

ME 3027: QUALITY MANAGEMENT SYSTEMS

Teaching Scheme	Examination Scheme
Lectures:3hrs/week Credits :3	Class Test 1 – 15 Marks Class Test 2 -15 Marks Teacher's Assessment – 10 Marks End Sem Exam- 60 Marks

Objectives:

To,

1. Understand the laws, principles and phenomena in the field of quality management
2. Be able to apply quality philosophies and tools.
3. Create and evaluate process management systems
4. To understand and analyse the customer supplier dynamics
5. To understand the contemporary trends in logistics

Outcomes:

1. To Manage and modify quality systems to maintain customer focus.
2. To develop the skills by applying tools of JIT
3. To build the knowledge of implementation of quality in organization
4. Able to address diverse needs of customers and suppliers.
5. Able to analyse the current trends in supply chain management


Detailed Syllabus:

Unit 1

Quality Management: Introduction to Quality management, principal of Quality management, Philosophies of various Quality Gurus, Quality planning, leadership theories, Theories of motivation (Maslow and Herzberg), Fred W. Riggs model of comparative management

Unit 2

Element of Just In Time manufacturing, Advantages, limitations, plant arrangement for flexible plan, planning, control, kanban, just in time logistics, Implementation issues in JIT


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manufacturing, Inventory management for JIT , Decision making in JIT, leadership theories. Theories of motivation

Unit 3

Quality circle, Human dimension in TQM, Quality Management Tools like Brainstorming, Histogram, check sheet, pareto diagram, Ishiwaka Diagram, control chart, scatter diagram, Affinity diagram, Tree diagram, Five S theory. Quality certification, ISO 9000, TPM- Definition and distinctive feature of TPM, Four developmental Stages of TPM Relationship between TPM, Terotechnology and logistics, Maximization equipment effectiveness organization for TPM implementation, communication and control

Unit 4


Customers and suppliers -- Define internal and external customers, identify their expectations, and determine their satisfaction levels; define internal and external suppliers and key elements of relations with them, Customer satisfaction and loyalty, Basic customer service principles, Multiple and diverse customer management

Unit 5

Quality principles for products and processes -- Identify basic quality principles related to products (such as features, fitness-for-use, freedom from defects, etc.) and processes (such as monitoring, measuring, continuous improvement, etc.). • Quality standards, requirements, and specifications Supply Chain Management ,Supplier Selection ,• Supplier communications, Supplier Performance , Supplier Improvement, Supplier Certification, Partnerships, and Alliances , Supplier Logistics

Reference Books

1. D. C. Montgomery, Introduction to Statistical Quality Control, John Wiley & Sons,
2. Mitra A., Fundamentals of Quality Control and Improvement, PHI
3. J Evans and W Linsay, The Management and Control of Quality, Thomson.
4. Besterfield, D H et al., Total Quality Management, Pearson Education.
5. D. C. Montgomery, Design and Analysis of Experiments, John Wiley & Sons
6. D. C. Montgomery and G C Runger, Applied Statistics and Probability for Engineers, John Wiley & Sons


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Teacher's Assessment:

Teachers Assessment of 10 marks is based on one of the / or combination of few of following

Student's Presentation on related topics

Mapping of Course out come with programme outcome


Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1				3						
CO2	3				2		2		2	
CO3		2				3				
CO4					3					
C05		3								

Assessment Pattern

Assessment Pattern Level No.	Knowledge Level	Test 1	Test 2	Teachers Assessment/ Assignment	End Semester Examination
K1	Remember	05	05	05	10
K2	Understand	03	03	02	10
K3	Apply	02	02	05	20
K4	Analyze	02	02	03	20
K5	Evaluate	03	03	00	00
K6	Create	00	00	00	00
Total Marks 100		15	15	10	60

Assessment table

Assessment Tool	K1	K2	K3	K4	K5
COs	CO1	CO1/CO5	CO3	CO4/CO2	CO5
Class Test (30 Marks)	05	07	05	08	05
Teachers Assessment (10 Marks)	02	01	03	02	02
ESE Assessment (60 Marks)	12	05	10	15	18


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