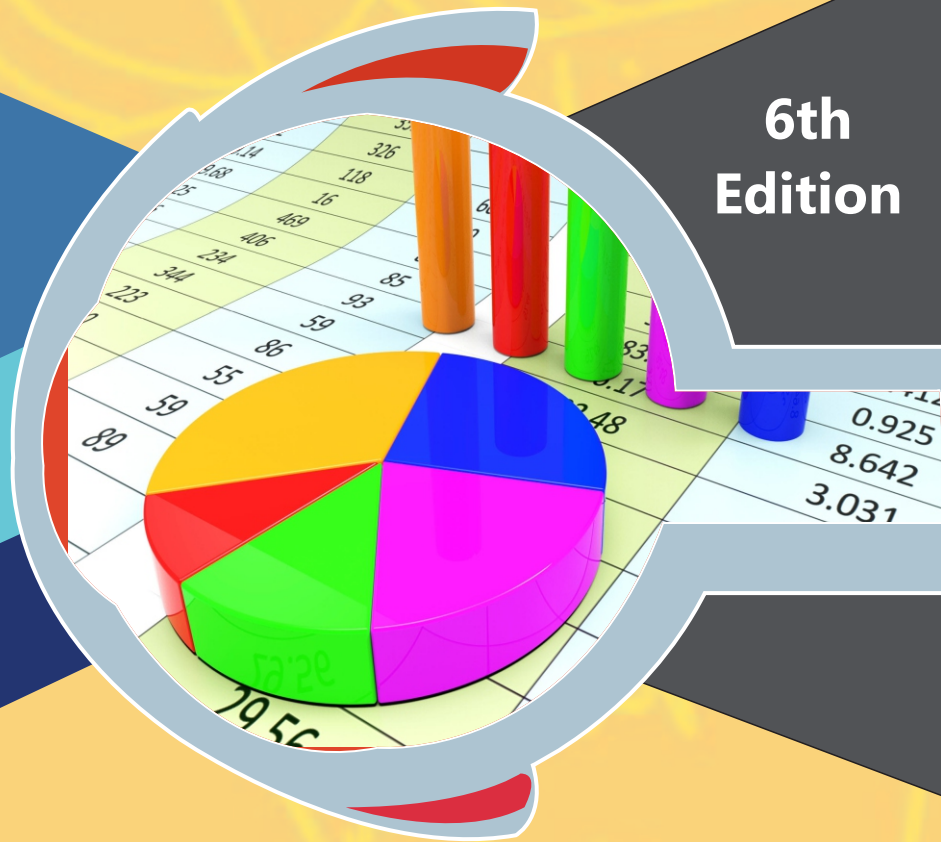


Business Statistics and Operations Research

Dr. S.P. Gupta • Dr. P.K. Gupta • Dr. Man Mohan

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Business Statistics & Operations Research

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Preface

The book entitled "Business Statistics & Operation Research" is designed primarily for B.Com., B.Com. (H) & BBA students of Madras University & other Universities having similar syllabus.

Salient features of the book are:

- * The book is written in a very simple and lucid style and is self-explanatory in character.
- * The book covers the syllabus of Business Statistics and Operations Research for the students of B.Com. and BBA.
- * Sufficient number of solved examples and illustrations are given in each chapter to explain various techniques of Statistics and Operation Research.
- * Unsolved questions are given in the form of exercise followed by their answers for self practice.
- * At the end of each chapter, multiple-choice questions followed by review exercise, based on theoretical questions are given.

The book is divided into two parts:

Part – I deals with the 'Techniques of Statistics' and **Part – II** gives the 'Techniques of Operations Research'.

Part – I includes chapters like Statistics 'what and why', Sampling Techniques, Measures of Central Tendency, Variation, Correlation, Regression, Index Numbers, Time Series, Tests of Hypotheses, Chi-Square test and Quality control.

Part – II starts with chapter 1 giving definition, modeling, methodology, applications and scope of Operation Research. Chapter 2 introduces the concept of Linear Programming and then familiarize the student with the formulation of Linear Programming Models. Method for solving Linear Programming Problems, Duality in Linear Programming, Transportation and Assignment Problems that covers comprehensively the syllabus is discussed in chapter 2 to chapter 6. Managerial applications are discussed at length. The concept of Network in Scheduling problems is introduced in chapter 7, where Scheduling Techniques using PERT/CPM methods are discussed.

Authors are grateful to Dr. Priyanshu Gupta, Assistant Professor, Indian Institute of Management, Lucknow, for his valuable suggestions.

Since the road to improvement is never ending, we shall look forward and gratefully acknowledge any suggestions received.

Dr. S. P. Gupta
Dr. P. K. Gupta
Dr. Man Mohan

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About the Book

The text book on "Business Statistics and Operations Research" provides a conceptual understanding of basic techniques of Statistics and Operations Research for solving managerial and business problems. The book discusses comprehensively the essential topics of quantitative decision-making by using various illustrations and examples. The book covers complete syllabus of B.Com. & BBA prescribed by most Indian Universities.

Salient Features

- Book is divided into two parts: Part I gives basic concepts of Statistics and Part II provides various Operations Research Techniques.
- There are detailed self contained chapters covering the syllabus completely.
- The language used in the text is simple and subject-matter has been presented in a lucid style.
- Special care has been taken to develop the concepts in an easy to understand manner.
- Chapter on Network Analysis is discussed in detail due to its importance in solving complex business problems.

About the Authors

Dr. S P Gupta (born 1942) has a brilliant academic record of teaching for more than 4 decades in Indian and Foreign Universities. He was a student of Shri Ram College of Commerce, University of Delhi. He obtained B.Com. (H) and M.Com. Degree with "Advanced Statistics" as specialization and taught for more than a decade in SRCC.

He was invited by the Tribhuvan University, Kathmandu, Nepal as visiting professor for a period of 2 years. He was also appointed visiting Professor in University of Milan, Italy for a period of 1 year. He attended prestigious International Teachers Program in Stockholm (Sweden) and Budapest, Hungary.

Dr. Gupta joined Faculty of Management Studies (FMS), University of Delhi from where he obtained Ph.D degree in Management and taught for about 3 decades. He has authored more than a dozen books in the field of Statistics for B.Com., M.Com., MBA, CA, ICWA courses etc. He was also Head & Dean, Faculty of Management Studies, University of Delhi for a period of 3 years.



Dr. P K Gupta has over three decades of experience in teaching Mathematics and Operations Research to Undergraduate and Post-Graduate students. He obtained a Master's Degree in Mathematics, and then another one in Operations Research from the University of Delhi. He obtained his doctorate in 1977 in the field of Queuing Theory.

He served as a faculty member in various capacities at the Department of Mathematics, JV Jain College, Saharanpur; where he taught a range of topics on Mathematics and Operations Research. These included Boolean Algebra, Linear Algebra, Difference Equations, Graph Theory and Techniques of Operations Research.

In 1979, he was invited by the Cochin University of Science & Technology, Kochi (Kerala) to teach the students of their newly started diploma course in Operations Research and Computer Applications. He also has been actively engaged in research in the discipline. He supervised multiple Ph.D. scholars in Optimization of Queues and also applied Optimization techniques in paper industry. He has authored more than half a dozen books of Mathematics and Operations Research, in addition to multiple research publications.

Dr. Man Mohan was Head of the Department of Mathematics & Statistics, Ramjas College, University of Delhi, Delhi & Managing Editor of Journal of Statistics & Applications and Ganita Bharati, Bulletin of I.S.H.M.



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