MBA (Operations & Supply Chain Management) – III Semester

PAPER - 1
PRODUCTION AND OPERATIONS MANAGEMENT

Paper Code: MBSC3001

Objectives

- To understand the concepts and principles of Production and Operations
- To appreciate the importance of quality in Production Management
- To apply the productivity improvement techniques

UNIT I

Transformation process model: Inputs, Process and outputs; Classification of operations; Responsibilities of Operations Manager; New Product Development, Selection and Design of Product / Services.

UNIT II

Process types in manufacturing: Project, jobbing, batch, line, mass, continuous; Process types in services: professional services, services shops, mass services; Plant location; Layout planning.

UNIT III

Production Planning & Control: Production planning techniques for various process choices, Techniques of production control, Aggregate planning techniques,

UNIT IV

Quality management: Introduction; Meaning; Quality characteristics of goods and services; Tools and techniques for quality improvement: check sheet, histogram, scatter diagram, cause and effect diagram, Pareto chart, process diagram, statistical process control chart; Quality assurance; Total quality management (TQM) model; Service quality, concept of Six Sigma and its application.

UNIT V

Productivity Improvement Techniques: Work study; Method study; Work measurement: time study: stop watch time study; Work sampling. Maintenance: maintenance policies for facilities and equipment; Time of failure; Preventive versus breakdown maintenance; Procedure for maintenance, total productive maintenance (TPM)

REFERENCES

Adam Jr Everetl E. R J, PRODUCTION AND OPERATIONS MANAGEMENT , *Prentice-Hall, 1992, 2000 5th ed.*

Chary, PRODUCTION AND OPERATIONS MANAGEMENT, *Tata McGraw-Hill, 1997 9th e*

Hill T, OPERATIONS MANAGEMENT , *Palgrave, 2000*

Haleem A, PRODUCTION AND OPERATIONS MANAGEMENT ,*Galgotia Publication, 2004*

Shanker Ravi, **Industrial Engineering**, *Galgotia Publication.*

Kanishka Bedi, PRODUCTION & OPERATIONS MANAGEMENT, *Oxford University Press*

MBA (Operations & Supply Chain Management) – III Semester

PAPER - 2
LOGISTICS MANAGEMENT

Paper Code: MBSC3002

Objectives

- To introduce process and functions of logistics system
- To understand the major building blocks, functions, business process, performance metrics and decision making in supply chain network, and
- To provide an insight into the role of Internet Technologies in Logistics Management

UNIT I

Introduction to logistics management- Definition, scope, functions, objectives - Integrated logistics management, role of logistics in the Supply chain - Logistics & customer service, Role of logistics in competitive strategy, Logistics organization & performance measurement,ERP –SAP - ORACLE

UNIT II

Inventory planning- inventory costs, classifying inventory, Nature & importance of warehousing, types of warehouses, warehousing functions, warehouse layout & design. Material handling -objectives, guidelines & principles, selection of material handling equipments. Packaging-role of packaging, packaging materials, consumer & industrial packaging, material handling efficiency

UNIT III

Transportation- role of transportation in logistics, transportation selection decision, basic modes of transportation- Rail, Road, Water, Air, Pipeline- characteristics of different modes-transport economics - Inter modal operations

UNIT IV

Containerization-concept, types, benefits, Types of carriers- indirect & special carriers, Role of intermediaries- shipping agents, brokers- freight management- route planning Role of ports, ICDs, CONCOR - Global shipping options

UNIT V

Reverse logistics- scope, design, e-logistics- logistics information system-application of IT in logistics- automatic identification technologies- bar coding, RFID, Logistics outsourcing- 3PL & 4PL, Global logistics- operational & strategic issues

REFERENCES

Ailawadi C Sathish & Rakesh, LOGISTICS MANAGEMENT, *Prentice Hall, India, 2005*
Agrawal D K, LOGISTICS & SUPPLY CHAIN MANAGEMENT , *Macmillan India Ltd, 2003*
Coyle et al., THE MANAGEMENT OF BUSINESS LOGISTICS, *Thomson, 7th ed., 2004*
Bowersox Donald J, LOGISTICAL MANAGEMENT- THE INTEGRATED SUPPLY CHAIN PROCESS, *Tata McGraw Hill, 2000*

MBA (Operations & Supply Chain Management) – III Semester

PAPER - 3

SUPPLY CHAIN MANAGEMENT

Paper Code: MBSC3003

Objectives

- To introduce process and functions of supply chain management
- Appreciate the design and network in supply chain management
- To understand the role of coordination in supply chain management

UNIT I

Introduction to Supply Chain Management- Supply chain – objectives – importance – decision phases – process view – competitive and supply chain strategies – achieving strategic fit – supply chain drivers – obstacles – framework – facilities – inventory – transportation – information – sourcing – pricing.

UNIT II

Designing the Supply Chain Network- Designing the distribution network – role of distribution – factors influencing distribution – design options – e-business and its impact – distribution networks in practice – network design in the supply chain – role of network – factors affecting the network design decisions – modeling for supply chain.

UNIT III

Planning Demand and Supply- Role of forecasting – demand forecasting – approaches – role of IT.

Planning and Managing Inventories- Safety inventory and its appropriate level – impact of supply uncertainty, aggregation and replenishment policies.

