

UNIT 5

Inventories

(4 Hours) — Financial Accounting (CACS152)

1. Meaning of Inventory

Inventory (also called stock) refers to the tangible property held by a business (a) for sale in the ordinary course of business, (b) in the process of production for such sale, or (c) in the form of materials or supplies to be consumed in the production process or in the rendering of services. Inventory is a current asset, since it is expected to be converted into cash within the normal operating cycle of the business.

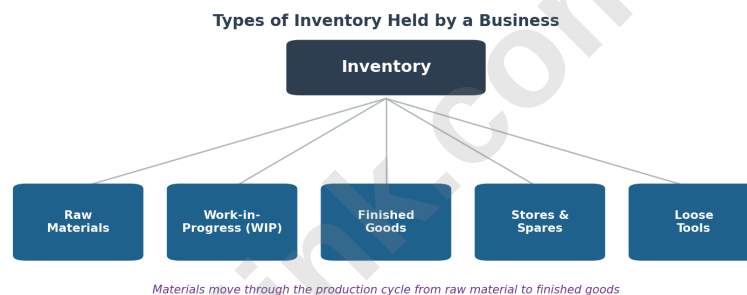


Fig 5.1 — Types of inventory held by a manufacturing business.

1.1 Types of Inventory

- **Raw Materials** — basic materials purchased for use in the manufacturing process, not yet issued to production.
- **Work-in-Progress (WIP)** — goods that have entered the production process but are not yet complete.
- **Finished Goods** — goods that have completed the production process and are ready for sale to customers.
- **Stores and Spares** — consumable items and spare parts held for the maintenance of machinery and equipment.
- **Loose Tools** — small tools and implements used in production that are not treated as fixed assets due to their low value and short life.

1.2 Importance of Inventory Valuation

The value placed on closing inventory directly affects both the Trading Account and the Balance Sheet: an overstatement of closing stock overstates both current assets and profit for the period, while an understatement has the opposite effect and may also distort the following year's opening stock and profit. Since inventory is often one of the largest current assets on a business's Balance Sheet, its correct valuation is essential for a true and fair view of financial performance and position.

2. Basis of Inventory Valuation

2.1 The Fundamental Valuation Rule

Inventory is valued at the lower of its cost and its net realizable value. This rule follows directly from the convention of conservatism (prudence): assets should not be carried in the books at more than the amount they are expected to realize, so any anticipated loss is recognized as soon as it becomes evident, while an unrealized gain is not recognized until the goods are actually sold.

Key Definitions

Cost of Inventory comprises the cost of purchase, cost of conversion, and other costs incurred in bringing the inventory to its present location and condition.

Net Realizable Value (NRV) is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale.

2.2 Components of Cost

- **Cost of Purchase** — the purchase price, plus import duties and other non-refundable taxes, plus freight, handling, and other costs directly attributable to the acquisition, less trade discounts and rebates.
- **Cost of Conversion** — costs directly related to the units of production (such as direct labour) plus a systematic allocation of fixed and variable production overheads incurred in converting materials into finished goods.
- **Other Costs** — only those costs incurred in bringing the inventory to its present location and condition; costs such as abnormal wastage, storage costs (unless necessary before a further production stage), administrative overheads, and selling costs are excluded and expensed as incurred.

2.3 Why 'Lower of Cost and NRV'?

- If the net realizable value has fallen below cost — for example, due to damage, obsolescence, or a fall in selling prices — the inventory is written down to its net realizable value, and the loss is recognized immediately in the period in which it occurs.
- If the net realizable value is higher than cost, the inventory continues to be shown at cost, since a business does not recognize profit until the goods are actually sold.

Note: The comparison of cost with net realizable value is usually made item by item, or for groups of similar items, rather than for inventory as a whole, to avoid the possibility of a loss on one item being offset against an unrecognized gain on another.

3. Techniques of Inventory Valuation

Once the valuation basis (lower of cost and NRV) is settled, a business still needs a technique to determine the cost of the units actually remaining in stock, particularly where identical units were purchased at different prices at different times.

