Preface
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Quality has been an integral part of all products and services. It has become one of the most important consumer decision factors in the selection among competing products and services. Consequently, understanding and improving quality is a key factor leading to business success, growth and enhanced competitive position. One trend that has focused attention on modern quality control methods is growing awareness of the needs and demands of the consumer – a trend that might be called consumerism and one that is receiving much attention in and out of industry. It acknowledges the importance of customer satisfaction and recognizes that the consumer should expect to purchase safe, reliable products at fair prices.

Quality has been variously defined as “Fitness for use”, “meeting an expectation”, “degree of excellence” and “conformance to a standard”, along with other phrases. Quality Control in its broadest sense refers to a spectrum of managerial methods for attempting to maintain the quality of manufactured articles at a desired level. Statistical Quality Control is the tool for quality maintenance. It is the collection, analysis and interpretation of data for the use in quality control activities.

The major area of quality control and improvement is Acceptance Sampling. Acceptance Sampling is necessarily a defensive measure. Instituted as protective devices against the threat of deterioration in quality. Acceptance sampling is defined as the inspection and classification of a sample of units selected at random from a larger batch or lot and the ultimate decision about disposition of the lot is made.
Inspection of raw materials, semi finished products or finished products an important part of quality assurance. When inspection is for the purpose of acceptance or rejection of a product, based on adherence to a standard type of inspection procedure employed is usually called acceptance sampling. The prime objective of sampling inspection is to reduce the cost of inspection while at the same time assuring the customer of an adequate level of quality in the items being inspected. This study provides.

**Chapter I:** Deals with certain definitions, terminologies and notations involved in the thesis.

**Chapter II:** Quick Switching System with Single Sampling Plan – 1, 2, 3 \((n, c_N, c_T)\) and \((n, kn, c_0)\) through Maximum Allowable Percent Defective (MAPD), Maximum Allowable Average Outgoing Quality (MAAOQ) and Relative slopes.

**Chapter III:** Quick Switching System -1, 2 with Special Type Double Sampling Plans with Quality levels for \((n, c_N, c_T)\)

**Chapter IV:** Quick Switching System – 1, 2, 3 with Repetitive Deferred Sampling Plans with Quality levels for \((n, c_N, c_T)\) and \((n, kn, c_0)\)

**Chapter V:** Quick Switching System -1, 2, 3 with Multiple Deferred Sampling plans with quality levels for \((n, c_N, c_T)\).

**Chapter VI:** Deals with the results based on Sampling Plans using Trigonometrical ratio, RDS, SkSp-2, Bagchi’s Two level chain sampling plans. TNT Sampling scheme, Two-Plan switching system and Sampling plans for given acceptable and limiting quality levels for RDS and MRGS plans.