

AS- 2

Valuation of inventories

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OBJECTIVE

A primary issue in accounting for inventories is the determination of the value at which inventories are carried in the financial statements until the related revenues are recognised.

SCOPE

This Standard should be applied in accounting for inventories **other than**:

- (a) work in progress arising under construction contracts, including directly related service contracts (see Accounting Standard (AS) 7, Construction Contracts);
- (b) work in progress arising in the ordinary course of business of service providers;
- (c) shares, debentures and other financial instruments held as stock-in-trade; and
- (d) producers' inventories of livestock, agricultural and forest products, and mineral oils, ores and gases to the extent that they are measured at net realisable value in accordance with well established practices in those industries.

Definition of inventories

The following terms are used in this Standard with the meanings specified:

- Inventories are assets:
 - (a) held 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.
 - (d) do not include machinery

Para4: Inventories encompass goods purchased and held for resale, for example, merchandise purchased by a retailer and held for resale, computer software held for resale, or land and other property held for resale. Inventories also encompass finished goods produced, or work in progress being produced, by the enterprise and include materials, maintenance supplies, consumables and loose tools awaiting use in the production process. **Inventories do not include machinery spares which can be used only in connection with an item of fixed asset and whose use is expected to be irregular;** such machinery spares are accounted for in accordance with Accounting Standard (AS) 10, Accounting for Fixed Assets.

Example :

1. Maple Ltd deals in manufacturing and selling of mobile phones, their closing stock consists of Mobile phones, camera, speaker, microphone, circuit board and battery. It also needs certain spares which will used in the manufacturing of these phones. How will it value its Inventories as on 31st March 2020?
 1. *The mobile phones that are readily available for sale will be considered as inventories.*
 2. *The mobile phones in the assembly line at year end and the raw material (camera, speaker, microphone etc.) are to be considered as a part of inventory.*
 3. *As per Para 4 of the standard “Inventories also encompasses.....consumables and loose tools awaiting use in the production process. Inventories do not include machinery spare which can be used in connection with an item of fixed asset and whose use is expected to be irregular: such machinery spares are accounted for in accordance with AS-10.*

Measurement of inventories :

Inventories should be valued at the **lower of cost and net realisable value**

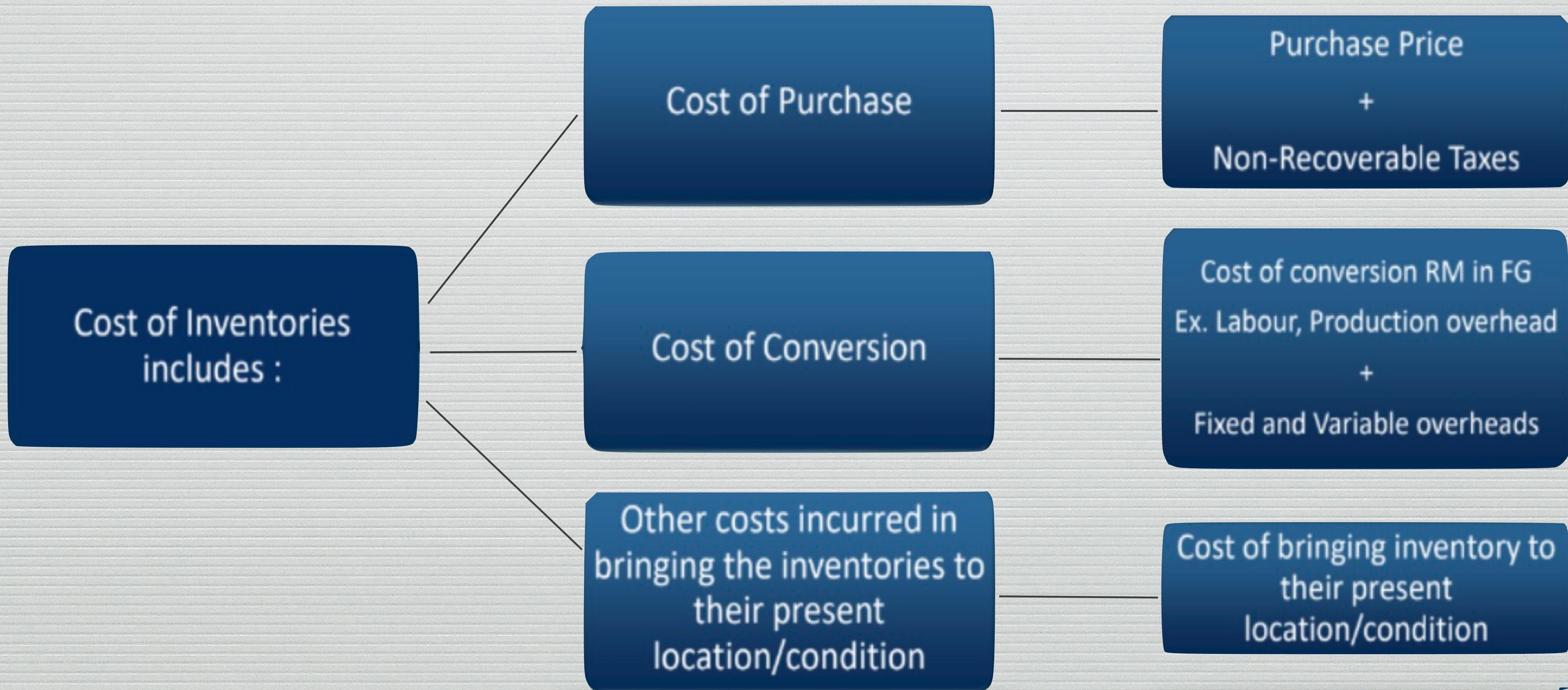
Why lower and
not higher ?

