

2.16 30335 STATISTICAL METHODS

UNIT-1 STATISTICAL METHODS

- 1.1 Measures of Central tendency and dispersion Skewness, Movements and Kurtosis-Correlation analysis Frequency distributions- Normal distribution,
1.2 Poisson distribution Binomial distribution Population and sample-Concept of standard error Tests of significance- “t” test and “F” test and their application in textile industry.

UNIT-2 PROBABILITY AND ACCEPTANCE SAMPLING

- 2.1 Probability, definition-Classical determination of probability Priority probability and posteriority probability,
2.2 Laws of probability Random variable exceptions Sampling versus hundred percent inspection
2.3 Interest of producers and customers AQL – LTPD and OC curves Single, double and multiple or sequential sampling plans.
2.4 Quality Assurance – incoming and outgoing.

UNIT-3 ANALYSIS OF VARIANCE AND ACCEPTANCE SAMPLING CHI – SQUARE TESTS AND ITS APPLICATION TO TEXTILE INDUSTRY

- 3.1 Introduction to analysis of variance. Application of analysis of variance technique to Textile industry.
3.2 One way classification, Two way classification Principles of experimentation, Randomization Replication and local control Basic idea of Randomized Block and Latin square designs.
3.3 Design of experiments Number of tests sampling and general principles underlying design of experiments.

UNIT-4 CONTROL CHARTS FREQUENCY DISTRIBUTION

- 4.1 Control charts for variables Concepts of quality control and meaning of control Basic principles of rational set grouping Different types of control charts of averages, ranges and standard deviations.
4.2 Examples of control charts for textile applications. Interpretation of control charts-Process capability and specification Control charts for fraction defective, Number defectives and Number of defects per unit.

UNIT-5 MANAGEMENT AND ORGANIZATION OF QUALITY CONTROL MANAGEMENT

- 5.1 techniques for quality control Snap survey technique and its application to textile industry
5.2 Economic centering of the process Statistical concepts of its and tolerances
5.3 Machine interference with special reference to textile industry Simple technique of linear programming with special Economics of quality control Objectives and specifications of Quality standards in textile mills.
5.4 Routine quality standards in textile mills and garment factories. Application and maintenance of SQC systems adopted in mills.

5.5 Total Quality Control.

5.6 Planning and organization of total quality control in mills.

5.7 Standard reporting to management. Cost reduction and quality control

Reference Books:

1. Principles of Textile testing BY J. E. Booth
2. Hand Book of Textile Test and Quality control BY B.Grover and D.S.Hamby

