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**Department of Statistics**

F.Y.B.Sc. Statistics Choice Based Credit System Syllabus To be implemented from  
Academic Year 2019-2020.

**SEMESTER – I**

**PAPER – I ST – 111: Descriptive Statistics I**

At the end of this course students are expected to be able, (i) to compute various measures of central tendency, dispersion, skewness and kurtosis. (ii) to analyze data pertaining to attributes and to interpret the results.

**PAPER – II ST – 112: Discrete Probability and Probability Distributions I**

By the end of the course students are expected to be able (i) to distinguish between random and non-random experiments. (ii) to find the probabilities of events. (iii) to obtain a probability distribution of random variable (one or two dimensional) in the given situation.

**Paper III ST – 113: PRACTICALS**

At the end of this course students are expected to be able (i) to use various graphical and diagrammatic techniques and interpretation. (ii) to analyse data pertaining to discrete and continuous variables and to interpret the results, (iii) to compute various measures of central tendency, dispersion, skewness and kurtosis. (iv) to interpret summary statistics of computer output. (v) to summarize and analyze the data using computer.

**SEMESTER – II**

**PAPER – I ST - 121: Descriptive Statistics II**

At the end of this course students are expected to be able, (i) to compute the correlation coefficient for bivariate data and interpret it. (ii) to fit linear, quadratic and exponential curves to the bivariate data to investigate relation between two variables. (iii) to compute and interpret various index numbers.

**PAPER – II ST – 112: Discrete Probability and Probability Distributions II**

The main objective of this course is to introduce to the students some discrete Distributions and its application in real life. (i) to apply standard discrete probability distribution to different situations. (ii) to study properties of these distributions as well as interrelation between them.

**Paper III ST – 123: PRACTICALS**

At the end of this course students are expected to be able (i) to compute correlation coefficient, regression coefficients, (ii) to compute probabilities of bivariate distributions, (iii) to fit binomial

and Poisson distributions (iv) to compute probabilities of bivariate distributions. (v) to draw random samples from Poisson and binomial distributions.

S. Y. B. Sc. STATISTICS (at subsidiary level) Choice Based Credit System Syllabus (pattern 2019-20) With Effect from June 2020

### **SEMESTER – III**

PAPER - I ST – 231: DISCRETE PROBABILITY DISTRIBUTIONS AND TIME SERIES

PAPER – II ST 232: CONTINUOUS PROBABILITY DISTRIBUTIONS

Objectives: 1. To fit various discrete and continuous probability distributions and to study various real-life situations. 2. To identify the appropriate probability model that can be used. 3. To use forecasting and data analysis techniques in case of univariate and multivariate data sets. 4. To use statistical software packages. 5. To test various hypotheses of significance like means, proportions, independence of attributes, variance etc. included in theory (using calculators, software). 6. To compute probabilities of discrete and continuous probability distributions using MS-Excel and/ or R software (whichever is applicable). 7. To study applications of statistics in the field of demography etc.

PAPER - III ST-233: PRACTICALS

Objectives: 1. To fit various discrete and continuous probability distributions and to study various real-life situations. (Using calculators and ) 2. To identify the appropriate probability model that can be used. 3. To use forecasting and data analysis techniques in case of univariate data sets.

### **SEMESTER – IV**

PAPER – I ST – 241: TESTS OF SIGNIFICANCE AND STATISTICAL METHODS.

PAPER-II ST-242: SAMPLING DISTRIBUTIONS AND EXACT TESTS.

PAPER III ST-243: PRACTICALS

Objectives: 1. To conduct various tests of significance like averages, population proportions, independence of attributes, variance etc. included in theory (using calculators, software). 2. To compute probabilities of discrete and continuous probability distributions using R software. 3. To use software for finding basic summary statistics.