCY
- 6.5 DEFLECTION, CRACKING AND VIBRATIONS
- 6.6 WARNING BEFORE TOTAL COLLAPSE
- 6.7 DESIGN CODES

Chapter 7 FORM, STIFFNESS, STRENGTH AND DEFORMATION

- 7.1 FORM
- 7.2 STIFFNESS
- 7.3 STIFFNESS AND LOAD CARRYING CAPACITY
- 7.4 STIFFNESS AND DEFLECTION
- 7.5 STIFFNESS AND ROTATION OF SHAFT
- 7.6 SOLID SECTION, SPECIAL SECTION AND BUILT-UP SECTION
- 7.7 TRUSS GIRDER AND BEAM, BUILT-UP AND SOLID SECTION FOR COLUMN

Chapter 8 STEEL STRUCTURES

- 8.1 INTRODUCTION
- 8.2 COLUMN DESIGN
 - 8.2.1 LATERAL SUPPORT IN COLUMN AND BEAM
 - 8.2.2 COLUMN DESIGN MECHANISM
 - 8.2.3 DESIGN OF A COLUMN
 - 8.2.4 COLUMN DESIGN AND ECONOMY
 - 8.2.5 COLUMN SECTION AND CAPACITY
 - 8.2.6 COLUMN LENGTH AND CAPACITY
 - 8.2.7 BUILT-UP COLUMN
- 8.3 BEAM DESIGN
 - 8.3.1 BEAM DESIGN MECHANISM
 - 8.3.2 DESIGN OF A BEAM
 - 8.3.3 PLATE GIRDER
- 8.4 BEAM - COLUMN DESIGN
- 8.5 DESIGN OF SHAFT FOR TORSION
 - 8.5.1 DESIGN OF SHAFT
 - 8.5.2 SHAFT SECTIONS AND TORSIONAL MOMENT CAPACITY
- 8.6 CONNECTIONS
 - 8.6.1 RIVETED/BOLTED CONNECTION
 - 8.6.2 FAILURE OF A RIVETED/BOLTED JOINT
 - 8.6.3 STRENGTH OF A JOINT
 - 8.6.4 SHEAR AND MOMENT CONNECTION
 - 8.6.5 WELDED JOINT
- 8.7 FATIGUE

Chapter 9 RCC STRUCTURES

- 9.1 RCC - CONCRETE AND STEEL REINFORCEMENT
- 9.2 CRACK PATTERN IN A SIMPLE CONCRETE BEAM LOADED WITH UNIFORMLY DISTRIBUTED LOAD
- 9.3 RCC PHILOSOPHY OF DESIGN
- 9.4 PLACEMENT OF MAIN REINFORCEMENT DUE TO FLEXURE
- 9.5 SHRINKAGE REINFORCEMENT
- 9.6 BEAM THEORY
- 9.7 METHODS OF DESIGN
 - 9.7.1 WORKING STRESS METHOD
 - 9.7.1.1 SINGLY REINFORCED BEAM THEORY FOR WORKING STRESS METHOD
 - 9.7.2 ULTIMATE LOAD METHOD
 - 9.7.3 LIMIT STATE METHOD
 - 9.7.3.1 CHARACTERISTIC STRENGTH
 - 9.7.3.2 SINGLY REINFORCED BEAM THEORY FOR LIMIT STATE METHOD
 - 9.7.4 UNDER REINFORCED, BALANCED, OVER-REINFORCED SECTIONS
 - 9.7.5 DESIGN MECHANISM FOR SINGLY REINFORCED BEAM WORKING STRESS METHOD
 - 9.7.5.1 DESIGN MECHANISM FOR SINGLY REINFORCED BEAM SECTION - LIMIT STATE METHOD
- 9.8 DOUBLY REINFORCED SECTION
- 9.9 FLANGED BEAM SECTIONS
 - 9.9.1 T - SECTION VIEWED AS RECTANGULAR SECTION

- 9.9.2 TORSION IN L-BEAM
- 9.9.3 COMPARISON OF BEAM SECTION TO RESIST $M = 135 \text{ KNM}$
- 9.9.4 CURTAILMENT OF BARS
- 9.10 DEVELOPMENT LENGTH (LIMIT STATE METHOD)
- 9.11 SHEAR DESIGN
- 9.12 BEAM DETAILING
- 9.13 SLAB
- 9.14 STAIR
- 9.15 COLUMN
 - 9.15.1 COLUMN DETAILING
 - 9.15.2 COLUMN DESIGN
 - 9.15.3 COLUMN DESIGN MECHANISM
 - 9.15.4 BIAXIAL BENDING
 - 9.15.5 SLENDER COLUMN
- 9.16 COLUMN FOOTING
 - 9.16.1 FOOTING DESIGN UNIAXIAL MOMENT KNOWN TO BE ACTING IN ONLY ONE DIRECTION
- 9.17 RCC LIQUID RETAINING TANK
 - 9.17.1 HOOP TENSION FOR SLIDING BASED WALL OF A TANK
 - 9.17.2 RCC TANK DESIGN PHILOSOPHY
- 9.18 DETAILING AND LOAD DISTRIBUTION

Chapter 10 STRUCTURAL FRAMING

- 10.1 INTRODUCTION
- 10.2 FRAMING FOR A BEAM-COLUMN SUPPORTING OPEN WOODEN STAIRCASE
- 10.3 CONTINUOUS BEAM FRAMING
 - 10.3.1 BALANCED CANTILEVER BEAM
- 10.4 FRAMING SYSTEMS FOR RESISTING GRAVITY LOADS
- 10.5 MEMBER CONNECTION
- 10.6 FRAMING SYSTEM FOR SUPPORTING LATERAL LOADS
- 10.7 FRAMING SYSTEMS FOR RESISTING LATERAL LOADS FOR TALL STRUCTURES

PART III - CONCEPTUAL ANALYSIS AND DESIGN OF FOUR STRUCTURES

Chapter 11 A LOAD BEARING SINGLE STOREY STRUCTURE

- 11.1 A LOAD BEARING SINGLE STOREY STRUCTURE
- 11.2 SLAB
- 11.3 RCC BEAM ANALYSIS
- 11.4 WALL AND WALL FOOTING ANALYSIS

Chapter 12 RCC BUILDING FRAME

- 12.1 8 STOREY OFFICE BUILDING RCC FRAME
- 12.2 LIVE LOAD ARRANGEMENT FOR MAXIMUM MOMENT
- 12.3 APPROXIMATE ANALYSIS OF FRAME FOR DEAD AND LIVE LOAD
- 12.4 COLUMN ANALYSIS FOR AXIAL LOADS (BY AREA METHOD)
- 12.5 APPROXIMATE ANALYSIS OF FRAME FOR WIND LOAD
- 12.6 COLUMN DESIGN OF THE FRAME AT FIRST FL LEVEL
- 12.7 BEAM DESIGN
- 12.8 EXTERIOR COLUMN FOOTING DESIGN

Chapter 13 BRACING FOR WIND FORCES IN A STEEL STRUCTURE

- 13.1 VERTICAL TRUSS/FRAME TO RESIST WIND SHEAR
- 13.2 A BAY DESIGN TO SUPPORT VERTICAL AND LATERAL LOAD

Chapter 14 PRELIMINARY COLUMN DESIGN OF 30 STOREYED STEEL TOWER

- 14.1 TALL TOWER VIEWED AS A TUBE
- 14.2 30 STOREYED STEEL TOWER
- 14.3 PRELIMINARY COLUMN DESIGN

Index