ACHARYA NAGARJUNA UNIVERSITY - UG SYLLABUS

Group: B.Sc   **Subject:** Quality and Reliability   **Year:** III   **Sem:** V

Unit-I:

Importance of SQC in industry, statistical basis of shewart control charts, uses of control charts., control limits, Natural tolerance limits and specification limits, concept of six-sigma

Unit-II:

Variable Control Chart: Construction of mean, R, s.d, charts for variables, Interpretation of control charts

Attribute control charts - nP, P charts, C chart, Interpretation of control charts.

Unit-III:

Acceptance sampling plans: Scope, Producer's risk and consumer's risk. Concepts of AQL and   LTPD.

Unit-IV:

Sampling Plans: Single and double sampling plans, OC and ASN functions, Double and single Sampling plans for attributes using Binomial.

Unit -V:

Reliability: Introduction, failure rates, Hazard function, estimation of reliability, exponential distribution as life model, its memoryless property.

Reference Books:

1. BA/BSc III year paper - IV Statistics - applied statistics - Telugu academy by Prof.K.SrinivasaRao, Dr D.Giri. Dr A.Anand, Dr V.PapaiahSastry.
2. Fundamentals of applied statistics : VK Kapoor and SC Gupta
3. S.K Sinha: Reliability and life testing. Wiley Eastern.
4. R.C.Gupta: Statistical Quality Control.