To be effective from Year 2016-2017

New Syllabus of Gujarat University for B. Com. **Semester - III**

CC 205 STATISTICS – III

Unit 1 : Limit And Continuity of Function (25 %)

Concept of function of one variable (Linear, Quadratic and Exponential function). Domain, Co-domain and Range of the function. (Theoretical explanation with illustration and without examples)

Limit of a function, Rules of limit (without proof), Formulae for limit of standard functions, $\frac{x^n-a^n}{x-a}$, $\frac{a^x-1}{x}$ and $\frac{e^x-1}{x}$.

Sums of limit of function y = f(x) where f(x) is a polynomial function of x or a rational function showing the ratio of two polynomial function or a function on the basis of standard form.

Meaning of continuity (including the concept of left hand limit and right hand limit). Sums of continuity of function y=f(x) where f(x) is a polynomial function or a rational function.

Unit 2: Probability (25%)

Random experiment, sample space, event and definition of various events. Mathematical, Statistical and Axiomatic definitions of probability. Addition and multiplication rule and sub rules of the probability (without proof). Simple examples of probability and conditional probability. Bayes' theorem (without proof) and sums showing use of it up to three events.

Unit 3 : Mathematical Expectation and Moments (25 %)

Meaning of discrete random variable, concept of probability function of discrete random variable. Definition of expected value (mathematical expectation) of random variable and its properties (without proof). Definition of variance and covariance and their formulae. Simple mathematical and applied examples of on it.

Central and Raw Moments (First four) of discrete random variable, Formulae showing the relation between central moments and raw moments (without proof). Concept of Skewness and Kurtosis and their interpretations. Simple examples based on unclassified data, classified data (frequency distribution) and probability distribution.

Unit –4 : Negative Binomial and Geometric Distribution (25 %)

Meaning, definition, properties (without proof) and uses of Negative Binomial Distribution. Simple related examples. Deriving probability mass function of Geometric distribution from Negative Binomial distribution, its properties (without proof) and uses. Simple related examples.