CA INTERMEDIATE

MARATHON

Advanced Accounting

AS 2:
Valuation of Inventories

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AS 2 : Valuation of Inventories

Meaning of Inventories

These are the assets

- Held for sale in ordinary coure of business (Finished Goods / Stock in Trade)
- In the process of production (Work in Progress)
- In the form of material or supplies to be consumed (Raw Material, Stores & spares, etc.)

Non Applicability

- WIP arising under construction contracts
- WIP of service providers
- Shares, debentures, etc. held as stock in trade
- Producers inventories of livestock, agricultural & forest products to the extent measured at NRV

Valuation

Raw Material

$SP_{FG} \geq CP_{FG}$ → At Cost Price

$SP_{FG} < CP_{FG}$ → Cost Price or Replacement Price w.e. is Lower

WIP & Finished Goods

Lower of Cost or NRV

Cost

- Actual Cost *
- Standard Cost — On Normal consumption
- Retail Price — Sales value of Inventory (−) GP (%)

Used for convenience if results approximates actual cost

NRV (Net Realisable value)

Estimated Selling Price
(−) Est. selling Expenses
(−) Est. costs of completion

(Firm / committed contract: NRV shall be contract Price)

* Actual Cost

- **Direct Material**
  - Items not ordinarily Interchangeable → Specific Identification
  - Other Items
    - FIFO
    - Weighted Average
- **Conversion Costs**
  - Direct Costs → Direct Labour & Direct Expenses → Actuals
  - Indirect Costs (Overheads)
    - Fixed Overheads → Normal capacity or Actual Production w.e. is higher
    - Variable Overheads → Actuals
  - Joint costs
    - Joint Product → Allocation based on sales value at separation or completion
    - By Product → Measured at NRV & deducted from cost of main product
- **Other Costs**
  - Eg: Design cost for specific customers

⇒ Purchase costs

Purchase Price (Net of Trade disc.)
+ Non Refundable Taxes
+ Freight Inwards
+ Directly Attributable Expenditure

⇒ Exclusions from cost

- Abnormal Loss
- Storage costs unless necessary in production process
- Administrative Overheads
- Selling & Distribution costs
- Interest & other borrowing costs (Exception AS 16)

VALUATION OF INVENTORIES

AS 2

Meaning of Inventories	These are the assets: → Held for sale in the ordinary course of business (Finished goods/Stock in trade) → In the process of production for such sale (Work –in-Progress) → In the form of material or supplies to be consumed in the production process or in the rendering of services (raw material, stores and spares*, etc.) * *Inventories do not include spare parts, servicing equipment & standby equipment which meet the definition of property, plant and equipment as per AS 10. Such items are accounted for in accordance with AS 10.*
Measurement	**Inventories should be valued at Lower of Cost or Net Realizable Value**

Cost of Inventories

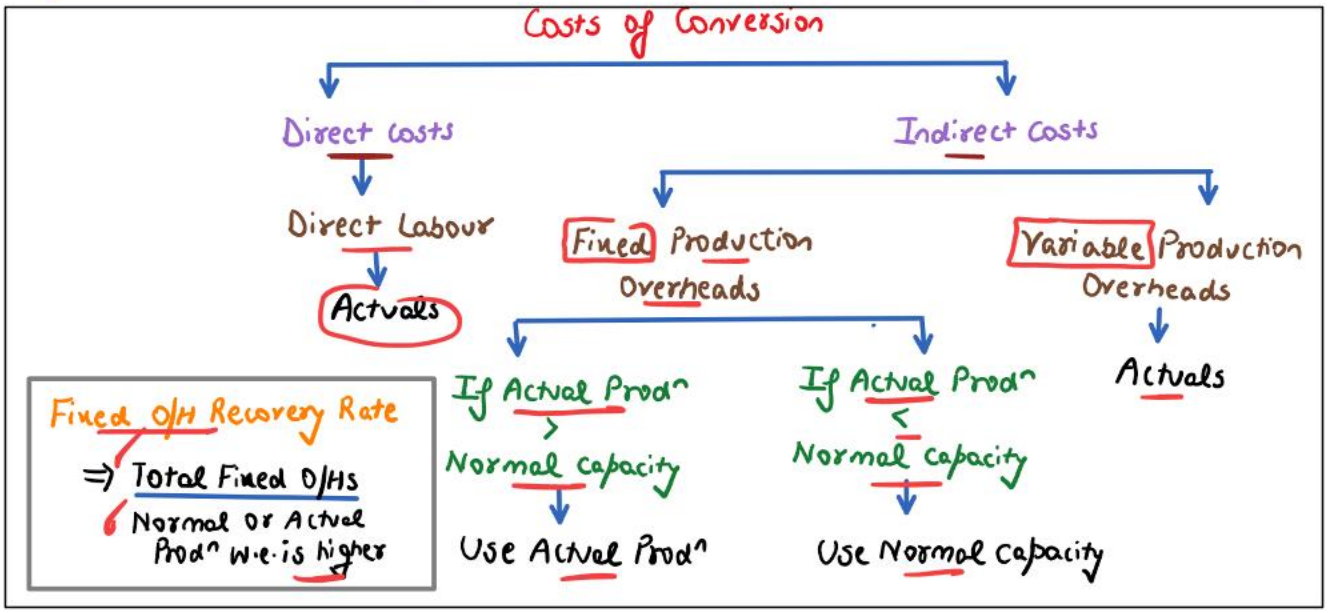
- Cost of Purchase
- Conversion cost
- Other cost incurred in bringing the inventory to their present location and condition

