

FIFTH SEMESTER

COURSE NAME: BASIC STATISTICS

COURSE CODE: MT(N) - 222

CREDIT: 04

Basics And Data

Different types of data, Laws of statistics, Importance of statistics, Limitations of statistics, Tables, charts, histograms, frequency distributions, Measures of association.

Probability

Probability Concepts, Conditional Probability, Bayes Theorem, Probability Distributions, Random Variable, Expected Value and Variance.

Moment Generating Function

Moments, Moment generating function, Characteristic function, Generation of Moments and Cumulants by Characteristic Function, Fourier's Inversion Theorem.

Discrete Distribution

Discrete distributions, Types of Discrete Probability Distributions, Binomial distribution, Probability Function of Binomial Distribution, Poisson distribution, Binomial Approximation to Poisson Distribution, Fitting of Poisson Distribution.

Continuous Distribution

Continuous distributions, distribution function, probability density function of distribution, Uniform distribution, Normal distribution, Mean, Median and Mode of normal distribution, Standard Normal Distribution.

REFERENCE BOOKS

1. S. C. Gupta and V. K. Kapoor, (2020), Fundamentals of mathematical statistics, Sultan Chand & Sons.
2. Seymour Lipschutz and John J. Schiller, (2017), Schaum's Outline: Introduction to Probability and Statistics, McGraw Hill Professional.
3. J. S. Milton and J. C. Arnold (2003), Introduction to Probability and Statistics (4th Edition), Tata McGraw-Hill.