

## QUALITY CONTROL & RELIABILITY

### Concepts in Quality Management

Quality planning, quality measurement, quality assurance, troubleshooting, diagnostic techniques, quality costs, systems approach in quality management, TQM, Taguchi concept, ISO 9000.

**Control Charts:** Shewhart, Cusum, SSR; economic design of control charts.

Industrial Applications of Experiment Design and Analysis in Troubleshooting

Quality Assurance through Acceptance Sampling

Single, double, multiple sequential sampling of lots, continuous sampling plans.

Economic design of quality assurance plans in single and multi stage production.

Quality in the form of reliability, reliability assurance tests design, analysis of fault trees for system failure, cause effect diagrams, quality control circles.

### Evolutionary Operation and Response Surface Methodology

Statistical analysis of life time data. Analysis of semi-Markov processes and regenerative phenomena in determination of systems availability and reliability.

### REFERENCES :

- (i) Quality Control Hand Book by J.M. Juran et. Al. - McGraw Hill
- (ii) Statistical Quality Control by E.L. Grant and R.S. Levernworth - McGraw Hill – Koga Kusha
- (iii) Hand Book of Industrial Engineering and Management by W.G. Ireson and E.L. Grant - Prentice Hall
- (iv) Quality Control and Applications by B. Hansen and P.M. Ghare - Prentice Hall