A. COST OF PURCHASE

Purchase Price (Net of Trade discount and rebates)		XX
Add	Duties and Taxes (non-refundable)	XX
Add	Freight inwards	XX
Add	Other expenditure directly attributable to the acquisition (Note)	XX
	Cost of Purchase	**XX**

Note: Examples of expenditure directly attributable for purchases are- (a) Costs of Containers (b) Transit Insurance, (c) Buying Commission where purchase is possible only through agents

B. COST OF CONVERSION

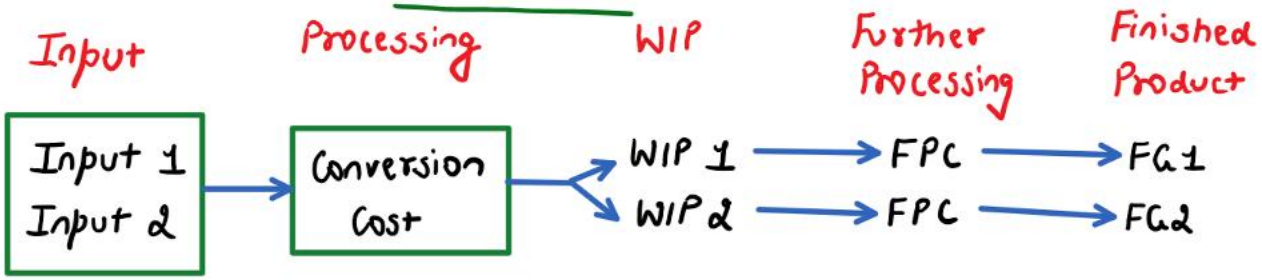


COST OF CONVERSION IN CASE OF PRODUCTION PROCESS RESULTING IN MORE THAN ONE PRODUCT BEING PRODUCED SIMULTANEOUSLY

(NOT SEPARATELY IDENTIFIABLE)

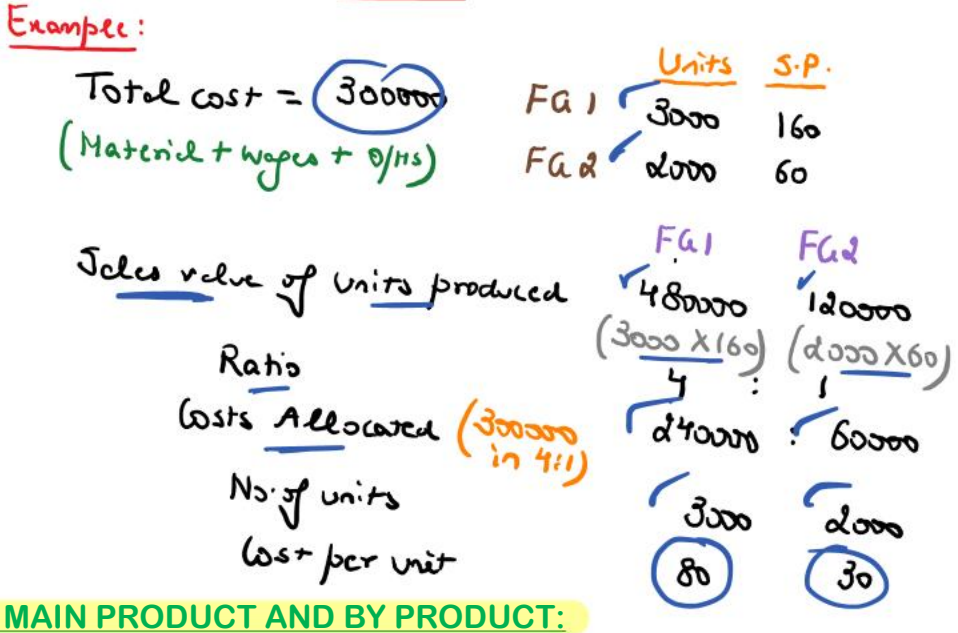
CASE 1: JOINT PRODUCT:

