

AS-2: Valuation of Inventories (Revised) (Effective Date: 1st April, 1999)

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Introduction

Inventory is one of the largest assets of a business enterprise. It is ranging from 25% to 30 % of the total assets of the enterprise. The major source of revenue is the sale of these inventories. The objective of accounting for inventories is the proper determination of income through process of matching appropriate cost against revenues. To ascertain the trading profit of a particular period, revenues for the period must be matched or set off by all the related expenses in producing those revenues. Proper inventory accounting will help to determine what portion of the cost of goods available for sale should be deducted for the revenues of the current period & what portion is to be carried forward as inventory to be matched against revenues in the next 'accounting period'.

Objectives and Scopes.

This standard covers accounting and disclosure of inventories. It prescribes the accounting treatment for inventories, including cost determination and expense recognition. However, this Standard does not cover the following : a) work in progress arising under construction contracts, including directly related service contracts. (see AS-7, Accounting for Construction Contracts) , b) work in progress arising in the ordinary course of business of service providers, c) shares, debentures & other financial instruments held as stock in trade, & d) producers inventories of livestock, agricultural & forest products, & mineral oils & gases to the extent that they are measured at net realizable value in accordance with well established practices in those industries.

Meaning of Important terms

Inventories

Inventories are assets

- a) Held for sale in the ordinary course of business (e.g., finished car ready to be dispatched to dealers) ;
- b) In the process of production for such sale (e.g. car in the assembly lines): or
- c) In the form of materials or supplies to be consumed in the production process or in the rendering of services (e.g., tyre battery headlights, etc.)

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, e.g. spray guns used in the paint shop' of an automobile company's workshop .

Net Realisable Value (NRV)

Net realisable value is the estimated selling price, in the ordinary course of business, less cost of completion and the estimated cost necessary to make the sale .

Illustration 1

X Ltd has an item in stock which cost Rs.10,000 and can be sold for Rs.12000 However ,before it can be sold ,it will require to be modified at a cost of Rs 1500. The expected selling expenses of the item are an additional Rs.1000.

Calculate the Net Realisable Value (NRV) of the item

Solution

$$\begin{aligned} \text{NRV} &= \text{selling price} - \text{modification Cost} - \text{Expected selling Expenses} \\ &= \text{Rs}12000 - 1500 - 1000 = \text{Rs.}9500. \end{aligned}$$

Fair Value

Fair value is the value for which an item could be sold between willing independent traders.

Measurement of Inventories

Inventories should be valued at the lower of cost and net realizable value.

Illustration 2.

The following information is available from the books of account of a trader. Stock which cost Rs. 20000 can now be replaced for Rs.14000 the estimated net realisable value of this stock is Rs 17000 It is proposed that the stock should be written down to Rs 17000 Give your view.

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Solution

As per AS-2 inventories should be valued at cost or NRV whichever is lower. Here cost is Rs.20000 and NRV is Rs 17000. Therefore stock should be valued at Rs 17000 being the lowest. Replacement value will not be taken into consideration.

Cost of Inventories

For valuation of inventories, the determination of cost is very important. The cost of inventories should comprise

- i) all costs of purchase;
- ii) costs of conversion; and
- iii) other costs incurred in bringing the inventories to their present location and condition

Costs of Purchase: The costs of purchase consists of the purchase price including duties and taxes (other than those can be reclaimed from the authorities), freight inwards and other expenditure directly attributable to the acquisition (e.g. brokerage on purchase, packing cost for transportation etc.)

Trade discounts, rebates, duty drawbacks and other similar items are deducted from cost

Illustration 3

Pepsi India Ltd. purchased 20,000 kgs of oranges from farmers of Hosierpur, Punjab @Rs 10 per Kg. Orange collecting agents' commission were paid @Rs 1 per kg. Rs. 8,000 were paid for lorry hire charges for transporting it to Noida plant 5% of the oranges were damaged in transit and discarded. This loss is a normal loss. Calculate the cost of purchase per kg. of orange.