Definition
of Cost ?

Definition of Net
realisable value ?

This is at par with
the accounting
concept of
conservatism
(The doctrine of
prudence)

Cost of Inventories



Costs of Purchase

The costs of purchase consist of the purchase price including duties and taxes (other than those subsequently recoverable by the enterprise from the taxing authorities), freight inwards and other expenditure directly attributable to the acquisition. Trade discounts, rebates, duty drawbacks and other similar items are deducted in determining the costs of purchase.

Costs of Conversion

The costs of conversion of inventories **include costs directly related to the units of production, such as direct labour.** They also include a systematic allocation of **fixed and variable production overheads** that are incurred in converting materials into finished goods.

Fixed production overheads are those indirect costs of production that remain relatively constant regardless of the volume of production, such as **depreciation**, maintenance of factory buildings. Variable production overheads are those indirect costs of production that vary directly, or nearly directly, with the volume of production, such as **indirect materials**.

The **allocation of fixed production overheads** for the purpose of their inclusion in the costs of conversion is **based on the normal capacity** of the production facilities. Normal capacity is the production expected to be achieved on an average over a number of periods or seasons under normal circumstances, taking into account the loss of capacity resulting from planned maintenance.

In periods of abnormally high production, the amount of fixed production overheads allocated to each unit of production is decreased so that inventories are not measured above cost. Variable production overheads are assigned to each unit of production on the basis of the actual use of the production facilities.

Example :

Morpat Ltd produced 1,10,000 units of its famous calculators "OR-6" during F.Y. 2019-20. Its cost sheet is as follows:

Particulars	Per unit cost
Direct Material	50
Direct Labour	30
Direct Expenses	5
	Rs 85

The Production Overhead is Rs.2,00,000 out of the same 30% is Fixed Overheads, whereas the balance are Variable Overheads. The installed capacity of the plant is 1,20,000 calculators per year and the same is running at 100% capacity. The sales of Morpat Ltd is 85,000 units during the year.

Determine the value of closing stock?

Particulars	Amount	Per unit cost (Rs)
Direct Material		50
Direct Labour		30
Direct Expenses		5
Fixed Overhead	$(2,00,000 * 30 / 100) / 1,20,000$	0.50
Variable Overhead	$(2,00,000 * 70 / 100) / 1,10,000$	1.27
Total		86.77

The value of 25,000 units of finished goods to be recognized is as

$$= 25,000 \text{ units} * \text{Rs } 86.77 \text{ i.e. Rs } 21,69,250.$$

Here, it must be noted that the allocation of fixed overhead

The will remain as per normal capacity and the shortfall in recovery of the fixed overhead due to reduction in production due to Covid 19, cannot be adjusted and will have to be charged to the Profit & Loss Account even though the plant is Idle.

JOINT PRODUCTS AND BY-PRODUCTS

JOINT PRODUCTS:

When two or more products are produced from the same basic raw material and are of almost equivalent value, it is known as joint product.