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



Basis of Allocation of Conversion Cost

At the stage in Production process	At the completion of Production
On the relative sales value of WIP 1 and WIP 2	On the relative sales value of FG 1 and FG 2



CASE 2: MAIN PRODUCT AND BY PRODUCT:

- Most by products as well as scrap or waste materials, by their nature are immaterial.
- In such case, they are measured at NRV & such value is deducted from cost of main product.

C. OTHER COST

Other costs are included in cost of inventories only to the extent that they are incurred in bringing the inventories to their present location and condition.

Example: Cost of designing products for specific customers.

EXCLUSIONS FROM THE COST OF INVENTORIES

- Abnormal amount of wasted materials, labour or other production cost (Abnormal loss)
- Storage cost unless those are necessary in the production process prior to a further production stage.
- Administrative overheads that do not contribute to bringing the inventories to their present location and condition.
- Selling and distribution cost
- 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 cost of inventory ***(Exception: AS 16 Borrowing Costs)***

COST FORMULAS

For items that are not ordinarily interchangeable	For other items
Specific identification of cost method: Specific costs are attributed to identified items of inventory	FIFO: Inventory which were purchased or produced first are sold or consumed first. or Weighted Average method: Weighted average of cost of similar items

Total cost / Total units

TECHNIQUES FOR MEASUREMENT OF COST

(May Be Used for Convenience if Results Approximate Actual Cost)

Standard Cost method	Retail method
Takes into account normal levels of consumption of materials and supplies, labour, efficiency and capacity utilization	• Often used in the retail trade for measuring inventories of large numbers of rapidly changing items that have similar margins. • Inventory = Sales value of inventory - GP %

NET REALISABLE VALUE (NRV)

Estimated Selling Price	XX
Less: Estimated selling expenses	(XX)
Less: Estimated cost of completion	(XX)
NRV	**XX**

F/G: 100, (2), 98 — WIP: 100, (2), (20), 78

- ❖ Inventories should be usually written down to NRV on an item by item basis (individual basis) and not on global basis.
- ❖ In case of firm/committed contract of sale, NRV shall be calculated at the contract price.

Example:

	Cost	NRV	Lower
Product A	50	40	40
Product B	60	80	60
			100

Example: Closing stock: 3000 units
Cost = 40 S.P. = 50
Firm contract for 1000 units @ 35/unit

Units	Cost	NRV	Lower	Value
1000	40	35	35	35000
2000	40	50	40	80000
				115000

VALUATION OF MATERIALS AND OTHER SUPPLIES (PARA 24)

If finished product in which such raw material is to be used is expected to be sold at or above cost price [$SP_{FG} \geq CP_{FG}$]	Other cases [$SP_{FG} < CP_{FG}$]
Value Raw Material at Cost Price.	Value Raw Material at Lower of Cost price or Replacement price [CP or RP ↓]

Question 1:

The closing inventory at cost of XYZ Ltd. amounted to ₹ 9,56,700. 350 Shirts, which had cost ₹ 380 each and normally sold for ₹ 750 each are included in this amount of ₹ 9,56,700. Owing to a defect in manufacture, they were all sold after the Balance Sheet date at 50% of their normal price. Selling expenses amounted to 5% of the proceeds. What should be the closing inventory value?

