Open Elective Course-2
SEMESTER I
MBOE102:Quantitative Techniques

Courseobjective:-The aim of this course is to provide the student knowledge and understanding to compute the measures of central tendency, frequency distribution, Correlation, regression analysis, probability concepts and probability theoretical distributions, Sampling distribution, and Estimation.

Syllabus & Detailed Contents

L	T	P	CR
3	0	0	3

Unit	Content	Hours / Weightage
Unit1:	Role of statistics in Business Decisions, Scope, functions and limitations of statistics. Frequency Distribution, Methods of data Classification. Types of Frequency Distributions, tabulation of Data. Graphical Representation, Importance of Visual Presentation of Data, Diagrammatic Presentation-Types of Diagrams; Functions of Graphs, Graphs of Frequency Distribution.	**10/25%**
Unit2:	Descriptive Statistics - Measures of Central tendency – Mean, Median, Mode, Percentiles, Quartiles, Measures of Dispersion – Range, Interquartile range, Mean deviation, Mean Absolute deviation, Standard deviation, Variance, Coefficient of Variation. Measures of shape and relative location; Skewness and Kurtosis	**10/25%**
Unit3:	Correlation Analysis: Rank Method & Karl Pearson's Coefficient of Correlation and Properties of Correlation. Regression Analysis: Fitting of a Regression Line and Interpretation of Results, Properties of Regression Coefficients and Relationship between Regression and Correlation.	**10/25%**
Unit4:	Theory of Probability, Addition and Multiplication Law, Bayes' Theorem, Theoretical Distributions: Binomial, Poisson and Normal Distribution, Sampling Distribution, Standard Error, Theory of Estimation, Point Estimation, Interval Estimation.	**10/25%**

CourseLearningOutcomes(CLO)

Oncompletionofthiscourse,thestudentswillbeableto:

1. Understandthekeyterminology,conceptstoolsandtechniquesusedinbusinessstatisticalanalysis.
2. Understandthesignificance of visual presentation of data.
3. Apply the measures of central tendency and relative location.
4. Apply correlation and regression analysis to solve the problems.
5. Analyze the problems on the basis of concepts of probability and probability distributions.

SUGGESTED READINGS

TextBooks

1. Levins,Krehbiel&Berenson,BusinessStatistics,PearsonEducation
2. Levin&Rubin,StatisticsforManagement,PrenticeHall
3. Sancheti& Kapoor,BusinessMathematics,SultanChandandSons
4. Gupta,StatisticalMethods,SultanChandandSons

Reference Books

1. TNSrivastava & ShailajaRego,Statisticsformanagement.
2. S.C.Gupta–FundamentalsofStatistics