➤ **EXAMPLE:**

In refining of crude oil, both petrol and diesel is obtained.

By PRODUCTS:

By products are incidental products resulting from the processing of another product.

➤ **EXAMPLE:**

In processing of sugarcane both sugar and molasses is obtained

Main Products
Joint Products

By Products

A production process may result in **More Than One Product** being produced simultaneously. This is the case, for example, when **joint products** are produced or when there is a main product and a **by-product**.

- **Joint products-** When the costs of conversion of each product are not separately identifiable, they are allocated between the products on a rational and consistent basis.

The allocation may be based, for example, on the relative sales value of each product either at the stage in the production process when the products become separately identifiable, or at the completion of production.

- **By-products** as well as scrap or waste materials, by their nature, are immaterial. When this is the case, they are often measured at net realisable value and this value is deducted from the cost of the main product. As a result, the carrying amount of the main product is not materially different from its cost.

Other Costs

Other costs are included in the cost of inventories only to the extent that they are incurred in bringing the inventories to their present location and condition. For example, it may be appropriate to include overheads other than production overheads or the costs of designing products for specific customers in the cost of inventories. Interest and other borrowing costs are usually considered as not relating to bringing the inventories to their present location and condition and are, therefore, usually not included in the cost of inventories.

Exclusions from the Cost of Inventories

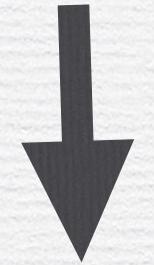
- (a) abnormal amounts of wasted materials, labour, or other production costs;
- (b) storage costs, unless those costs are necessary in the production process prior to a further production stage;
- (c) administrative overheads that do not contribute to bringing the inventories to their present location and condition; and
- (d) selling and distribution costs.

Example :

Queenfisher Ltd is in the line of production and selling of alcoholic beverages. It has a normal wastage of 5% of the total production (Total production = 1000 barrels) . During the year 2019-20, there was a surprise inspection by the authorities due to which production was halted for 15 days. This delay of 15 days resulted beverages being rejected by the quality department and which resulted into an abnormal wastage of 25 barrels.

In this scenario, the normal wastage/loss of 50 barrels will form a part of cost of inventory at the year end, whereas the abnormal wastage/loss of 25 barrels will be charged to Profit and Loss statement.

Methods of cost determination



Depends upon the nature of the inventories

Ordinarily interchangeable

Historical methods:

- LIFO (first in first out)
- Weighted average cost method (WAC)