Solution

Calculation of value of closing inventory

Value of closing inventory (given)	9,56,700
Less: Adjustment to bring the stock of shirts at NRV (W.N 1)	(8,313)
Revised value of closing inventory as per AS 2	9,48,387

Working Notes 1: Valuation of Shirts as per AS 2

Cost price (per shirt)		380
NRV per shirt :		
Sale price (per shirt) ₹ 750 × 50%	= 375.00	
Less: Selling expenses (5% of ₹ 375)	= (18.75)	
NRV (per shirt)	= 356.25	356.25
As per AS 2, inventories are valued at cost or NRV whichever is less		356.25
Difference of cost and NRV		**23.75**
Value of inventory of shirts to be reduced by ₹ 8,313 (approx) (₹ 23.75 x 350 shirts)		

Question 2: RTP May 2023

An enterprise ordered 20000 kg of certain material at ₹ 110 per unit. The purchase price includes GST at ₹ 12 per kg, in respect of which full input tax credit (ITC) is admissible. Freight incurred amounted to ₹ 1,17,600. Normal transit loss is 2%. The enterprise actually received 19,500 Kg and consumed 18,000 Kg. You are required to calculate cost of material per Kg & Allocation of material cost?

Solution

Purchase price (20,000 Kg. x ₹ 110)	22,00,000
Less: GST Credit (20,000 Kg. x ₹ 12)	(2,40,000)
	19,60,000
Add: Freight	1,17,600
Total material cost	**20,77,600**
Number of units normally received = 98% of 20,000 Kg.	19,600 kg
Normal cost per Kg. (20,77,600/19,600)	**106**

	Kg	₹ /Kg.	₹	
Materials consumed	18,000	106	19,08,00	→ Add to cost of FG
Cost of inventory	1,500	106	1,59,000	→ B/S
Abnormal loss	100	106	10,600	→ P&L A/c
Total material cost	**19,600**		**20,77,600**	

Note: Abnormal losses are recognised as separate expense

Question 3: RTP May 2025

From the following information provided by LMN Ltd. for the year 2024, you are required to compute the closing inventory:

Raw Material A: Closing balance: 700 units

	₹ per unit
Cost price including GST	280
ITC available (-)	25
Freight inward +	35
Handling charges +	20
Replacement cost	200

Finished Goods B: Closing balance: 1,800 units

	₹ per unit
Material consumed	280
Direct labour	80
Direct overhead	40

Total fixed overhead for the year was ₹ 3,60,000 on a normal capacity of 36,000 units, while actual production has been 30,000 units. Calculate the value of closing stock when:

(i) Net Realisable Value of Finished Goods B is 500 per unit

(ii) Net Realisable Value of Finished Goods B is 380 per unit

Solution

(i) When Net Realisable Value of Finished Goods B is ₹500 per unit

410 or 500 ↓ SP FG 500 > CP FG 410

Value of Closing Stock:

Valuation Base	Method	Qty.	Rate (₹)	Amount (₹)
Raw Material A	Cost	700	310	2,17,000
Finished Goods B	Cost	1,800	410	7,38,000
Total Value of Closing Stock				**9,55,000**

(ii) When Net Realisable Value of Finished Goods B is ₹ 380 per unit

380 or 410 ↓

Since NRV of finished goods B is less than its cost (₹ 410, as per W.N.), raw material A is to be valued at replacement cost, and finished goods B is to be valued at NRV.

Value of Closing Stock:

250 or 310 ↓

Valuation Base	Basis	Qty.	Rate (₹)	Amount (₹)
Raw Material A	Replacement Cost	700	200	1,40,000
Finished Goods B	Net Realisable Value	1,800	380	6,84,000
Total Value of Closing Stock				**8,24,000**

Working Note: Calculation of Cost of Raw Material A and Finished Goods B

Raw Material A

	Amount (₹)
Cost Price (280 - 25)	255
Add: Freight Inward	35
Add: Handling Charges	20
Total Cost	**310**

Finished Goods B

	Amount (₹)
Material consumed	280
Direct labour	80
Variable overhead	40
Fixed overheads (3,60,000/36,000)	10
Cost	**410**

Question 4: Inter Jan 2021 (5 Marks)

Mr. Jatin gives the following information relating to the items forming part of the inventory as on 31.03.2021. His enterprise produces product P using Raw Material X.

(i) 900 units of Raw Material X (purchases @ ₹ 100 per unit). Replacement cost of Raw Material X as on 31.03.2021 is ₹ 80 per unit

(ii) 400 units of partly finished goods in the process of producing P. Cost incurred till date is ₹ 245 per unit. These units can be finished next year by incurring additional cost of ₹ 50 per unit.

