

To be effective from Year 2017-2018

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

CC 305            STATISTICS – V

**Unit 1 : Integration and its application** (25%)

Definition of Integration, Rules of integration (For constants and addition as well as subtraction rule). Simple sums on the basis of rules of integration and standard functions like  $x^n$ ,  $(ax + b)^n$ ,  $a^x$ ,  $a^{mx + n}$ ,  $1/(ax + b)$ ,  $e^{ax + b}$ . Definition and properties of definite integration and its uses (for Total Revenue, Total Cost and Profit from Marginal Revenue and Marginal Cost and sums on the basis of the same)

**Unit 2 : Poisson Distribution and Hypergeometric Distribution** (25%)

Meaning and Probability mass function of Poisson distribution. Its properties (without proof) and uses. Simple related sums.

Meaning and Probability mass function of Hypergeometric Distribution. Its properties (without proof) and uses. Simple related sums.

**Unit 3 : Process Control Technique (Statistical Quality Control)** (25%)

Meaning of Quality and Quality Control and its uses in Industry – variation in quality – principle of control chart – Process Control Limits, Revised Control Limits, Run Theory, Variable Charts ( $\bar{x}$  and R) and their sums, Attribute Charts (control limits without proof). Sums of attribute charts (For constant sample size np, p and c chart). Difference between Variable Chart & Attributable Charts.

**Unit 4 : Lot Control Technique (Acceptance Sampling)** (25%)

Meaning of Lot (Product) Control and its uses. Single Sampling Plan, AQL, LTPD, Producer's Risk, Consumer's Risk, Operating Characteristic Curve, ASN, ATI and AOQ. Simple sums on the basis of Hypergeometric Distribution and Poisson Distribution only.

**References Books:**

- (1) Grant E.L.: Statistical Quality Control, McGraw Hill.
- (2) Duncan A.J.: Quality Control and Industrial Statistics. Taraporewala and Sons.
- (3) Levin and Rubin: "Statistics for Management", Prentice Hall of India Pvt. Ltd. New Delhi
- (4) Sancheti & Kapoor : Business Statistics. Sultan Chand & Sons, New Delhi.
- (5) Sancheti & Kapoor : Business Mathematics, Sultan Chand Sons, New Delhi.