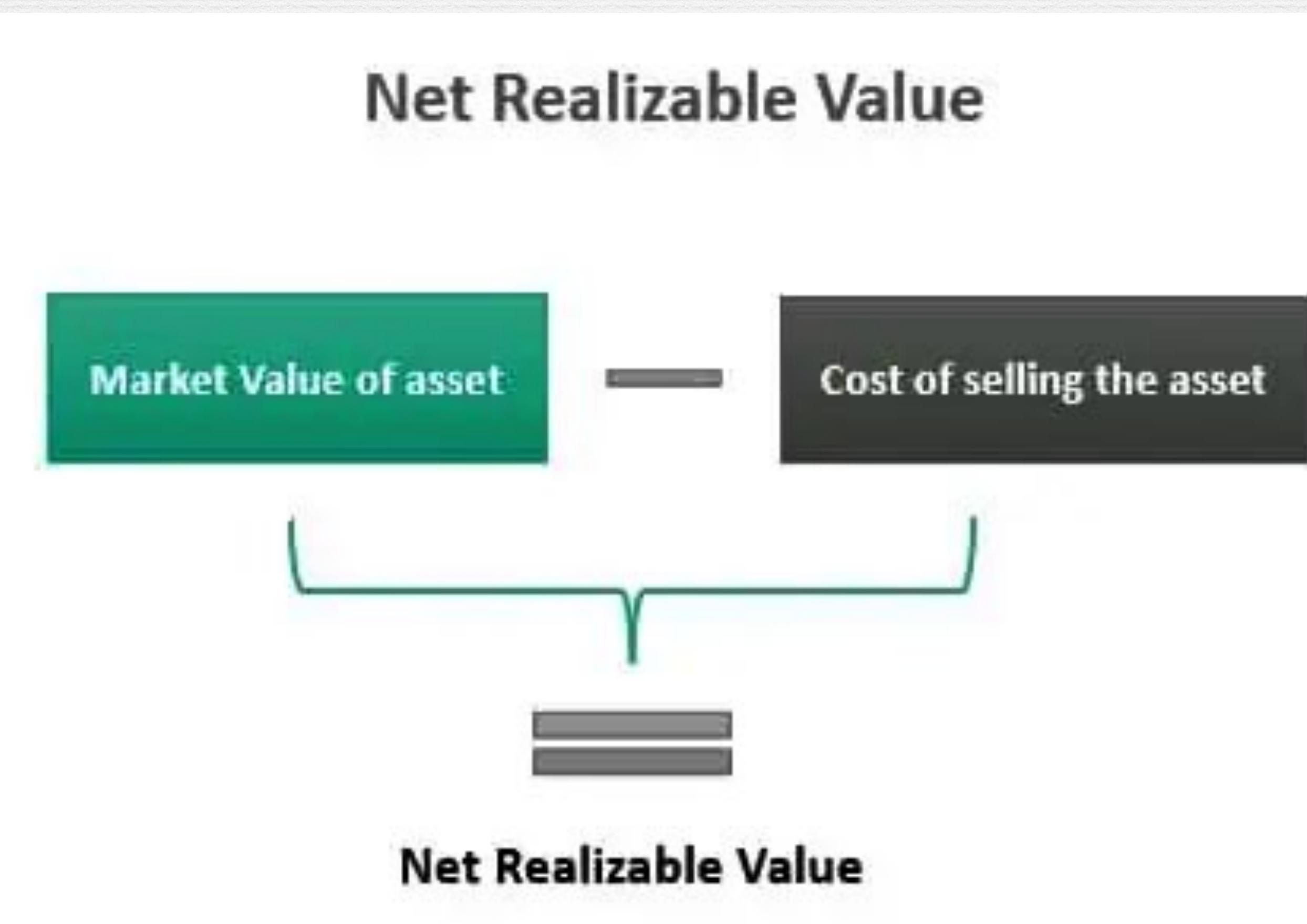
Non-historical methods:

- Standard cost
- Retail cost

Non Ordinarily interchangeable

Specific identification method

Net realisable value 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.

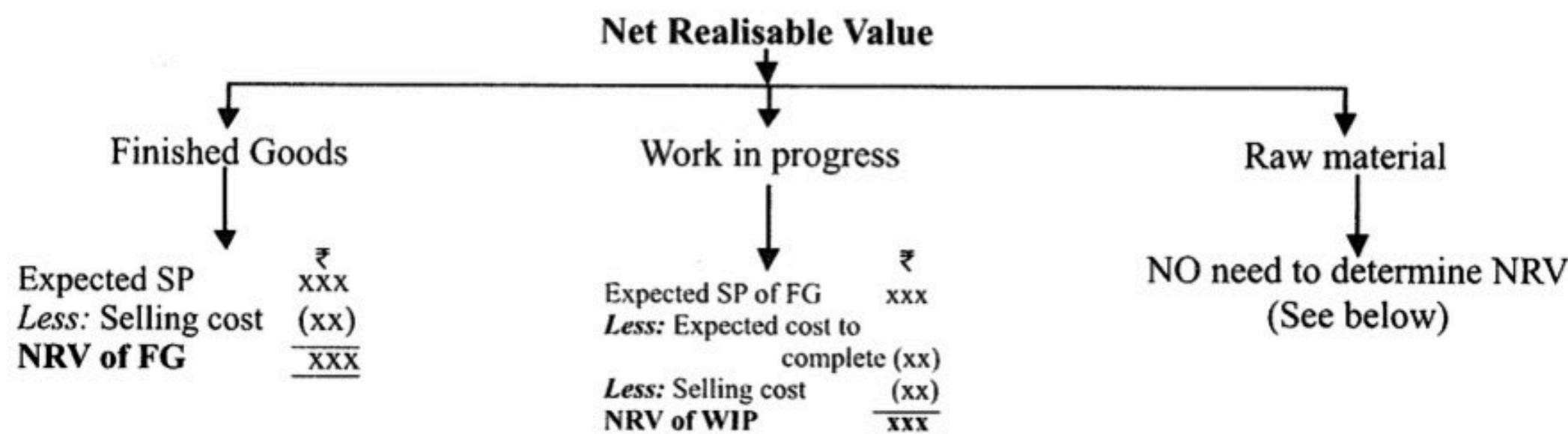


12. Net Realisable Value (NRV)

	₹
Estimated Selling Price in the ordinary course of business	XXX
Less: Cost of completion (applies if you are computing NRV of WIP)	(XX)
Less: Costs to make the sale (Applies to both WIP & FG)	(XX)
Net Realisable Value	XXX

