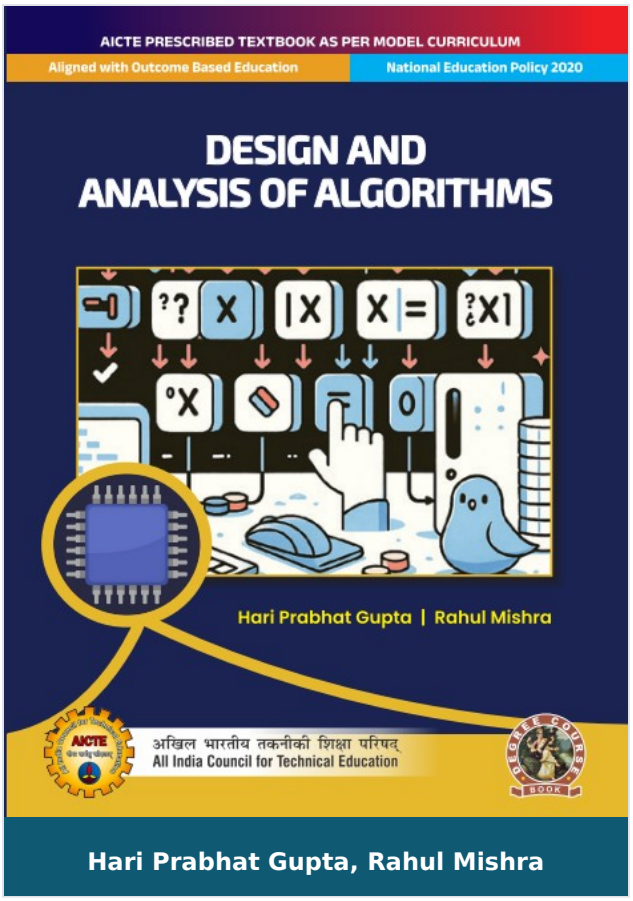

Design and Analysis of Algorithms

Author :	Hari Prabhat Gupta, Rahul Mishra
ISBN 13 :	978-93-55386-70-0
ISBN 10 :	9355386702
E-ISBN 13 :	978-93-55386-70-0
Edition :	First
Pages :	324
Type of book :	Physical
Year :	2026
Language :	English
Publisher :	Khanna Publishing House
M.R.P :	Rs 598.00
Categories :	English Books, Book Store, AICTE Prescribed Textbooks
Condition Type :	New
Country Origin :	India

Product Description

Design and Analysis of Algorithms

This book offers an in-depth exploration of designing and analysing algorithms. It covers topics such as algorithmic analysis, design principles, theoretical proofs, and practical applications. The content includes a logical example explaining the concepts, accompanied by a diverse range of solved and unsolved problems. Each problem is accompanied by step-by-step solutions, providing readers with a comprehensive understanding of algorithmic design and analysis. With its systematic approach, programming-based solutions, and thorough examples, this book serves as an ideal resource for those curious to learn basic to high level concept of algorithm design.

Salient Features:

- Content of the book aligned with the mapping of Course Outcomes, Programs Outcomes and Unit Outcomes.
- In the beginning of each unit learning outcomes are listed to make the student understand what is expected of him/ her after completing that unit.
- Book provides lots of recent information, interesting facts, logical examples, and solved programming exercises. Theorems and their proofs are added to provide detailed insight of analysis.
- Student and teacher centric subject material included in book in balanced and chronological manner.
- Figures, tables, and image-based elaborate examples are inserted to improve clarity of the topics. Salient Features:
- Short and long answer questions are given for practice of students after every chapter for practice of students after every chapter.

Khanna Publishing House
4C/4344, Ansari Road, Daryaganj, New Delhi-110002
Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

- Solved and Unsolved programming exercises are included in the appendix of the book.
- QR Code at the start of every chapter provide convenient access to electronic resources, including solutions to programming problems, discussions on key concepts, and project topics for students

Khanna Publishing House

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

Table Of Contents

- Foreword
- Acknowledgement
- Preface
- Outcome Based Education
- Course Outcomes
- Guidelines for Teachers
- Guidelines for Students
- List of Figures
- List of Table
- Introduction to Algorithms
- Analysis of Algorithms
- Analysis of Recursive Algorithms
- Graph and tree Algorithms
- Brute-Force Methodology
- Greedy Algorithms
- Dynamic Programming
- Divide-and-Conquer
- NP-Completeness
- Advanced Topics in Algorithms
- Annexure: List of Experiments
- Co and PO Attainment Table
- Appendices
- Index

Khanna Publishing House

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

Author

Hari Prabhat Gupta

Dr. Hari Prabhat Gupta, Ph.D. Associate Professor, Dept. of Computer Science & Engineering, IIT (BHU) Varanasi, India Dr.

Rahul Mishra

Dr. Rahul Mishra, Ph.D. Assistant Professor, Dept. of Computer Science & Engineering, IIT Patna, India

Khanna Publishing House

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320