MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR
FIRST YEAR B. Sc.   STATISTICS   2016-17

PAPER - III
COMPUTATIONAL TECHNIQUES & OFFICIAL STATISTICS

TIME: 3 hours   **Max. Marks 50**

UNIT - I

Statistical Organizations in India Central Statistical Organization, National Sample Survey Organization, their functions and publications, Agricultural Statistics, Area and Yield Statistics, Trade Statistics, Statistical Organizations in Rajasthan, their functions and publications.

UNIT - II

Linear Programming: Definition of Linear Programming Problem (LPP), formulation of LPP, Graphical method (for two variables), Simplex computational procedure and Duality.

UNIT - III

Theory of Finite Differences: Operator, Δ , E & ∇ with their properties, Problems of identities involving Δ & E & ∇ , Factorial function; Newton-Gregory's forward and backward interpolation formulae, Estimation of missing value in equal intervals.

UNIT - IV

Theory of divided differences and its properties, Newton's divided difference & Lagrange's interpolation formulae, inverse interpolation by making use of Lagrange's formula.

UNIT - V

Numerical Integration : Trapezoidal rule, Simpson's 1/3 & 3/8th rule, Weddle's rule and related problems.

Recommended Books:

1. Saxena H.C.	: Finite Differences and Numerical Analysis, S.Chand & Company Ltd., New Delhi.
2. Gokhroo D.Cand Saini S.R.	: Numerical Analysis (Hindi edition), Navkar Prakashan, Ajmer
3. Gokhroo D.C.and Saini S.R.	: Elements of Linear Programming (Hindi and English editions), Jaipur Publishing House
4. Asthana B.N. & Srivastava S.S.	: Applied Statistics of India, Chaitanya Publishing House, Allahabad.
5. Porwal L.S.and Agarwal N.P.	: Applied & Economic Statistics of India (Hindi Ed.)

Reference Books :

1. Bhargava S.L., Sharma, K.D. Bhati, S.S.	: Linear Programnling (Hindi edition), Jaipur and Publishing House, Jaipur
2. Nagar, K.N.	: Fundamentals of Statistics (Hindi edition) Meenakshi Prakashan, Meerut
3. Gupta, B.N.	: Statistics: Theory & Practice (Hindi and English editions), Sahitya Bhawan, Agra.
4. Saluja M.R.	: Indian Official Statistical Systems, Statistical Publishing Society, Calcutta