(iii) 800 units of Finished goods P and total cost incurred is ₹ 295 per unit.

Expected selling price of product P is ₹ 280 per unit, subject to a payment of 5% brokerage on selling price.

Determine how each item of inventory will be valued as on 31.03.2021. Also calculate the value of total Inventory as on 31.03.2021.

Solution

Particulars	Units	Cost (₹)	NRV/ Replacement cost ₹	Value = units x cost or NRV whichever is less (₹)
Raw material X	900	100	80	72,000
Partly finished goods	400	245	216 (280-5%-50)	86,400
Finished goods P	800	295	266 (280-5%)	2,12,800
Value of Inventory				**3,71,200**

As per AS 2 (Revised) "Valuation of Inventories", materials and other supplies held for use in the 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 cost 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 net realizable value, the materials are written down to net realizable value.

In such circumstances, the replacement cost of the materials may be the best available measure of their net realizable value. In the given case, selling price of product P is ₹ 266 and total cost per unit for production is ₹ 295.

Hence the valuation will be done as under:

(i) 900 units of raw material X will be written down to replacement cost as market value of finished product is less than its cost, hence valued at ₹ 80 per unit.

(ii) 400 units of partly finished goods will be valued at 216 per unit i.e., lower of cost (₹ 245) or Net realizable value ₹ 216 (Estimated selling price ₹ 266 per unit less additional cost of ₹ 50).

(iii) 800 units of finished product P will be valued at NRV of ₹ 266 per unit since it is lower than cost ₹ 295.

Question 5: Inter Sep 2025 (5 Marks)

SR Limited is a manufacturing company and engaged in the production of Finished goods 'MP' for which Raw material 'RP' is required.

The company provides following information for the year ended March 31st 2025:

Particulars		Units	₹
Opening Inventory	MP	4,000	1,20,000
	RP	4,400	52,800
Purchase of RP		40,000	4,80,000
Labour			3,23,200
Overheads (Fixed)			3,15,000
Sales	MP	40,200	11,20,000
Closing Inventory	MP	4,200	
	RP	4,000	

The expected production for the year was 45,000 units of the MP. Due to fall in market demand, the sales price for the MP was ₹ 22 per unit and the replacement cost for the RP was ₹11.50 per unit on the closing day.

You are required to calculate value of Closing Stock of 'MP' and 'RP' as on 31st March 2025.

Solution

Calculation of cost for closing inventory

Particulars	Unit (₹)	Total (₹)
Cost of Material Consumed (40,400 x 12)	12	4,84,800
Direct Labour	8	3,23,200
Fixed Overhead $\frac{3,15,000 \times 40,400}{45,000}$	7	2,82,800
Cost of Production	27	10,90,800
Cost of closing inventory per unit (10,90,800/ 40,400)		₹ 27
Net Realisable Value per unit		₹ 22

Since net realisable value is less than cost, closing inventory will be valued at ₹ 22.

As NRV of the MP (finished goods) is less than its cost, relevant raw materials will be valued at replacement cost i.e. ₹11.50.

Therefore, value of closing inventory:

Finished Goods (MP) (4,200 x 22) ₹ 92,400

Raw Materials (RP) (4,000 x 11.50) ₹ 46,000

Working Notes:

1. Units produced (actual)
   Production = Sales + Closing FG – Opening FG
   = 40,200 + 4,200 – 4,000 = 40,400 units.
2. Raw material (RP) consumed (units)
   = Opening RP + Purchases – Closing RP
   = 4,400 + 40,000 – 4,000 = 40,400 units.
3. Cost per unit of RP (weighted average)
   Total cost of RP = Opening value ₹ 52,800 + Purchases ₹ 4,80,000 = ₹ 5,32,800.
   Cost per unit RP = 5,32,800 ÷ 44,400 = ₹ 12.00 per unit

Question 6: Inter May 2024 (7 Marks)

Well Wear Limited is a Textile Manufacturing Company and engaged in the production of Polyester (P) and Nylon (N). While manufacturing the main products, a by-product Fiber (F) is also produced. Details of the cost of production are as under:

Purchase of Raw Material for manufacturing process of

30,000 units	₹ 3,50,000
Wages paid	₹ 1,60,000
Fixed overheads	₹ 1,20,000
Variable overheads	₹ 60,000
Output:	
Polyester (P)	12,500 Units
Nylon (N)	10,000 Units
Fiber (F)	3,200 Units
Closing Inventory:	
Polyester (P)	1,600 Units
Nylon(N)	400 Units

Average market price of Polyester and Nylon is ₹ 100 and ₹ 60 per unit respectively, by-product Fiber is sold@₹ 40 per unit. There is a profit of ₹ 8,000 on sale of by-product after incurring separate processing expenses of ₹ 10,000 and packing charges of ₹ 9,000. ₹ 5,000 was realized from sale of scrap.