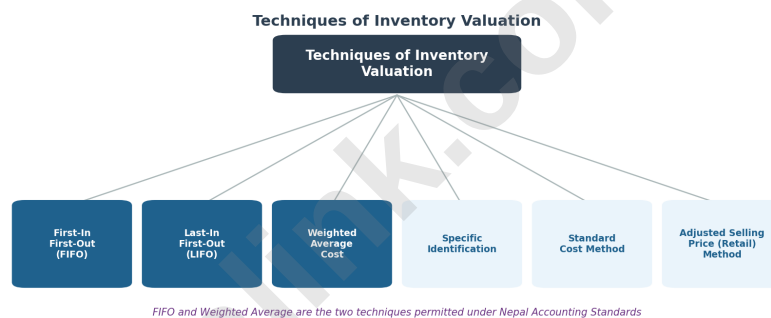


Fig 5.2 — Commonly used techniques of inventory valuation.

3.1 First-In First-Out (FIFO)

FIFO assumes that the units purchased first are also the units issued or sold first, so that the units remaining in closing stock are deemed to be those from the most recent purchases. In a period of rising prices, FIFO tends to value closing stock closer to current replacement cost and results in a lower cost of goods sold (and therefore higher reported profit) than other methods.

3.2 Last-In First-Out (LIFO)

LIFO assumes the opposite: that the most recently purchased units are issued or sold first, leaving the earliest, and often oldest-priced, purchases in closing stock. In a period of rising prices, LIFO results in a cost of goods sold that is closer to current prices, but values closing stock at older, and often lower, historical costs.

Note: LIFO is not permitted under Nepal Accounting Standards (NAS 2) or IFRS for financial reporting purposes, since it can value closing stock at costs far removed from current prices; it remains, however, a

traditional technique still discussed for conceptual and comparative purposes.

3.3 Weighted Average Cost Method

Under this method, the cost of each unit is determined from the weighted average of the cost of similar units at the beginning of a period and the cost of similar units purchased during the period. The average may be recalculated after each purchase (in a perpetual system) or at the end of the period (in a periodic system).

Formula — Weighted Average Cost

Weighted Average Cost per Unit = $\frac{\text{Total Cost of Goods Available for Sale}}{\text{Total Units Available for Sale}}$

3.4 Other Techniques

- **Specific Identification** — each item of inventory is individually identified and valued at its own actual cost; suited to businesses dealing in distinguishable, high-value items such as motor vehicles or jewellery.
- **Standard Cost Method** — inventory is valued at pre-determined standard costs, with variances between standard and actual cost analyzed separately; commonly used in manufacturing for cost control.
- **Adjusted Selling Price (Retail) Method** — inventory is valued by taking its selling price and deducting an appropriate gross profit margin; widely used by retail businesses holding a large number of rapidly changing items at broadly similar margins.

Example 3.1 — Comparing FIFO, LIFO, and Weighted Average

A trader's stock record for the month shows: opening stock 40 units @ Rs. 20 = Rs. 800; purchases on the 8th, 60 units @ Rs. 22 = Rs. 1,320; purchases on the 20th, 40 units @ Rs. 25 = Rs. 1,000. During the month, 80 units were sold, leaving a closing stock of 60 units. Value the closing stock under FIFO, LIFO, and the Weighted Average method.

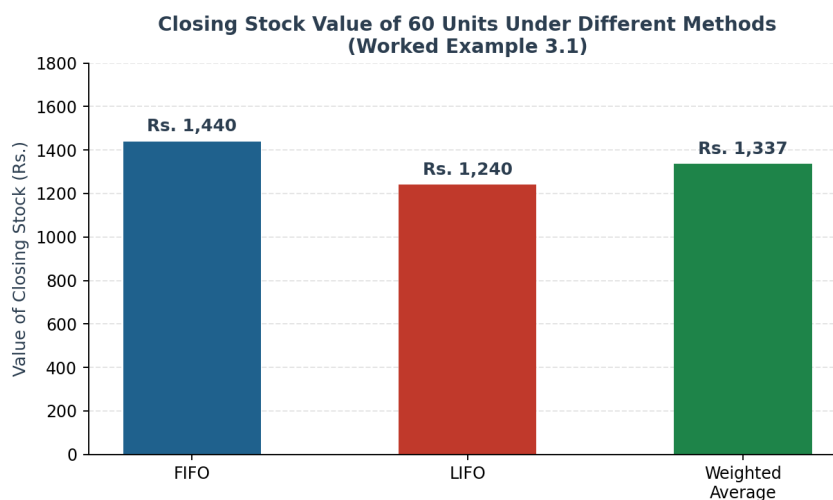


Fig 5.3 — Value of the same 60 units of closing stock under FIFO, LIFO, and the Weighted Average method.

