

## STATISTICS

### SYLLABUS FOR HIGHER SECONDARY COURSE

#### Objectives :

The main objectives of the course are to enable students ..

- to acquire knowledge on basic statistical concepts.
- to acquire the skill of statistical analysis of data from real life situation in a scientific manner.
- to acquire knowledge on the basic aspects of statistical reasoning and drawing conclusions.
- to create an aptitude for Statistics for those students who show a promise for higher studies and creative work in Statistics.
- to develop aptitude for applications of statistical techniques in Biological Sciences, Social Sciences, Education and Psychology.

## STATISTICS

### SYLLABUS FOR HIGHER SECONDARY FINAL YEAR COURSE

**One Paper**

**Three Hours**

**Marks 100**

#### Unitwise Distribution of Marks and Periods :

Unit No.	Title	Marks	Periods
Unit-I :	Calculus of Finite difference	20	45
Unit-2 :	Theory of Probability	40	65
Unit-3 :	Elementary Theory of Sampling and Test of Significance	25	50
Unit-4 :	Sample Survey	15	40
<b>Total</b>		<b>100</b>	<b>200</b>

#### Unitwise Distribution of Course contents :

##### Unit-1 : Calculus of Finite Difference :

Operators A and E. Construction of diagonal Difference tables. Estimation of missing values, Idea of interpretation. Statements and applications of Newtons Forward, Backward and Longranges interpolation formulae. Idea of numerical integration, General quadrature formula. Statement and applications of trapezoidal rule, Simpsons  $\frac{1}{3}$  rd rule and Simpsons  $\frac{3}{8}$  th rule along with the conditions under which they are derived.

##### Unit-2 : Theory of Probability :

Basic concepts of Random experiment, Sample point, Sample space and Event occurrence of an event, Union and intersection of events. Complement of an event. Certain and null events. Exhaustive, Mutually exclusive and equally likely events. Probability of an event. Classical, Emperical and axiomatic (without introducing idea of measure theory). Unconditional probability, conditional probability, Dependent and independent events. Addition rule of Probability, Generalized Addition rule of Probability (upto three events). Statements and application of multiplication rule of Probabilities.