On the basis of above information, compute value of closing inventory of Polyester & Nylon.

Solution

As per AS 2 'Valuation of Inventories', most by-products as well as scrap or waste materials by their nature, are immaterial. They are often measured at net realizable value and this value is deducted from the cost of the main product.

Determination of value of closing inventory of Polyester and Nylon

	Polyester	Nylon
Closing inventory in units	1,600 units	400 units
Cost per unit	₹ 31.14	₹ 18.68
Value of closing inventory	₹ 49,824	₹ 7,472

Working Notes

1. Calculation of net realizable value of by-product, Fiber

	₹
Selling price of by-product Fiber (3,200 units × ₹ 40 per unit)	1,28,000
Less: Separate processing charges of by-product Fiber	(10,000)
Packing charges	(9,000)
Net realizable value of by-product Fiber	**1,09,000**

2. Calculation of cost of conversion for allocation between joint products Polyester and Nylon

	₹	₹
Raw material		3,50,000
Wages		1,60,000
Fixed overhead		1,20,000
Variable overhead		60,000
		6,90,000
Less: NRV of by-product Fiber (W.N. 1)	(1,09,000)	
Sale value of scrap	(5,000)	(1,14,000)
Joint cost to be allocated between Polyester and Nylon		**5,76,000**

Determination of "basis for allocation" and allocation of joint cost to Polyester and Nylon

	Polyester	Nylon
Output in units (a)	12,500 units	10,000 units
Sales price per unit (b)	₹ 100	₹ 60
Sales value (a x b)	₹ 12,50,000	₹ 6,00,000
Total value (12,50,000 + 6,00,000) = 18,50,000		
Joint cost of ₹ 5,76,000 allocated in the ratio of 12,50,000: 6,00,000	₹ 3,89,189	₹ 1,86,811
Cost per unit [c/a]	₹ 31.14	₹ 18.68

Question 7: Inter Nov 2023 (5 Marks)

In the following cases, find the value of closing stock as per AS 2:

(i) Sonu is a retailer dealing in toys. During the year, he purchased items worth for ₹ 1,47,000 and made a total sale ₹ 1,54,000. The average percentage of gross margin is 10% on cost. Opening stock of toys at cost was ₹ 20,000.

(ii) On 21st March, 2023, Mohan purchased 250 chairs at ₹ 300 each. The selling price of chair is ₹ 400 each. Owing to manufacturing defect, net realisable value of the whole lot of chair was determined at 70% of their normal selling price. No chairs were sold during the year.

Solution

i. Cost of closing inventory is shown below:

	₹
Sale value of opening stock and purchases (₹ 20,000 + ₹1,47,000) x 1.10	1,83,700
Sales	(1,54,000)
Sale value of unsold stock	29,700
Less: Gross Margin (₹ 29,700 / 1.10) x 0.10	(2,700)
Cost of closing inventory	**27,000**

Alternative:

		₹
Opening Stock		20,000
Purchases		1,47,000
Less: Cost of Goods Sold		
Sales	1,54,000	
Gross Profit @10% on cost (1,54,000*10/110)	(14,000)	(1,40,000)
Cost of closing inventory		**27,000**

ii.

Closing stock at cost (250X ₹ 300) (i)	75,000
Net Realizable value of closing stock (₹ 280* × 250) (ii)	70,000
Value of closing stock [lower of (i) and (ii)]	70,000

*400*70% = 280

Question 8: RTP May 2022

Rohan Pvt. Ltd., wholesaler in agriculture products, has valued inventory on Net Realizable Value on the ground that AS 2 does not apply to inventory of agriculture products.

Solution

AS 2 does not apply to producers of agricultural products but applies to traders in agricultural products. Hence AS 2 will apply to Rohan Pvt. Ltd. and it will have to value inventory at lower of cost or net realizable value.