

## TOTAL QUALITY MANAGEMENT

Sub Code	: 10ME 758	IA Marks	: 25
Hrs/week	: 04	Exam Hours	: 03
Total Lecture Hrs	: 52	Exam Marks	: 100

### PART - A

#### UNIT - 1

**Principles and Practice:** Definition, basic approach, gurus of TQM, TQM Framework, awareness, defining quality, historical review, obstacles, benefits of TQM.

#### UNIT - 2

06 Hours

**Leadership:** Definition, characteristics of quality leaders, leadership concept, characteristics of effective people, ethics, the Deming philosophy, role of TQM leaders, implementation, core values, concepts and framework, strategic planning communication, decision making,

#### UNIT - 3

06 Hours

**Customer Satisfaction and Customer Involvement:**

**Customer Satisfaction :** customer and customer perception of quality, feedback, using customer complaints, service quality, translating needs into requirements, customer retention, Case studies.

**Employee Involvement –** Motivation, employee surveys, empowerment, teams, suggestion system, recognition and reward, gain sharing, performance appraisal, unions and employee involvement, case studies.

#### UNIT - 4

07 Hours

**Continuous Process Improvement:** process, the Juran trilogy, improvement strategies, types of problems, the PDCA Cycle, problem-solving methods, Kaizen, reengineering, six sigma, case studies.

**Tools and Techniques:** Benchmarking, information technology, quality management systems, environmental management system, quality function deployment, quality by design, failure mode and effect analysis, product liability, total productive maintenance.

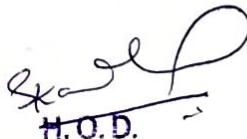
### PART - B

07 Hours

#### UNIT - 5

**Quality Management Tools :** Why-Why, forced field analysis, nominal group technique, affinity diagram, interrelationship digraph, tree diagram, matrix diagram, prioritization matrices, process decision program chart, activity network diagram.

07 hours



H.O.D.

Dept. Of Mechanical Engineering  
Alva's Institute of Engg. & Technology  
Mijar, MOODSIDRI - 571 221

#### **UNIT - 6**

**Statistical Process Control :** Pareto diagram, process flow diagram, cause-and-effect diagram, check sheets, histograms, statistical fundamentals, Control charts, state of control, out of control process, control charts for variables, control charts for attributes, scatter diagrams, case studies.

**06 Hours**

#### **UNIT - 7**

**Building and Sustaining Performance Excellence in Organizations :** Making the commitment to total quality, organizational culture and total quality, change management, sustaining the quality organization, self-assessment processes, implementing ISO 9000, Baldrige, and Six Sigma, a view toward the future.

**07 Hours**

#### **UNIT - 8**

**Design for Six Sigma:** Tools for concept development, tools for design development, tools for design optimization, tools for design verification, problems.


**06 Hours**

#### **TEXT BOOKS:**

1. **Total Quality Management:** Dale H. Besterfield, Publisher - Pearson Education India, ISBN: 8129702606, Edition 03/e Paperback (Special Indian Edition)
2. **Total Quality Management for Engineers:** M. Zairi, ISBN: 1855730243, Publisher: Woodhead Publishing

#### **REFERENCE BOOKS:**

1. **A New American TQM, four revolutions in management,** Shoji Shiba, Alan Graham, David Walden, Productivity press, Oregon, 1990
2. **100 Methods for Total Quality Management:** Gopal K. Kanji and Mike Asher, ISBN: 0803977476, Publisher: Sage Publications, Inc.; Edition - 1
3. **Organisational Excellence through TQM,** H. Lal, New age pub, 2008

  
**H.O.D.**

Dept. Of Mechanical Engineering  
Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 226