

<b>Devi Ahilya University, Indore, India Institute of Engineering &amp; Technology</b>				<b>III Year B.E. Mechanical Engg., (Full Time)</b>				
<b>Subject Code &amp; Name</b>		<b>Instructions Hours per Week</b>		<b>Credits</b>				
<b>MER6G1 Materials Management</b>		<b>L</b>	<b>T</b>	<b>P</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>
<b>Duration of Theory Paper: 3 Hours</b>		<b>3</b>	<b>1</b>	<b>-</b>	<b>3</b>	<b>1</b>	<b>-</b>	<b>4</b>

**Learning Objectives:**

1. To inbuilt the concepts of Material handling and purchase procedure of an organization.
2. To impart the basics of standardization & stores management within organization.
3. To concrete the concepts of inventory management for effective decision making related to material & inventory.

**Prerequisite(s):** Basic concepts of Industrial Engineering and Management, Principles of Management.

**COURSE CONTENTS**

**UNIT-I**

**Introduction:** Objective of materials management, field and scope of material management, general analysis material quality, material planning programming. Integrated approach to Materials Management, Standardization, simplification, codification.

**UNIT-II**

**Purchase Management:** Scientific purchasing; objectives, organization of purchasing functions, Purchase cycle, Method of Buying; buying under certainty, buying under uncertainty, Purchasing under different circumstances , inspection and testing , purchasing for mass production , purchase contract , make or buy decision , material import , DGS & D rate contract.

**UNIT-III**

**Stores Management:** Stores organization, functions of scientific stores management, types of stores, store layout, store security, stores receipts, methods of storing, record – keeping & checking, issue methods, stores layout.

**UNIT-IV**

**Inventory Management:** Selective control of inventory, various inventory models, quantity discounts, shortages, instantaneous production with back orders, fixed time mode, single period model of profit maximization with time independent costs, lead time , re-order point , buffer stock, models with price breaks , POQ system.

**UNIT-V**

**Supply chain Management:** Understanding the Supply chain, Process view of the supply chain, Supply chain performance: achieving Strategic Fit, Supply chain Drivers and Obstacles.

**Learning Outcomes:**

Upon Completing the Course, Student will able:

1. To understand the basics of Material handling techniques used in industries.
2. To understand the basics of purchase procedure and its management.
3. To understand the basics of stores and inventory management techniques used in industries. An overview of supply chain management.

**BOOKS RECOMMENDED:**

- [1]. Lee & Dobler, *Material management*. Tata Mc.Graw Hill, 1990, 5e
- [2]. Arnold J.R Tony & Stephen N. Chapman, *Introduction to Material management*. PHI, 2003, 7e
- [3]. Gopal Krishnan, *Material Management*, PHI 2015, 2e
- [4] L.C.Jhamb, *Materials and Logistics Management*, Everest Publication, 1e
- [5] Sunil Chopara and Peter Meindl, *Supply chain Management*, Pearson Education, 6e