

## **BIOSTATISTICS**

### **UNIT I**

Classification, Tabulation, representation and Analysis of Biological data – Applications of statistics in biology - Measures of Central tendency: Mean, Median & Mode.

### **UNIT II**

Measures of dispersion Variability: Range, Quartile deviation, Mean deviation, Standard deviation and Coefficient of variation.

### **UNIT III**

Basic concepts of Probability – Sample space and events – Addition and Multiplication theorem – Theoretical distribution: Binomial, Normal and Poisson.

### **UNIT IV**

Correlation analysis: Types of correlation- Methods of studying correlation: Karl Pearson's coefficient of correlation and Rank correlation coefficient; Regression analysis: Regression line and equations – Simple problems based on biological data.

### **UNIT V**

Tests of Significance: Small sample tests – Students't' test for mean, difference of two means and test for Correlation – Chi Square test for goodness of fit – F test for equality of variance.

### **Reference Books**

1. Palanichamy, S. and Manoharan, M., *Statistical methods for biologist*, Paramount publications.
2. Arora P.N and Malhon.P.K., *Biostatistics*, Himalaya publishing house, Mumbai, 1996.
3. Ramakrishnan, P., *Bio statistics*, Saras Publications, Nagercoil, 1996.
4. Sokal R.J. and Roflf. S.J., *Introduction to Biostatistics*, W.H.Freeman London, 1981.
5. Zar, J.H., *Biostatistical analysis*, McGraw Hill, London, 1983.
6. S.C. Gupta, and V.K.Kapoor, *Fundamentals of mathematical Statistics*, S. Chand and Sons, New Delhi, 2002.