

3227 C
THIRD YEAR B. Sc. MATHEMATICS

PAPER- III(C)
MATHEMATICAL STATISTICS

Duration: 3 Hours

Max. Marks: 75

UNIT -I

Probability: Definitions of Probability, Addition and Multiplication laws, Conditional probability, Independent events, Baye's Theorem.

UNIT II

Random variable, Distribution function, Probability mass & density functions, probability distribution, Joint, marginal and conditional probability functions.

UNIT -III

Mathematical expectation and Moments, Addition & Multiplication law, Covariance, Expectation and Variance of linear combination of two variables, Moment generating, cumulant generating & characteristic functions.

UNIT -IV

Theoretical Probability distributions- Binomial, Poisson and Normal distributions and their properties.

UNIT -V

Curve fitting by the principle of least squares, fitting of straight line and parabola, Bivariate linear correlation and regression.

Books Recommended:

1. Mathematical Statistics, J. N. Kapur & H.C. Saxana, S. Chand & Co., New Delhi.
2. Fundamentals of Mathematical Statistics, V. K. Kapoor & S.C. Gupta, Sultan Chand & Sons, New Delhi.
3. Mathematical Statistics by Dr. Gokhroo & Saini.

NOTE:

Candidates who have offered Statistics as an optional subject will not be permitted to offer the paper III (B) and III (C). Candidates who have offered Computer science as an optional subject will not be permitted to offer paper III (B).