Solution

	Rs
i) Purchase Price (20,000 x Rs. 10)	2,00,000
ii) Collecting agents' commission (20,000 x Rs 1)	20,000
iii) Transportation cost	<u>8,000</u>
Total Cost of (20000-1000)=19000 kgs	<u>2,28,000</u>
Purchase Cost per kg = $\frac{\text{Rs } 2,28,000}{19,000}$	=Rs 12

Costs of conversion : The costs of conversion of inventories include cost 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 raw materials into finished goods

Fixed production overheads : are those indirect cost of production that remain relatively constant regardless of the volume of production, such as depreciation and maintenance cost of cutting machine in the above example, depreciation of factory building and the cost of factory management and administration.

The allocation of fixed production overheads for the purpose of their inclusion in the cost of conversion is based on the normal capacity of the production facility. This is the average expected output over a number of periods, taking into account production reductions due to planned maintenance and normal holidays.

Cost Excluded from Inventories

In determining the cost of inventories it is appropriate to exclude certain costs and recognize them as expenses in the period in which they are incurred. Examples of such costs are :

- a) abnormal amounts of wasted materials, labour or other production cost
- b) storage costs, unless those costs are necessary in the production process prior to 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 ;

III. Cost Formulas

Inventory prices are seldom stable. In many cases inventories lose their identity and are substantially indistinguishable from one another, though they may be acquired at varying rates. A very important valuation problem arises while assigning costs to inventory items. No problem would arise if prices never changed. Once the unit cost of each inventory item is known, some method must be used to assign costs to closing inventory and cost of goods sold. There are several methods for assigning cost to inventory items.

1) Specific Identification Method :

This method is adapted by the enterprises to determine the cost of items that are not ordinarily interchangeable and goods or services produced and segregated for specific projects. For example, X Ltd deals in paintings of renowned artists. As the paintings are not interchangeable, X Ltd should follow 'Specific Identification Method' for valuation of closing inventory and cost of goods sold.

2) First In First Out Method (FIFO):

This method is based on the premise that the first item purchased is the first item sold, that is all the inventories are sold in the order in which they are acquired since the oldest stock in the inventory is sold first, the calculation of the inventory is on the basis that the inventories in hand represent the ones most recently purchased or produced and the cost of goods sold represents the cost of items acquired in the earlier purchases.

3) Weighted Average Method:

Under this method, the costs to be assigned to inventories are ascertained by applying to the closing inventory an average cost computed by dividing the total cost of units by the total number of such units. The average cost is calculated by applying the following formula:

$$\text{Weighted Average Cost Per Unit} = \frac{\text{Opening Inventory} + \text{Purchases (in amount)}}{\text{Opening Inventory} + \text{Purchases (in Unit)}}$$

The value of the closing inventory is ascertained by multiplying the number of units on hand (from the physical count) by the weighted average cost per unit.

IV. Techniques for the Measurement of Cost -Standard Cost Method and the Retail Method

Techniques for the measurement of the cost of inventories, such as the standard cost method or the retail method may be used for convenience if the results approximate the actual cost.

Standard Cost Method: Standard costs take into account normal levels of consumption of materials and supplies, labour, efficiency and capacity utilization. They are regularly reviewed and if necessary, revised in the light of current conditions.

The Retail Method : The retail method is often used in the retail trade for measuring inventories of large numbers of rapidly changing items that have similar margins and for which it is impracticable to use other costing methods. The cost of the inventory is determined by reducing from the sales value of the inventory the appropriate percentage gross margin. The percentage used takes into consideration inventory which has been marked down to below its original selling price. An average percentage for each retail department is often used.

Net Realizable Value (NRV)

Inventories should not be carried in excess of amounts expected to be realized from their sale or use. It may be necessary to write down the cost of the inventory to NRV for different reasons. e.g.

