M.Sc (Final) Environmental Sciences
Semester IV

Paper III

BIOSTATISTICS AND COMPUTER APPLICATION

Unit I

Introduction to sampling methodology, measures of central tendency and graphical representation of data; Mean (arithmetic, harmonic and geometric), Median and Mode; Measures of dispersion, Frequency distribution of continuous variables, properties and application of normal distribution.

Unit II

Poisson and binomial distribution; Standard deviation, Standard error of mean; t test and pair T test; Chi square test, Coefficient of association (measure of association); Analysis of variance

Unit III

Correlation coefficient: testing of significance of correlation coefficient; Regression coefficient and the line of best fit: relationship between correlation and regression; introduction to multivariate methods for environmental sciences.

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Unit IV

Basic concepts of computer, hardware, operating systems: Windows, Unix and Linux; use of common application software in environmental sciences; word processing, spreadsheets, graphics and data base,

Unit V

Introduction to web browsing software and search engines with special reference to online environmental resources; Problem solving using computer; computer memory, magnetic hard disc, various drives, magnetic tape drivers, processor.