

Gujarat University
Choice Based Credit System (CBCS)
Syllabus for B.Com Semester V (Statistics)
Effective from June 2013
CC 305
Fundamental Statistics - III

HOURS: 3/WEEK

CREDIT: 3

EXAM HRS: 3

Objective: - Students should be aware with the basics of advanced mathematical statistics.

1. Discrete Probability Distributions -1: [25%]

definition of probability distributions and distribution function, Probability mass function of Poisson distribution, It's properties and applications, Numerical examples, Probability mass function of Hyper-geometric distribution, properties and simple applications based on it. (without any mathematical proofs).

2. Discrete Probability Distributions -2: [25%]

Probability mass function of Negative Binomial distribution Its properties and applications, Numerical examples and Geometric distribution, simple applications and their properties and simple examples based on it

3. Process Control Technique: [25%]

Meaning of quality control and its uses in industry, Variations in quality, Theory of control chart, revised control chart, Theory of run, Control charts for variables (\bar{x} and R) and its examples, Control charts for attributes (np for fixed sample size, p and c) (No derivation of control limits), Examples related to the charts.

4. Product Control Technique: [25%]

Meaning of product control and its advantages, Definition of Single sampling plan, Explanation of the terms AQL, LTPD, Producer's risk, Consumer's risk, O.C function, ASN, ATI, AOQ, Simple examples based on Binomial, Hyper-geometric and Poisson distributions

References Books:

- (1) Grant E.L.: Statistical Quality Control, McGraw Hill.
- (2) Duncan A.J.: Quality Control and Industrial Statistics. Taraporewalaand 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.