UNIT IV

Transportation Networks and Sourcing- Role of transportation – modes and their performance – transportation infrastructure and policies - design options and their trade-offs – Tailored transportation. Sourcing – In-house or Outsource – 3rd and 4th PLs – supplier scoring and assessment.

UNIT V

Coordination in a Supply Chain- Lack of supply chain coordination and the Bullwhip effect – obstacle to coordination – managerial levels – building partnerships and trust – continuous replenishment and vendor-managed inventories – collaborative planning, forecasting and replenishment.

REFERENCES

Sunil Chopra and Peter Meindl, SUPPLY CHAIN MANAGEMENT – STRATEGY, PLANNING AND OPERATION, *PHI, 4th Edition, 2010.*

Wisner, Keong Leong and Keah-Choon Tan, PRINCIPLES OF SUPPLY CHAIN MANAGEMENT A BALANCED APPROACH, *Thomson Press, 2005..*

Coyle, Bardi, Longley, THE MANAGEMENT OF BUSINESS LOGISTICS – A SUPPLY CHAIN PERSPECTIVE, *Thomson Press, 2006.*

Jeremy F Shapiro, MODELING THE SUPPLY CHAIN, *Thomson duxbury 2002.*

MBA (Operations & Supply Chain Management) – III Semester

PAPER - 4

MATERIALS AND STORE MANAGEMENT

Paper Code: MBSC3004

Objectives

- To understand the concepts and principles materials and store management
- To appreciate the role of store management and forecasting
- To analyze the management aspects of health and safety in work

UNIT I

Determination of Stockholding Policy. Customer expectations – internal/external; supply market conditions; Categories of risks and their evaluation; Requirements of the business and the need for stock; Economics constraints; methods of avoiding carrying stock; General control methods e.g. ABC analysis. Control of Stock Range Coding, classification and categorization methods;

UNIT II

Variety reduction and standardization; Application and approval of new stock items; Control of slow moving; obsolete and redundant stock; Role of and function in determining stock range, Control of Stock Levels Forecasting techniques in relation to demand and lead times; Independent demand situations and the use of fixed order quantity and periodic reviewsystems; Techniques for dealing with dependent demand.

UNIT III

The Kanban approach and Just in Time philosophy; Coping with uncertainty in achieving required service levels; Suppliers contribution to controlling stock. Management of Storage Facilities. Identifying types of commodities to be stored and their characteristics with regard to storage and handling needs; Materials requirements planning (MRP) and manufacturing resource planning (MRPII) and distribution requirements planning (DRP); Pull systems.

UNIT IV

Physical Management of Stock Selection and operation of appropriate storage and materials handling equipment – general outline; Methods of stores layout to optimize the use of space and minimize picking costs; Outsourcing the activity and vendor managed inventory; Maintenance of security and prevention of theft; Storage and disposal of redundant, obsolete and scrap items; Environmental issues.

UNIT V

Management Aspects Health and Safety at work – operational issues: Health and Safety at work – management issues interdependence and teamwork; Relationships with other functions. Relevant Techniques Use of operational research techniques of queuing theory, network analysis, simple simulation techniques and decision trees; Identifying methods to distinguish between stores efficiency and effectiveness; Benchmarking and measurement of performance.

REFERENCES

Jessop & Morrison, STORAGE AND SUPPLY OF MATERIALS,

Duru C. Innocent, PURCHASING AND STORES MANAGEMENT, *Ken Printing Press,*

Terry Lucey, QUANTITATIVE TECHNIQUES, *Letts Educational, 5th Edition.*

Dobler & Burt. PURCHASING & SUPPLY MANAGEMENT

PAPER - 5
INFORMATION SYSTEM IN SUPPLY CHAIN MANAGEMENT

Paper Code: MBSC3005

Objectives

- To appreciate the role of IT in supply chain
- To understand data mining in supply chain
- To analyze IT practices in supply chain

UNIT I

The role of IT in Supply Chain .Uses of IT in inventories, Transportation & facilities within a Supply Chain .The Supply Chain IT frame work-macro Processes

UNIT II

The future of IT in the Supply Chain, Internal Supply Chain management, Supply Relationship Management, The Transaction Management Foundation .Data mining –Methodsapplication area in Supply Chain

UNIT III

Goals of Supply Chain information Technology, Standardization, information Technology infrastructure Presentation Devises, Communication Devices .Data base, System architecture.

UNIT IV

The Supply Chain IT in Practice, Integrating Supply Chain Information Technology, Stage of Development, Implementation of ERP & DSS. Structure of DSS. Selection of Supply Chain DSS. Supply Chain master Planning.

UNIT V

Supply Chain Information System Design – Planning, Capacity, Performance requirement' manufacturing requirement, Operation, Transportation, Inventory Development .E-Business – Role in Supply chain, Framework, Impact on Cost.

REFERENCES

David Simchi-Levi et al, DESIGNING AND MANAGING THE SUPPLY CHAIN – CONCEPTS, STRATEGIES, AND CASE STUDIES, *McGraw Hill International Edition 2003.*

N. Chandrasekaran, SUPPLY CHAIN MANAGEMENT, *Oxford University Press, New Delhi 2010*

Donald J Bowersox et al, SUPPLY CHAIN LOGISTICS MANAGEMENT, *McGrawe hIll Education (India) Pvt. Ltd.New Delhi 2007*