PBM7J006   **BIOSTATISTICS**

Module-I:

Introduction and definition of Biostatistics; Concept of variables in biological systems. Collection, Classification, tabulation graphical and diagrammatic representation of numerical data; Measures of central tendency: Mean, Median and Mode and their relationship; Measures of dispersion: Range, Quartile deviation, Mean deviation, Standard deviation, Concept of standard error, Coefficient of variation, Skew ness and Kurtosis.

Module-II:

Probability: Random experiment, events, sample space, mutually exclusive events, independent and dependent events; Various definitions of probability, addition and multiplication theorems of probability, Random variables (discrete and continuous), Probability density functions and its properties; Probability distributions: normal, Binomial, Poisson and their application.

Module-III:

Concept of populations and sample. Simple random sampling without replacement. Definition of simple random sample; Designing of Experiments-Random block design and Split plot design; Correlation and Regression, linear and quadratic regression; Analysis of variance: One- way and two-way classifications with single observation per cell. Duncan's multiple range test; Tests of significance: Chi-square, student's t, z and f-distributions, their properties and uses.

Text Books:

1. Biostatistics: Rao KS, Himalaya Publishing House
2. Introduction to Biostatistics & Research Methods: Sundar Rao PSS & Richard J, PHI learning Pvt. Ltd.
3. Biostatistics: Arora and Mohan, Himalaya Publishing House

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