B.A. /B.Sc. FIRST SEMESTER-STATISTICS
Descriptive Statistics
M.M-60 (Theory=56 & Attendance=04)

UNIT- I

Descriptive Statistics: Concept of a statistical population and sample from a population; qualitative and quantitative data. Collection and Scrutiny of data: Primary data: Methods of collecting primary data, Secondary data, their major sources including some government publications. Presentation of Data: Construction of tables with one or more factors of classification.

UNIT- II

Diagrammatic and Graphical representation of non-frequency data. Frequency distribution, cumulative frequency distribution and their graphical representation - histogram, frequency polygon and Ogive curves.

Measures of central tendency or location(Arithmetic mean, median, mode, geometric mean and harmonic mean). Characteristics of a good average. Relationship between various measures of location and their applications. Merits and demerits of these measures.

UNIT- III

Dispersion: Relative and absolute measures(Range, Quartile Deviation, Mean Deviation and standard Deviation). Coefficient of variation and its applications.

Skewness, Kurtosis and their measures including those based on quartiles. Moments, relation between central moments in terms of raw moments and vice-versa. Effect of change of scale and origin on moments.

UNIT- IV

Bivariate Data: Concept of correlation and its types. Scatter diagram method and product moment method of studying correlation. Properties of a correlation coefficient (limits of the correlation coefficient, effect of change of origin and scale).Concept of rank correlation, derivation of Spearman`s rank correlation coefficient and its limits.

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

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.

4. R.K. Gupta and Aijaz Ahmad Hakak (2016): An Introduction to Statistics. Oberoi Book Service, Jammu.

5. K.L. Arora and Mushtaq Ahmad Zargar (2016): Descriptive Statistics, Dinesh Publications.

B.A./B.Sc. FIRST SEMESTER(Practical M.M:30(28+2)

1. Diagrammatic and graphical representation of data.
2. Computation of arithmetic mean discrete and continuous data.
3. Computation of median for discrete and continuous data.
4. Computation of mode, for discrete and continuous data.
5. Computation of geometric mean for discrete and continuous data.
6. Computation of harmonic mean for discrete and continuous data.
7. Computation of range, for discrete and continuous data.
8. Computation of mean deviation for discrete and continuous data.
9. Computation of quartile deviation for discrete and continuous data.
10. Computation of standard deviation for discrete and continuous data.
11. Computation of coefficient of variation. for discrete and continuous data
12. Computation of measures of skewness and kurtosis.
13. Computation of Karl Pearson`s correlation coefficient.
14. Computation of Spearman`s rank correlation coefficient.
15. Computation of two regression lines.