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B.Com Honours | Semester I | Calicut University

# Essentials of Cost Accounting

Course Code: COM1MN104 • Module 2 Notes

# 1. Material Cost: Procurement, Storage, and Control

Material cost typically constitutes the largest component of a product's total manufacturing cost, often ranging from 50% to 70%. Consequently, establishing efficient material control is vital to prevent waste, avoid inventory stockouts, minimize holding costs, and ensure smooth production runs. This module covers the procurement procedure, inventory control systems, stock level formulas, pricing methods, and the accounting treatment of material losses.

## Material Purchase Procedure

A systematic material procurement process involves the following sequential steps:

1. **Purchase Requisition:** The storekeeper or department head sends a formal request to the purchasing department specifying materials needed.
2. **Inviting Quotations:** The purchasing department invites bids/quotations from approved suppliers.
3. **Comparative Statement & Selection:** Evaluating quotations based on price, quality, delivery terms, and choosing the supplier.
4. **Purchase Order (PO):** Sending a formal legal order to the supplier containing terms, prices, and delivery dates.
5. **Receiving Materials:** Inspecting goods upon arrival and preparing a Goods Received Note (GRN) to confirm receipt.
6. **Invoice Verification:** Matching the supplier's invoice with the PO and GRN before authorizing payment.

## Inventory Control Techniques

Organizations use specific models to manage inventory investment efficiently:

### ABC Analysis

Groups inventory by value:

- **A Items:** High value (70%), low quantity (10%). Requires strict control.
- **B Items:** Moderate value (20%), moderate quantity (20%).
- **C Items:** Low value (10%), high quantity (70%). Loose control.

### VED & FSN Analysis

- **VED:** Vital (production stops without it), Essential, Desirable. Focuses on criticality.
- **FSN:** Fast-moving, Slow-moving, Non-moving. Focuses on inventory turnover.

### Just-in-Time (JIT)

A manufacturing philosophy aimed at reducing waste and inventory holding costs. Raw materials arrive exactly when production begins, maintaining near-zero stock levels. Requires highly reliable suppliers.

## Stock Level Determinations & Economic Order Quantity

To avoid over-stocking (high holding cost) and under-stocking (production halt), cost accountants determine optimal stock levels:

### Economic Order Quantity (EOQ)

EOQ is the order size that minimizes total inventory costs (ordering costs + carrying costs). It is calculated as:

[EOQ = \sqrt{\frac{2AO}{C}}]

Where: **A** = Annual consumption in units, **O** = Cost of placing one order, **C** = Carrying/holding cost per unit per year.

### Stock Level Formulas

| Stock Level | Formula | Objective |
|---|---|---|
| **Reorder Level** | Maximum Consumption × Maximum Reorder Period | Level at which a new order must be placed. |
| **Minimum Stock Level** | Reorder Level - (Normal Consumption × Normal Reorder Period) | Safety stock; should not be breached under normal conditions. |
| **Maximum Stock Level** | Reorder Level + Reorder Quantity - (Minimum Consumption × Minimum Reorder Period) | Prevents over-investment and storage overload. |
| **Danger Level** | Average Consumption × Maximum Reorder Period for Emergency purchases | Critical level; indicates immediate action is needed. |

## Methods of Pricing Issue of Materials

When materials are issued from the stores to the production floor, their cost must be determined. Major methods include:

- **FIFO (First-In, First-Out):** Assumes materials received first are issued first. Issues are priced at historical costs. Best during falling prices, but understates current cost of production during inflation.
- **LIFO (Last-In, First-Out):** Assumes materials received last are issued first. Issues are priced at current market rates. Matches current costs with current revenues, but inventory is valued at outdated prices.
- **Simple Average Method:** Issues are priced at the average of different purchase prices, ignoring quantities in each batch. Useful only when price fluctuations are minor.
- **Weighted Average Method:** Issues are priced by dividing total cost of materials in stock by total quantity. Prevents erratic cost fluctuations.

## Material Losses and Accounting Treatment

Material losses occur during storage or production. Their treatment depends on whether they are normal or abnormal:

- **Normal Loss:** Unavoidable losses inherent to the nature of materials (e.g., evaporation, shrinkage). The cost of normal loss is absorbed by good production units, increasing their

unit cost.

- **Abnormal Loss:** Avoidable losses due to negligence, accidents, or theft (e.g., fire, machine breakdown). The cost of abnormal loss is debited directly to the Costing Profit & Loss Account.
- **Definitions:**
  - *Waste:* Material lost with no scrap value (e.g., smoke, dust).
  - *Scrap:* Residue from manufacturing that has minor scrap sale value (e.g., wood shavings, metal turnings).
  - *Spoilage:* Damaged materials that cannot be reworked; sold as seconds.
  - *Defectives:* Sub-standard products that can be brought to standard specification through additional rework costs.