17MB112-OPERATIONS MANAGEMENT

Course Objectives:
This course is designed to address the key operations and quality issues in service and manufacturing organizations that have strategic as well as tactical implications. The specific objectives include:

Course Outcomes:
At the end of the course students will be able :
To apply analytical skills and problem-solving tools to the analysis of the operations problems
To understand the strategic role of operations management in creating and enhancing a firm's competitive advantages
To understand key concepts and issues of OM in both manufacturing and service organizations
To understand the application of operations management policies and techniques to the service sector as well as manufacturing firms.
To learn the quality improvement and maintenance aspects of operations management

UNIT - I
Operations Management Systems: Systems concept of production, types of production Systems- Flow, Shop, Batch, Cellular, flexible Manufacturing. Operations management functions, challenges in operations management, current priorities for operations management, operations strategy, world class manufacturing, emerging trends and implications for operations

UNIT - II
Planning and Controlling of Operations: Production planning and controlling activities, Aggregate planning, Resources planning: MRP-1, MRP-2

UNIT - III
Productivity Improvement in Operations: Factors affecting productivity, Techniques for improving productivity, Facility location and factors influencing facility location, Methods for facility location decision, Plant layout: types of layouts – process layout, product layout, hybrid layout, fixed position layout, Work study: method study, time study

UNIT – IV
Purchasing and Inventory Management: Purchase function, Procedures. Economic Order quantity, Inventory analysis Methods – ABC, VED, XYZ methods – their utility. Inventory Valuation Methods: Periodic and perpetual systems; FIFO, LIFO, Average cost and Weighted Average Cost Methods.

UNIT - V
Quality Improvement and maintenance: Inspection, Quality, Statistical Quality Control – Control Charts Deming concepts. Total Quality Management, maintenance management-need

equipment life cycle, measurement of maintenance performance Total Productive Maintenance, Six sigma.

Skill Development:

(*These activities are only indicative, the Faculty member can innovate*)

1. Visit any factory and list out the physical facilities and type of production followed.
2. Visit any factory and prepare a report on the production planning and control activities
3. Visit a company and draw a chart on plant layout/ suggest suitable methods for productivity improvement.
4. List out the functions of materials management in an organization.
5. Visit any industry and list out the various quality measures /maintenance methods adopted.

TEXT BOOKS:

1. Mahadevan, "Operations Management" , 2nd edition., Pearson, 2010
2. J.K Rajewski, Larry P Ritzman "Operations Management" , 5th edition., Addision Wesley, 1998.

REFERENCE BOOKS:

1. R.Paannerselvam, "Production and Operations Management", 2nd edition, PHI, 2006
2. S.N.Chary "production and Operations Management", 6th edition., THM, 2006
3. Buffa, "Production and Operations Management", 6th edition.,Willey, 2008
4. Joseph S Matrinich, "Production and Operations Management", 8th edition., Willey 2008