**Objective Statistics**

S.C. Gupta, Sanjeev Kumar Gupta and Ananya Gupta

Most of the Institutions/ Organisations in India are conducting examinations under “Multiple Choice” Tests for admissions or jobs in their Institutions or Organizations. The book, “Objective Statistics” is a comprehensive book in statistics based on Multiple Choice Questions (MCQs) and is intended for the students preparing for the competitive examinations conducted by Indian Statistical Service (I.S.S.); Staff Selection Commission (S.S.C.); Junior Statistical Officers (JSO); IIT Joint Admission Test for Masters (JAM); CSIR (NET; JRF) for subject Mathematical Sciences and many other Competitive Examinations. This book is a modest, though determined bid to meet the requirements of the students of Mathematical Statistics at Undergraduate (Pass and Honors) and Postgraduate level and those preparing for the competitive examinations mentioned above. The book contains 11 chapters, Exercise Sets and Multiple Choice Questions. A special feature of the book is that at the end of each Exercise Set the 'Answer Sheet' as well as the 'Solutions' to each question in the Exercise Set have been given.

**S.C. Gupta,** (born 1937) has a brilliant academic record with Honours in Mathematics (1957), from Punjab University, Post-Graduation in Mathematical Statistics (1959) and Mathematics (1966), both from University of Delhi, and M.S. in Statistics (1971-72) from the University of North Carolina, Chapel Hill (U.S.A.). Mr. Gupta started his teaching career since July 1960 as a lecturer in the Department of Statistics, Meerut College, Meerut and then as Associate Lecturer in Statistics at I.I.T. Kharagpur. He was an eminent and dedicated faculty member of Hindu College, University of Delhi, since September 1963 and retired as Associate Professor of Statistics in November 2002. Mr. Gupta was a Visiting Scientist at Clark Atlanta University, Atlanta GA, (U.S.A.) in 2002. During his teaching career spanning over four decades, Mr. Gupta has taught numerous Statistics courses like Statistical Methodology, Theory of Probability, Probability Distributions, Applied Statistics, Sample Surveys and Sampling Techniques, Design of Experiments, Theory of Estimation and Testing of Hypothesis, etc. at the Under-graduate (Honours) level. He has also been associated with post-graduate teaching at the Department of Statistics, University of Delhi, for over 15 years. A well-established author of international repute, he has written books on Mathematical Statistics, Fundamentals of Statistics, Applied Statistics, Business Statistics, Engineering Mathematics and Matrices & Wonderland of Numbers which have been prescribed as text-books/reference books in most of the universities. Reading, writing and teaching are still his main passion.

**Sanjeev Kumar Gupta** did CFA in 2018, M.Sc. in Statistics (2001) and M.Phil. in Statistics (2003), both from University of Delhi, Delhi. He also cleared NET (National Eligibility Test) in 2003. He worked as Guest-lecturer in Statistics at Hindu College, University of Delhi from August 2002 to March 2003. Mr. Gupta joined Reserve Bank of India in 2004 as Research Officer and is currently working as Director in Department of Statistics and Information Management (DSIM), Central Office, Mumbai.

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**Ananya Gupta** is a distinguished mathematician with a degree in BSc Mathematics from Exeter University, UK. Certified in Data Science & Machine Learning from Harvard University, USA, she possesses a unique blend of mathematical expertise and cutting-edge data analysis skills. Ananya's commitment to leveraging her strong foundation in mathematics to drive innovative solutions in the fields of Mathematics & Statistics is evident in her dedication and passion for advancing the boundaries of knowledge in these domains.

**Contents**

1. Descriptive Measures Measures of Central Tendency, Dispersion, Skewness and Kurtosis

2. Theory of Probability

3. Random Variables and Distribution Functions

4. Mathematical Expectation and Generating Functions

5. Discrete Probability Distributions

6. Theoretical Continuous Distributions

7. Chebyshevʼs Inequality, Strong and Weak Law of Large Numbers, and Central Limit Theorems

8. Correlation and Regression

9. Chi-Square, t, F and Z Distributions and Z Transformation

10. Bivariate Normal Distribution

11. Theory of Estimation–I (Point Estimation)

12. Theory of Estimation–II (Interval Estimation)

13. Testing of Hypothesis

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8. Important Issues of the Environment

9. Field Work

References (Reference Books / Suggested Text)

Glossary

**Dr. Suman Gupta** has doing teaching and administrative work in the subjects of Botany, Environmental Biology, Ecology, Environmental Science, and Environmental Studies in colleges and university at the Undergraduate and Postgraduate levels since 1997. The author is well versed in the subject of environmental science and keeps on doing programs from time to time for environmental awareness. The author has published 20 papers, 4 chapters, and 15 important articles on various topics in science journals, magazines, and newspapers. The author's three books were published in environmental science, and out of these, two have been awarded,

  Her book entitled “PARYAVARAN ADHYAYAN – EK VISHLESHAN” was awarded second prize all over India on November 10, 2020, by A.I.C.T.E., New Delhi, Government of India. She has been awarded “Anusrijan Samman” in her book entitled “Paryavaran Aur Manav Jeevan” for outstanding contribution to science writing in Hindi by AISECT University, Bhopal, M.P. in 2015. She was awarded the “Distinguished Service Award-2015” for outstanding contribution in the field of environment by the Society of Biological Sciences and Rural Development, Allahabad, U.P. She has been awarded “Focus Bharat” for excellent services in the field of science writing work, radio program on environmental science, and a teaching and awareness program in the environmental field. She was awarded the “Best Faculty Award” by IMS Engineering College, Ghaziabad.

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