According to

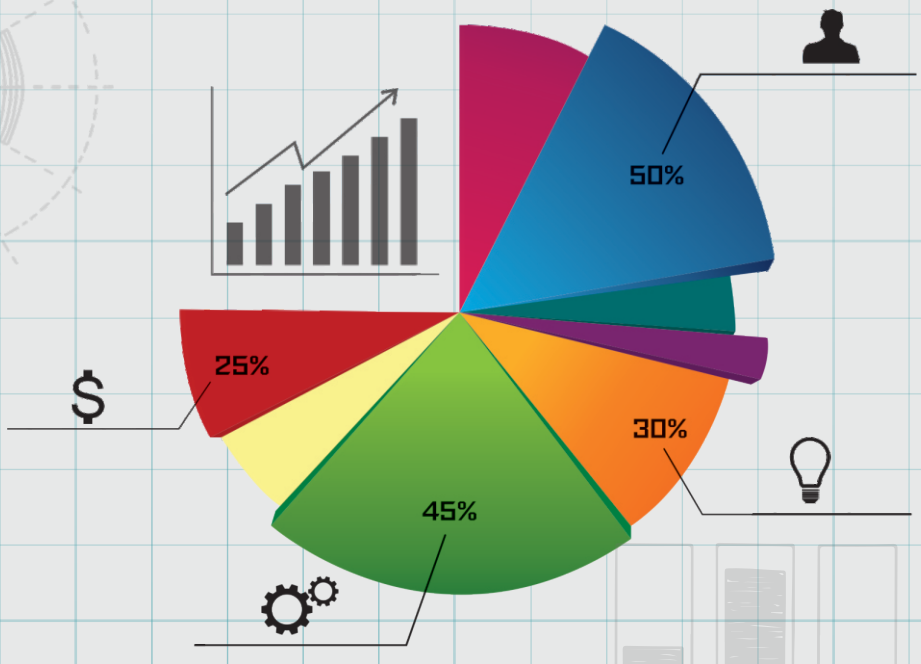
NATIONAL EDUCATION POLICY 2020

for

All UP State Universities

INTRODUCTORY
BUSINESS STATISTICS

S.P. GUPTA



Sultan Chand & Sons

Introductory Business Statistics

According to National Education Policy (NEP) 2020

for

All UP State Universities

Dr. S.P. Gupta

Formerly Head & Dean,
Faculty of Management Studies
University of Delhi

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Preface

This book has been specially designed as per National Education Policy 2020 for students of B.Com. of Uttar Pradesh State Universities & Colleges.

Some special features of the book are:

- It caters to the needs of B.Com. (Semester I) students.
- It is written in a very simple and lucid style.
- It includes the latest examination questions of various Universities of Uttar Pradesh up to 2022.
- For better understanding of the subject, a variety of questions have been given in each chapter as solved illustrations and exercise questions.
- The subject matter of each chapter is self-explanatory in nature.

I am thankful for M/S Sultan Chand & Sons, New Delhi, for their efforts and co-operation in publishing the book in an elegant form. My thanks to Sandeep Negi for his valuable help in preparing manuscript and providing timely advice.

My special thanks to Prof. H.B. Singh for his enormous help, inspiration & guidance.

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

S.P. Gupta

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Syllabus

National Education Policy – 2020

Common Minimum Syllabus

For All

U.P. State Universities

NEP 2020

UNIT – I	Evolution of Statistics in India, Contribution of Indian Statistics (Prasanta Chandra Mahalanobis). Introduction to Statistics: Meaning, Scope, Importance and Limitations, Statistical Investigation-Planning and Organization. Statistical Units, Methods of Investigation. Census and Sampling. Collection of Data- Primary and Secondary Data, Editing of Data, Classification of Data, Frequency Distribution and Statistical Series, Tabulation of Data, Diagrammatical and Graphical Presentation of Data.

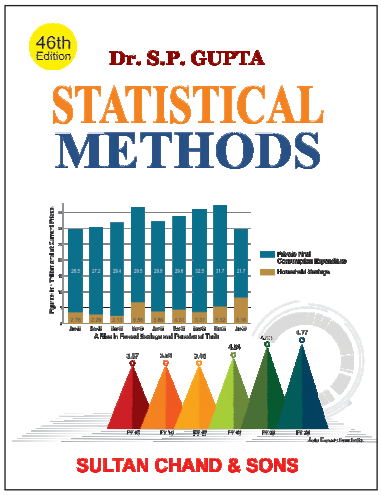
UNIT – II	Measures of Central Tendency – Mean, Median, Mode, Quartile, Decile, Percentile, Geometric and Harmonic Mean; Dispersion – Range, Quartile Deviation, Mean Deviation, Standard Deviation and its Coefficient, Coefficient of Variation and Variance, Test of Skewness and Dispersion, Its importance, Coefficient of Skewness.