As we discussed in the beginning we need to compare the COST with NRV of the inventory and it will be carried at the lower of the above two items. For that purpose we should find out the NRV.

Let us understand how we determine the NRV of Finished Goods, WIP and Raw material separately.



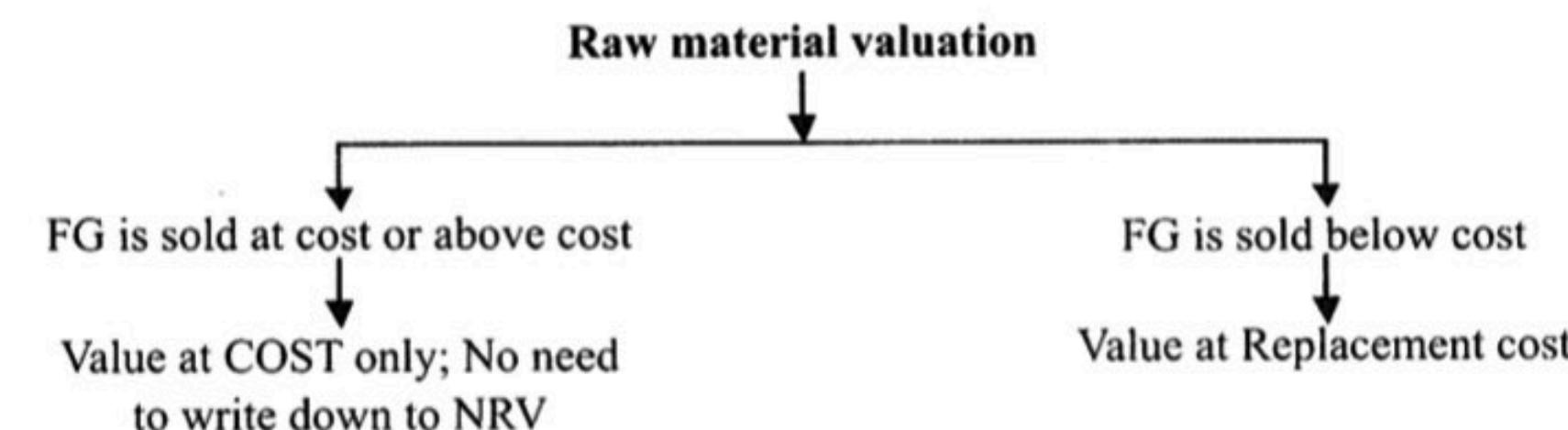
(1) NRV of work in progress

WIP is the one which is not completed or partially completed. Finding out expected selling price for WIP is not possible as nobody purchases the WIP product. It is meant to be converted into FG and to sell as FG. Hence we start computing the NRV of WIP with Expected selling price of FG and deduct the costs to be incurred to complete it as FG & Costs incurred to sell.

(2) Raw material valuation

Strictly speaking, raw material valuation is NOT based on Cost (or) NRV whichever is less. Its valuation is fully based on the valuation of finished goods *as the entity is purchasing raw material not to sell in the ordinary course of business as raw material BUT to use it for producing the finished goods. Intention is to sell FG and not RM.*

If the entity is able to sell the FG at cost or above cost, why should Inventory be written down, even if NRV of raw material is less than its COST? Just think before you look into the below diagram. RM is valued as discussed below.



Disclosures :

1. Accounting policy adopted in measuring inventories. (Cost or Net realizable value)
2. Cost formula used.
3. Total carrying amount of inventories together.
4. Classifications of inventories are:
 - (i) Raw materials and components
 - (ii) Work-in-progress
 - (iii) Finished goods
 - (iv) Stock-in-trade (in respect of goods acquired for trading)
 - (v) Stores and spares
 - (vi) Loose tools
 - (vii) Others (specify nature)