Solution — Valuing the 60 Units of Closing Stock

FIFO: the 60 units remaining are treated as the most recently purchased — all 40 units from the 20th @ Rs. 25 (Rs. 1,000) plus 20 units from the 8th @ Rs. 22 (Rs. 440) = Rs. 1,440.

LIFO: the 60 units remaining are treated as the earliest purchased — all 40 units of opening stock @ Rs. 20 (Rs. 800) plus 20 units from the 8th @ Rs. 22 (Rs. 440) = Rs. 1,240.

Weighted Average: total cost of Rs. 3,120 ÷ total 140 units = Rs. 22.29 per unit; 60 units × Rs. 22.29 = Rs. 1,337 (rounded).

Note: Notice that FIFO gives the highest closing stock value and LIFO the lowest in this period of rising prices, with the Weighted Average method falling in between — a pattern that generally holds whenever purchase prices are rising over time.

4. Inventory Recording System

Apart from how inventory is valued, a business must also decide how it will keep track of inventory quantities and costs as purchases and sales occur throughout the accounting period.

4.1 Periodic (Physical) Inventory System

Under the periodic system, no continuous, day-to-day record of inventory quantities or values is maintained. Instead, all purchases during the period are simply recorded in a Purchases Account, and the quantity and value of closing stock are determined by a physical count and valuation at the end of the accounting period. The cost of goods sold is then obtained only as a balancing figure.

Formula — Cost of Goods Sold under the Periodic System

Cost of Goods Sold = Opening Stock + Purchases – Closing Stock

- Simple and inexpensive to maintain, requiring no detailed day-to-day stock records.
- Does not provide up-to-date information on stock levels at any point during the period, and cannot immediately reveal a shortage arising from theft or wastage.
- Commonly used by smaller businesses and those dealing in a large number of low-value items.

4.2 Perpetual (Continuous) Inventory System

Under the perpetual system, a continuous record — a stock (or bin) card or ledger — is maintained for each item of inventory, updated immediately for every purchase and every issue or sale, so that the balance of stock on hand (in both quantity and value) is known at any time without waiting for a physical count.

- Provides up-to-date stock information at all times, supporting better inventory control and timely reordering.
- Any difference between the book balance shown by the stock records and the balance found on physical verification is immediately highlighted, helping to detect loss, damage, or theft promptly.
- More costly to maintain, particularly where inventory items are numerous, though considerably simplified today through the use of computerized inventory management systems.

4.3 Periodic vs. Perpetual — A Comparison

Basis	Periodic (Physical) System	Perpetual (Continuous) System
Recording	No continuous record; updated only at period end	Continuously updated after every purchase and issue
Cost of Goods Sold	Derived as a balancing figure at period end	Known at any time directly from the records
Stock Verification	Physical count is the only source of stock figures	Physical count is used to verify the book balance
Cost	Lower cost to maintain	Higher cost to maintain (though eased by computerization)
Suitability	Small businesses, low-value bulk items	Businesses needing tight control over stock, high-value items

Note: Even a business that maintains a perpetual inventory system should still carry out periodic physical stock-taking, both to verify the accuracy of its book records and to detect any discrepancy caused by damage, obsolescence, theft, or clerical error.

5. Stock Taking

5.1 Meaning of Stock Taking

Stock taking is the process of physically counting, weighing, or measuring the actual quantity of inventory on hand at a given date, and then valuing it, in order to verify (or, under the periodic system, to establish for the first time) the figure of closing stock to be used in the financial statements.

5.2 Objectives of Stock Taking

- To ascertain the actual physical quantity of each item of inventory held by the business at a given date.
- To provide the closing stock figure required for the preparation of the Trading Account and Balance Sheet.
- To verify the accuracy of the stock records maintained under a perpetual inventory system, by comparing book balances with physically counted quantities.
- To identify slow-moving, obsolete, or damaged stock that may need to be written down to net realizable value.
- To detect and investigate any shortage or surplus arising from theft, pilferage, wastage, or recording errors.