UNIT – III	Correlation – Meaning, Applications, Types and Degree of Correlation. Methods-Scatter Diagram, Karl Pearson's Coefficient of Correlation, Spearman's Rank Coefficient of Correlation, Concurrent Method. Probable Error & Standard Error.
UNIT – IV	Index Numbers - Meaning, Types and Uses, Methods of constructing Price Index Number, Fixed – Base Method, Chain-Base Method, Base conversion, Base Shifting, Deflating and Splicing, Consumer Price Index Number, Fisher's Ideal Index Number, Reversibility Test-Time and Factor; Analysis of Time Series: – Meaning, Importance and Components of a Time Series. Decomposition of Time Series: – Moving Average Method and Method of Least Squares.

STATISTICAL METHODS

Dr. S.P. Gupta

Salient Features



- The book has been written in a very simple and lucid style. The text material is self-explanatory and even the students learning statistics through distance education can follow it without much stress and strain.
- The treatment is non-mathematical in character and the readers can easily understand the text material without much taxing their minds.
- Besides good theory the book contains a large number of solved illustrations (to be exact, 885). These illustrations have been very carefully selected mainly from the latest examination question papers of various Universities all over India and neighbouring countries.
- This book is primarily meant to cater to the needs of under-graduate and post-graduate students of Commerce, Economics, Management and Professional Courses.

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Volume I:

- Statistics – What and Why
- Organising A Statistical Survey
- Collection of Data
- Sampling and Sample Designs
- Classification and Tabulation of Data
- Diagrammatic and Graphic Presentation
- Measures of Central Value
- Measures of Dispersion
- Skewness, moments & Kurtosis
- Correlation Analysis
- Regression Analysis
- Association of Attributes
- Index Numbers
- Analysis of Time Series
- Interpolation and Extrapolation
- Vital Statistics
- Statistical Fallacies.

Volume II:

- Probability and Expected Value
- Theoretical Distributions
- Statistical Inference – Test of Hypothesis
- X2 test and Goodness of Fit
- F-Test and Analysis of Variance
- Experimental Designs
- Statistical Quality Control
- Business Forecasting
- Partial and Multiple Correlation
- Statistical Decision Theory
- Non-Parametric Tests
- Revisionary Exercises
- Appendices.

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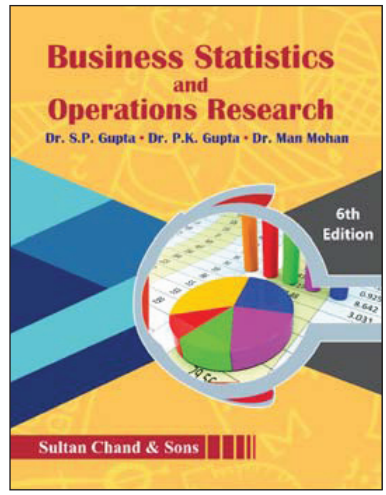
BUSINESS STATISTICS AND OPERATIONS RESEARCH

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

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.

Contents

Business Statistics

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- Classification and Tabulation
- Diagrammatic and Graphic Presentation
- Measures of Central Tendency
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- Skewness, Moments and Kurtosis
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About the Book

Statistical thinking is gradually becoming a part of our life. There is hardly any field in which statistical data & statistical techniques are not used. Keeping this in mind this book entitled 'Fundamentals of Business Statistics' has been especially designed for the students of Uttar Pradesh – National Education Policy course curriculum. It would help the readers in developing problem solving skills and apply statistical techniques in real life situations. Sufficient number of business oriented problems and latest examination questions have been included in the book.

Salient Features

- It caters to the needs of B.Com. (Semester I) students.
- It is written in a very simple and lucid style.
- It includes the latest examination questions of various universities of Uttar Pradesh up to 2022.
- For better understanding of the subject, a variety of questions have been given in each chapter as solved illustrations and exercise questions.
- The subject matter of each chapter is self-explanatory in nature.

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.

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23 Daryaganj, New Delhi-110002
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info@sultanchandandsons.com

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