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Discrete mathematics and graph theory. 4th edition.

New Delhi: PHI Learning (ISBN 978-81-203-5061-8/pbk). 748 p. (2015).

Publisher's description: This textbook, now in its fourth edition, continues to provide an accessible introduction to discrete mathematics and graph theory. The introductory material on mathematical logic is followed by extensive coverage of combinatorics, recurrence relation, binary relations, coding theory, distributive lattice, bipartite graphs, trees, algebra, and Pólya's counting principle. A number of selected results and methods of discrete mathematics are discussed in a logically coherent fashion from the areas of mathematical logic, set theory, combinatorics, binary relation and function, Boolean lattice, planarity, and group theory. There is an abundance of examples, illustrations and exercises spread throughout the book. A good number of problems in the exercises help students test their knowledge. The text is intended for the undergraduate students of computer science and engineering as well as to the students of mathematics and those pursuing courses in the areas of computer applications and information technology. New to the fourth edition:
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- Introduces new section on arithmetic function in Chapter 9.
- Elaborates enumeration of spanning trees of wheel graph, fan graph and ladder graph.
- Redistributes most of the problems given in exercises section-wise.
- Provides many additional definitions, theorems, examples and exercises.
- Gives elaborate hints for solving exercise problems. See the review of the second edition in [Zbl 1119.05002; ME 2016a.00952].

Classification: N75 K25 K35