B.A /B. Com. 6th SEMESTER
STATISTICS
GENERIC ELECTIVE (GE)

ST616G: STATISTICS (BASIC STATISTICS-II)

(CREDITS: THEORY = 4, PRACTICAL = 2)

THEORY (MAXIMUM MARKS = 60)

UNIT- I

Bivariate Data: Concept of correlation and its types. Scatter diagram method and product moment method of studying correlation. Properties of a correlation coefficient. Concept of rank correlation, derivation of Spearman's rank correlation coefficient and its limits.

UNIT- II

Meaning of regression, derivation of two regression lines. Regression coefficients and their properties.

UNIT- III

Probability: Random Experiment: Trial, sample space, event, operation of events, independent events, exhaustive events and mutually exclusive events. Classical and relative frequency approach to probability with their merits and demerits. Axiomatic approach to probability.

UNIT- IV

Addition and multiplication law of probability. Conditional probability, independence of events, Prior and posterior or revised probabilities, Bayes' theorem and its applications

REFERENCES

1. Bhat B.R, Srivenkatramana T and Rao Madhava K.S (1997): Statistics: A Beginner's Text, Vol 1., New Age International (P) Ltd.
2. Croxton F. E, Cowden D.J and Kelin S (1973): Applied General Statistic, Prentice Hall of India.
3. Spiegel, M.R. (1967): Theory & Problems of Statistics, Schaum's Publishing Series
4. S.C Gupta and V.K Kapoor(2007): Fundamentals of Mathematical Statistics.11th edition(reprint) Sultan Chand and sons.
5. S.P.Gupta: Statistical Methods. Sultan Chand and sons.

ADDITIONAL REFERENCES

1. Anderson T.W and Sclove S.L (1978): An introduction to the Statistical Analysis of Data, Houghton Miffin/Co.
2. Cooke, Cramer and Clarke (1996): Basic Statistical Computing, Chapman and Hall.
3. Mood A.M. Graybill F.A and Boes D.C. (1974): Introduction to the Theory of Statistics. McGraw Hill.

PRACTICAL (MAXIMUM MARKS: 30)

1. Computation of Karl Pearson's correlation coefficient.
2. Computation of Spearman's rank correlation coefficient.
3. Computation of two regression lines.
4. Evaluation of Probabilities using Addition law.
5. Evaluation of Probabilities using Multiplication law.
6. Evaluation of Probabilities using Bayes' theorem.