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CA FOUNDATION

Principles & Practice of Accounting

Inventories

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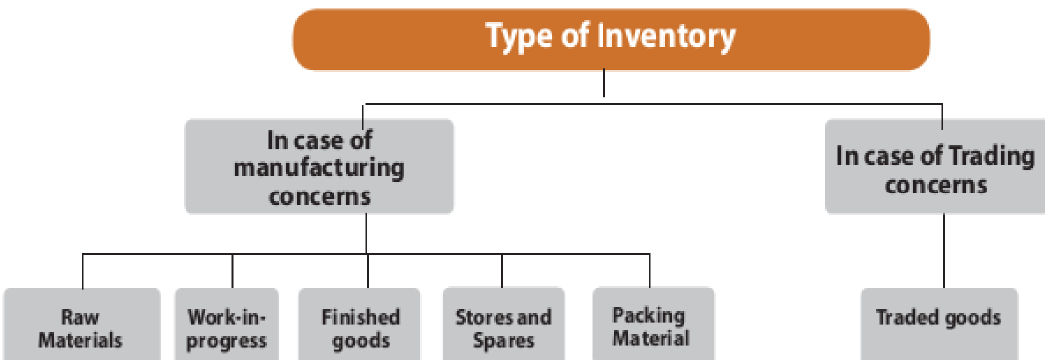
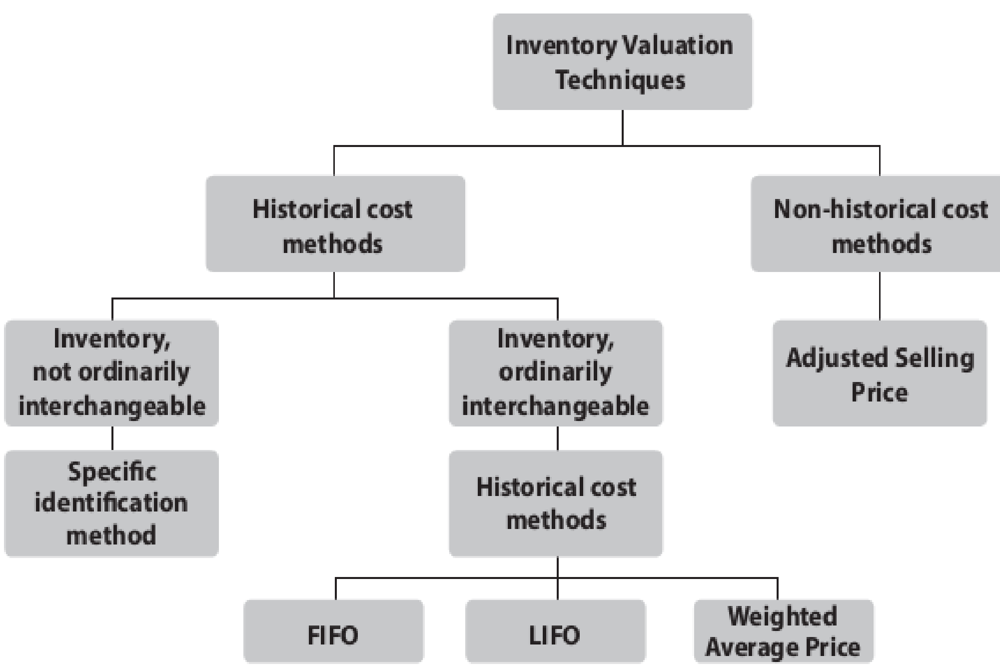
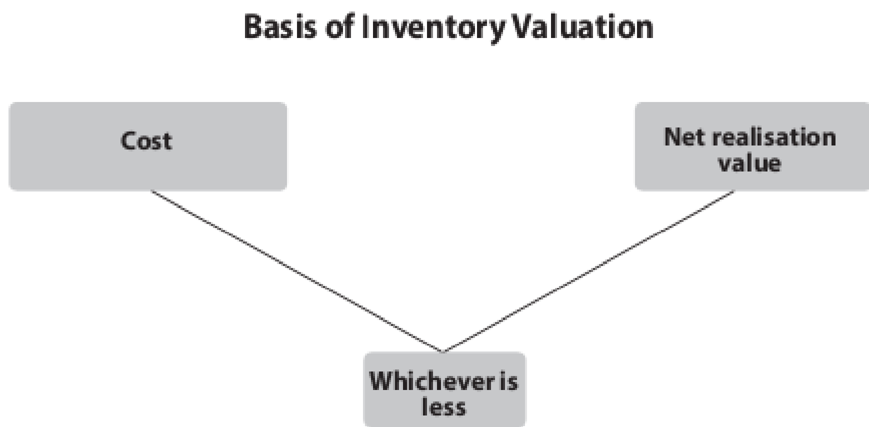
CHAPTER-4
INVENTORIES

INTRODUCTION



Formulae for Determining Cost of Inventory





➲ MEANING

Inventory can be defined as assets held

- for sale in the ordinary course of business, or
- in the process of production for such sale, or
- for consumption in the production of goods or services for sale, including maintenance supplies and consumables other than machinery spares, servicing equipment and standby equipment.

There can be different types of inventory based on nature of business of an enterprise. The inventories of a trading concern consist primarily of products purchased for resale in their existing form. The inventories of manufacturing concern consist of several types of inventories: raw material (which will become part of the goods to be produced), work-in-process (partially completed products in the factory) and finished products. In manufacturing concerns inventories will also include maintenance supplies, consumables, loose tools and spare parts. However, inventories do not include spare parts, servicing equipment and standby equipment 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 generally accounted for as fixed assets.

