17BB110-BUSINESS STATISTICS

Course Description and Objective:
The objective of this course is to provide the basic knowledge of the various statistical techniques useful to managers in their decision-making. Students will learn statistical tools like measures of central tendency, dispersion, Regression and Correlation analysis, sample tests and Hypothesis testing.

Learning outcomes:
The focus is on the use of statistical techniques to describe the data, thereby enabling the student to
1. Define statistics, become aware of wide range of applications in statistics, types of data, tabulation of data, construct a histogram, frequency polygon, an give, pie chart,
2. Apply various measures of central tendency –mean, median, mode, GM and H.M for grouped and ungrouped data. Apply various measures of variability-range, MD, QD, standard deviation, and to know percentiles, Deciles.
3. Understanding the concepts of various measures of dispersion and its applications in business decisions.
4. Understand the concepts of probability and its uses for making decisions in business.
5. Understand the concepts of discrete and continuous probability distribution.

UNIT – I
Statistics, Data classification, tabulation and presentation: Meaning of statistics, growth and development of statistics, importance and scope of statistics, Limitations of statistics, Reasons for learning data, Classification of data, organizing data using data array, tabulation of data, graphical presentation of data, types of diagrams, exploratory data analysis.

UNIT – II
Measures of central tendency: Introduction, measures of central tendency, mathematical averages: Simple mean, weighted mean, Geometric mean, harmonic mean, averages of position: median, mode, quartiles, deciles, percentiles, deciles.

UNIT – III
Measures of Dispersion: Introduction, classification of measures of dispersion, distance measures: range, interquartile range, average deviation measures: mean absolute deviation, variance and standard deviation, coefficient of variation.

UNIT – IV
Fundamentals of probability: Introduction. Event types, definition of probability, fundamentals rules of probability, counting rules for determining the number of outcomes, rules of probability and algebra of events, Bayes' theorem.

UNIT - V
Probability distributions: Introduction, discrete probability distribution: binomial probability distribution, Poisson probability distribution, Continuous probability distributions: normal probability distribution.

Skill Development:
(*These activities are only indicative; the Faculty member can innovate*)

1. Collect statistical information's from Magazines, Newspapers, Television, Internet etc.,
2. Collect interesting statistical facts from various sources and paste it in your note book.
3. Collect a primary data about the mode of transport of your school students. Classify the data and tabulate it.
4. From the mark sheets of your class, form the frequency tables, less than and more than cumulative frequency tables.
5. Get the previous monthly expenditure of your family and interpret it into bar diagram and pie diagram. Based on the data, propose a budget for the next month and interpreted into bar and pie diagram. Compare the two months expenditure through diagrams
6. Measure the heights and weights of your class students. Find the mean, median, mode and compare
7. Find the mean marks of your class students in various subjects. Analysis of data by computing standard deviation and coefficient of variation.
8. Collect the data from magazines, newspapers, and television, and publications. Present the data in graphs and diagrams.

Text books:
1. J. K. Sharma, Business statistics problems and solutions, Pearson.

2. J. K. Sharma, Business statistics, Vikas, 4th edition.

Reference books:
1. Gupta, S.P. Statistical Methods, Sultan Chand & Sons.2009.
2. G.C.Beri, Business Statistics, 3rd ed., McGraw Hill, 2009.