5.3 Methods of Stock Taking

- Periodic (Annual) Stock Taking — a complete physical count of all inventory items is carried out at one time, usually at the close of the accounting year, often requiring business operations to be temporarily suspended so that stock movements do not disturb the count.
- Continuous (Perpetual) Stock Taking — also called cycle counting, different sections or categories of inventory are counted on a rotating basis throughout the year, so that every item is physically verified at least once during the year without requiring a single, disruptive, all-at-once count.

Basis	Periodic (Annual) Stock Taking	Continuous (Cycle) Stock Taking
Timing	Carried out at a single point in time, typically at year end	Spread throughout the year on a rotating schedule
Disruption	Often requires suspension of normal operations during the count	Causes little or no disruption to normal operations
Staffing	Requires a large team for a short, intensive period	Can be managed by a small team on an ongoing basis

Basis	Periodic (Annual) Stock Taking	Continuous (Cycle) Stock Taking
Error Detection	Errors are detected only once a year	Errors are detected and corrected soon after they occur

5.4 Procedure for Stock Taking

- **Planning** — decide the date, scope, and method of the count, and prepare pre-numbered stock sheets or count tags in advance.
- **Organizing the count** — arrange inventory in an orderly manner, and, wherever possible, assign independent teams of two — one to count and one to record — to reduce the risk of error or manipulation.
- **Physical counting** — count, weigh, or measure each item, and record the quantity, description, and location on the stock sheet.
- **Cut-off procedures** — ensure that goods received or despatched around the count date are correctly included in, or excluded from, both the physical count and the corresponding purchase or sales records, so that stock and transactions are consistently matched.
- **Valuation** — apply the appropriate cost (or, if lower, net realizable value) to the quantities counted, using the business's chosen valuation technique.
- **Reconciliation** — compare the physically counted quantities with the book (stock ledger) balances, and investigate any difference.
- **Reporting and adjustment** — summarize the results in a stock sheet or inventory report, and pass any necessary adjusting entries in the books for shortages, surpluses, or write-downs to net realizable value.

5.5 Treatment of Discrepancies

- A shortage (book balance greater than physical count), once investigated and found not attributable to a recording error, is treated as a loss of stock and written off against the Profit & Loss Account (or, if covered, claimed from an insurer).
- A surplus (physical count greater than book balance), once investigated and found not attributable to a recording error, indicates that the accounting records had understated stock and is adjusted by increasing the recorded stock, with a corresponding credit as a gain.

Note: Every discrepancy should first be investigated for a possible clerical error (a wrong entry, an omitted transaction, or a miscount) before being accepted and recorded as an actual physical shortage or surplus.

5.6 Importance of Stock Taking

- Provides the closing stock figure essential for determining accurate profit or loss and a true financial position.
- Acts as an important internal control, deterring and detecting theft, pilferage, and fraud relating to inventory.
- Helps identify obsolete, slow-moving, or damaged stock in time for management to take corrective action, such as a price reduction or write-down.
- Builds the confidence of auditors, investors, and lenders in the reliability of the reported inventory and profit figures.
- Supports better inventory planning and purchasing decisions by revealing actual consumption and turnover patterns.

Key Takeaways

- ✓ Inventory includes raw materials, work-in-progress, finished goods, stores and spares, and loose tools, and is valued at the lower of cost and net realizable value.
- ✓ Cost of inventory comprises the cost of purchase, cost of conversion, and other costs of bringing it to its present location and condition.
- ✓ FIFO, LIFO, and Weighted Average are the principal techniques for costing inventory issues and closing stock; only FIFO and Weighted Average are permitted under Nepal Accounting Standards.
- ✓ The periodic system determines cost of goods sold as a balancing figure at period end, while the perpetual system maintains a continuously updated stock record.
- ✓ Stock taking — periodic or continuous — physically verifies inventory quantities, supports accurate financial reporting, and helps detect shortages, surpluses, and obsolete stock.

— *End of Unit 5* —