

Preface

Strategic Business Decisions is an attempt to outline the essentials of Operations Research and Engineering Management and their applicability for effective decision making in a manner that is easily understood by graduate engineering students and postgraduate students of management. The hands-on approach used throughout the book and the practical nature of the illustrations and case studies discussed make the book a handy tool for practicing managers as well.

The book is organized into two parts. Operations research (OR) is covered in the first part: [Chaps. 1–7](#). [Chapter 1](#) discusses the evolution of OR and sets the stage for other chapters to follow. [Chapter 2](#) introduces linear programming and formulation. [Chapter 3](#) discusses the simplex method and a few special cases encountered in linear programming. [Chapter 4](#) gives an insight into transportation algorithms and discusses the various types of assignment problems. [Chapter 5](#) introduces network models and discusses two powerful statistical tools in project management, i.e., PERT and CPM. [Chapter 6](#) covers game theory as a decision-making tool in business situations. [Chapter 7](#) concludes the part on OR by introducing queuing models and presenting eight different models for evaluation. [Chapter 1](#) consists of a number of problems designed to illustrate various concepts and models. Most of these problems are taken from examination papers of different universities and competitive examinations.

Engineering management is covered in the next part: [Chaps 8–13](#). [Chapter 8](#) introduces engineering management and summarizes its evolution and scope by looking at various management philosophies. [Chapter 9](#) lays out the foundations of technology management through a comprehensive overview of strategic management with a technology flavor. [Chapter 10](#) outlines the role of information technology in taking strategic decisions. [Chapter 11](#) strives to emphasize the impact of R&D on strategy formulation and execution. [Chapter 12](#) discusses the various aspects of managing projects and addresses the *how*, *why*, and *when* of project management. [Chapter 13](#) discusses professional communications and lays out the guidelines for communicating better in a business context.

This book has been possible due to the efforts of Sagarika Ghosh (Sr. Editor with Springer), who appreciated the need for an easy-to-use and practical manual for engineering and management students, and who believed in my ability to deliver the same. My thanks also go to Dr. Srinidhi, who is currently associated with Hewlett Packard Company for his timely and constructive suggestions. He was

instrumental in solving many of the problems in the book. Thanks are also due to Ms. Arpita Shetty, Project Assistant, IISc, who helped in keying in the material. I would also like to acknowledge PHI Learning Private Limited for permitting the use of some content from their publication, *Strategic Management—The Indian Context* (4th edition, 2012), authored by me. The staff of Springer has brought out this book in a very short time and in an attractive manner. My sincere thanks to the entire team.

But most of all, my thanks go out to my students and readers who have inspired the content and style of this book. I will consider my effort to be successful only if this book helps them understand the basics of the subject and advances their interest in the same.

Constructive suggestions for improvement of the book are welcome.

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