To be effective from Year 2016-2017

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

CC 210 STATISTICS – IV

Unit 1 : Differentiation (25%)

Definition of derivative of function Y = f(x), Derivatives of some simple functions like ax+b, ax^2+bx+c, 1/x, $\sqrt{x}$ by definition and derivatives of some standard functions like x^n, e^x, a^x, log x (without proof). Working rules of differentiation (without proof). Sums on the basis of the rules and above referred functions.

Unit 2 : Application of Derivatives (25%)

Definition of second order derivative, Maximum and minimum value of a function and its uses in commerce (business), Sums related to Cost, Revenue and Profit. Application of derivative in economics. Demand – Supply and their laws. Price elasticity of demand and supply, Marginal Revenue, Marginal Cost, Average Revenue and examples related to them.

Unit 3 : Index Numbers (25%)

Meaning and definition of Index Numbers, its uses and limitations. Different methods of obtaining index numbers (Aggregate Expenditure Method, Family Budget Method). Formulae given by different Statisticians (Laspeyer, Pasche, Fisher, Marshall Edgeworth and Dorbish-Bowley). Time reversal Test and Factor Reversal Test for all index numbers, Cost of living Index Number. Related examples.

Unit 4 : Time Series (25%)

Meaning and uses of Time Series, meaning of analysis of time series and its components (Trend, Cyclical Variation, Seasonal Variation, Irregular Variation). Different methods of obtaining trend (Theoretical explanation) Sums of obtaining Trend (by graphical and moving average method only), Seasonal variation and Irregular variation, Seasonal indices and its sums.

Reference Books :

1. Kapoor V.K.: Business Mathematics, Sultan Chand & Sons, New Delhi.
2. Sancheti & Kapoor: Business Statistics, Sultan Chand & Sons, New Delhi.
3. Sancheti & Kapoor: Business Mathematics, Sultan Chand &-Sons, New Delhi.
4. Mukhopadhyay, P. Mathematical Statistics, New Central Book Agency, Calcutta.
5. Trivedi and Trivedi: Business Mathematics, Pearson India Ltd. New Delhi.