- i) Damage to the inventories
- ii) Obsolescence
- iii) General decline in the market price for the goods
- iv) Estimated costs necessary to make the product saleable

for calculating NRV, the following points are to be taken into consideration:

1. Review Items Individually

Inventories are usually written down to net realizable value on an **item-by-item** basis. In some circumstances, however, it may be appropriate to group similar or related items. This may be the case with items of inventory relating to the same product line that have similar purposes or end uses & are produced & marketed in the same geographical area & cannot be practicably evaluated separately from other items in that product line. It is not appropriate to write down inventories based on classification of inventory, for example, finished goods, or all the inventories in a particular business segment.

Illustration 4: Lexus Motors Ltd a dealer in second hand cars has 5 vehicles in stock at the end of the financial year 2017-18. These are :

Car	Flat	Ambassador	Maruti Esteem	Maruti 800	Zen	Total
Cost Rs	90000	115000	275000	100000	200000	780000
Net Realisable Value (Rs)	95000	155000	265000	125000	230000	870000

You are required to calculate the value of stock to be included in the Balance sheet of the company.

Solution

For calculating the value of stock each item is to be reviewed individually. The valuation of stock is to be done as follows:

Car	Flat	Ambassador	Maruti Esteem	Maruti 800	Zen	Total
Value Rs	90000	115000	265000	100000	200000	770000

It should be noted that the appropriate stock figure is not Rs 780000 but Rs 770000 as calculated above.

2. Contract Price and Market Price

Estimates of net realizable value also take into consideration the purpose for which the inventory is held. For example. The net realizable value of the quantity of inventory held to satisfy firm sales of service contracts is based on the contract price. If the sales contracts are for less than the inventory quantities held, the net realizable value of the excess inventory is based on general selling prices.

For Example, X Ltd purchased 10000 barrels @ Rs 4000 per barrel. However the market price is Rs 3600 per barrel at the year end.

Here for the purpose of calculating net realizable value the contract Price Rs 4000 per barrel is to be taken into consideration. The value of stock will be $10000 \times \text{Rs } 4000 = \text{Rs. } 40000000$

Taking the above example let us assume that X Ltd has contract to sell 9000 barrels @ Rs 4000 per barrel.

9000 @ Rs 4000 per barrel Rs. 36000000

1000 @ Rs 3600 per barrel Rs 3600000

Total**Rs 39600000****3. No write down when finished goods will be sold at cost or above cost**

Materials and other supplies held for use in production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost.

However, when there has been a decline in the price of materials and it is estimated that the cost of the finished products will exceed NRV, the materials are written down to NRV. In such circumstances, the replacement cost of the materials may be the best available measure of their NRV.

Illustration 5

Stock consists of 1,742 units of a raw material purchased at Rs 7.30 each but the unit price of the item has fallen to Rs 6.50. The price reduction is apprehended to be permanent. The firm has already decided that if the price reduction lasts longer than six months, it will reduce the sale price of the finished goods from Rs 10.90 to about Rs. 10.

Calculate the Value of Stock.

Solution:

In this case though the unit price has fallen to Rs 6.50 from Rs 7.30 the stock will be valued @ Rs 7.30 because it will not exceed the revised selling price of Rs 10

Therefore, the value of stock will be: $1742 \times \text{Rs. } 7.30 = \text{Rs. } 12716.60$

Disclosure:

The financial statements should disclose:

- The accounting policies adopted in measuring inventories, including the cost formula used; and
- The total carrying amount of inventories and its classification appropriate to the enterprise

Information about the carrying amounts held in different classifications of inventories and the extent of the change in these assets is useful to financial statement users. Common classifications of inventories are raw materials and components work in progress finished goods stores and spares and loose tools.

References

Accounting for CA IPCC Examination & Accounting Technician Course, M. Hanif & A. Mukherjee, Chapter 2, Page 2.7-2.11

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