

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. SEMESTER : VIII
MANUFACTURING ENGINEERING

Subject Name: Materials and Logistic Management

Subject Code:183405

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam(E)	University Exam(P)	Mid Sem Exam(Theory) (M)	Practical (Internal)
3	2	0	5	70	30	30	20

Sr No	Course Contents
1	Materials Management Introduction to Material Management functions, scope, objectives, tools and techniques. Make or buy decision, Material Requirement Planning (MRP1). Value analysis: Value analysis / Value analysis engineering, concepts, advantages, applications, problem recognition, role of creativity, analysis of functions, use, esteem and exchange values elimination of unnecessary costs, value engineering techniques.
2	Purchase Management Objectives, functions, purchase cycle, documents in purchasing, purchasing with 5 R'S (Quality, Quantity, Time, Supplier, Price), vendor rating and vendor development. Import and Import Substitution: Factors affecting National and International markets, Import procedure and documents (Bill of lading, letter of credit etc.)
3	Stores Management Functions of stores, types of stores, stores identification, receipt-issue, recording system, stock taking system. Waste Management: Importance of waste management and techniques - Waste management system, Disposal of surplus and obsolete items - Mechanical and thermal disposal system.
4	Logistic Management Operating Responsibility, Logistical performance Cycle, Work of Logistics, Functional areas of logistics. Warehouse Management: Nature and importance of warehousing, warehouse location, warehousing operations and Facility development. Economic and service benefits of warehouse. Transportation Management: Transport planning parameters, Basic Economics & pricing factors affecting transportation cost.
5	Supply Chain Management Introduction, Types of supply chain, Components, Drivers, Role of supply chain in manufacturing, Supply chain performance and its measurement, Planning, Demand and supply in supply chain, Risk in supply chain and managing the risk, Coordination in supply chain
6	Inventory Control of Finished Goods

	Economic Manufacturing Quantity (EMQ), Fixed Order Quantity and Fixed Order Interval System, Probabilistic models, Safety stocks, service levels, inventory control of finished goods, single order inventory policies. Inventory models under risk and under uncertainty.
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Text Books:

1. Dobler and Lee, "Purchasing and Material Management", Tata McGraw Hill, New Delhi
2. Jhamb, L.C., "Inventory Management", Everest Publications,
3. Menon, K.S., "Purchasing and Inventory Control", Wheeler Publication, New Delhi
4. Chopra Sunil and Peter Meindl., "Supply Chain Management: Strategy, Planning and Operation", 3rd Edition, Prentice Hall, 2006.

Reference Books:

1. Miles L.D., "Techniques of Value Analysis and Engineering", McGraw Hill Book Company
2. Simchi-Levi, Kaminsky, "Designing and Managing the Supply Chain, Concepts Strategies and Case studies", 2nd Edition, Tata McGraw Hill, New Delhi
3. James R. Stock and Diouglas M. Lambert, "Strategic Logistics Management" 4th Edition, McGraw Hill International Edition.
4. Bowersox D.J., Closs, D.J., "Logistical Management", McGraw Hill Book Company, Singapore