ACHARYA NAGARJUNA UNIVERSITY - UG SYLLABUS

Group: B.Sc **Subject:** Sampling Techniques and Design of Experiments **Year:** III **Sem:** V

Unit-I:

Sampling Theory: Principle steps in a sample survey, Censes versus sample survey, sampling and Non-sampling errors.Types of sampling - subjective, probability and mixed sampling methods.

Unit-II:

Simple Random Sampling : Meaning of Samples and methods to draw, estimation of population mean, variances in SRSWR& SRSWOR. Advantages and Disadvantages of these methods.

Unit-III:

Stratified Random sampling: Proportional and optimum allocation of sample sizes in stratification. Variances of these methods. Comparison of their relative efficiencies. Advantages and Disadvantages of stratified sampling. concept of systematic sampling Advantages and disadvantages.

Unit-IV:

Analysis of Variance: Causes of variation, Statement of Cochran's theorem, One - way with equal and unequal classifications and two way classifications.

Unit -V:

Design of Experiments: Principles of experimentation in Designs, analysis of completely randomised design (CRD), Randomised block design (RBD) and Latin square design (LSD),efficiency of these designs. Concept of Factorial experiments.

Reference Books:

1. Telugu Academy BA/BSc III year paper - III Statistics - applied statistics – Telugu academy by prof.K.SrinivasaRao, Dr D.Giri. Dr A.Anand, Dr V.PapaiahSastry.
2. K.V.S. Sarma: Statistics Made Simple: Do it yourself on PC. PHI.
3. Fundamentals of applied statistics : VK Kapoor and SC Gupta.
4. AnuvarthitaSankyakaSastram - Telugu Academy.