At the year-end every business entity needs to ascertain the closing balance of Inventory which comprise of Inventory of raw material, work-in-progress, finished goods and other consumable items. Value of closing Inventory is put at the credit side of the Trading Account and asset side of the Balance Sheet. So before preparation of final accounts, the accountant should know the value of Inventory of the business entity.

However, we shall restrict our discussion on inventory valuation of a manufacturing concern and goods of a trading concern.

➲ OBJECTIVES OF INVENTORY VALUATION

The significance of inventory valuation arises due to various reasons as explained in the following points:

(i) **Determination of Income :** The valuation of inventory is necessary for determining the true income earned by a business entity during a particular period.

(ii) **Ascertainment of Financial Position :** Inventories are classified as **current assets**. The value of inventory on the date of balance sheet is required to determine the financial position of the business. In case the inventory is not properly valued, the balance sheet will not disclose the truthful financial position of the business.

(iii) **Liquidity Analysis :** Inventory is classified as a current asset, it is one of the components of net working capital which reveals the liquidity position of the business. Current ratio which studies the relationship between current assets and current liabilities is significantly affected by the value of inventory.

(iv) **Statutory Compliance : Schedule III to the Companies Act, 2013** requires valuation of each class of goods i.e. raw material, work-in-progress and finished goods under broad head to be disclosed in the financial statements.

➲ INVENTORY RECORD SYSTEMS

- PERIODIC INVENTORY SYSTEM
- PERPETUAL INVENTORY SYSTEM

S. No.	Periodic Inventory System	Perpetual Inventory System
1.	This system is based on physical verication.	It is based on book records.
2.	This system provides information about inventory and cost of goods sold at a particular date.	It provides continuous information about inventory and cost of sales.
3.	This system determines inventory and takes cost of goods sold as residual figure.	It directly determines cost of goods sold and computes inventory as balancing figure.
4.	Cost of goods sold includes loss of goods as goods not in inventory are assumed to be sold.	Closing inventory includes loss of goods as all unsold goods are assumed to be in Inventory.
5.	Under this method, inventory control is not possible.	Inventory control can be exercised under this system.
6.	This system is simple and less expensive.	It is costlier method.
7.	Periodic system requires closure of business for acounting of inventory.	Inventory can be determined without affecting the operations of the business.

➲ INVENTORIES TAKING

Normally, enterprises prefer to perform inventory taking closing day, however, sometimes inventory taking cannot be carried out on the closing day. It is carried out a few days later or sometimes even a few days earlier. In such a case, the actual value of the inventory must be so adjusted as to relate it to the end of the year concerned. For doing so, it will be necessary to take into account the goods that have come in (purchases and sales returns) and those that have gone out (sales and purchase returns) during the interval between the close of the year and the date of actual inventory taking. Further, the adjustment of all goods must be on the basis of cost. Suppose, a firm that closes its books on 31st December, carried out the inventory taking on the 7th January next year and actual inventory was of the cost of `7,85,000, during the period January 1 to 7 purchases were `1,53,000 and sales `2,50,000, the mark up being 25% on cost. The inventory on 31st December would be ` 8,32,000 as shown below:

	`
Inventory ascertained on January 7	7,85,000
Less: Purchases during the period Jan. 1 to 7	1,53,000
	6,32,000
Add: Cost of goods sold during the period :	
2,50,000 × (100/125)	2,00,000
	8,32,000

CLASS WORK

A. INVENTORY TAKING

1. Mrs. Pyari who was closing his books on 31.3.2016 failed to take the actual stock which she did only on 9th April, 2016, when it was ascertained by her to be worth ` 2,50,000.

It was found that sales are entered in the sales book on the same day of dispatch and return inwards in the returns book as and when the goods are received back. Purchases are entered in the purchases day book once the invoices are received.

It was found that sales between 31.3.2016 and 9.4.2016 as per the sales day book are ` 17,200. Purchases between 31.3.2016 and 9.4.2016 as per purchases day book are ` 1,200, out of these goods amounting to ` 500 were not received until after the stock was taken.

Goods invoiced during the month of March, 2016 but goods received only on 4th April, 2016 amounted to ` 1,000. Rate of gross profit is 33-1/3% on cost.

Ascertain the value of physical stock as on 31.3.2016.

2. From the following information, ascertain the value of stock as on 31.3.2017:

	`
Value of stock on 1.4.2016	7,00,000
Purchases during the period from 1.4.2016 to 31.3.2017	34,60,000
Manufacturing expenses during the above period	7,00,000
Sales during the same period	52,20,000

At the time of valuing stock on 31.3.2016 a sum of ` 60,000 was written off a particular item which was originally purchased for ` 2,00,000 and was sold for ` 1,60,000. But for the above transaction the gross profit earned during the year was 25% on cost.

3. The Profit and loss account of Halwaivala showed a net profit of ` 6,00,000, after considering the closing stock of ` 3,75,000 on 31st March, 2016. Subsequently the following information was obtained from scrutiny of the books:

(i) Purchases for the year included ` 15,000 paid for new electric fittings for the shop.

(ii) Halwaiwala gave away goods valued at ` 40,000 as free samples for which no entry was made in the books of accounts.

(iii) Invoices for goods amounting to ` 2,50,000 have been entered on 27th March, 2016, but the goods were not included in stock.

(iv) In March, 2016 goods of ` 2,00,000 sold and delivered were taken in the sales for April, 2016.

(v) Goods costing ` 75,000 were sent on sale or return in March, 2016 at a margin of profit of 33-1/3% on cost. Though approval was given in April, 2016 these were taken as sales for March, 2016.

Calculate the value of stock on 31st March, 2016 and the adjusted net profit for the year ended on that date.

4. Physical verification of stock in a business was done on 23rd June, 2016. The value of the stock was ` 48,00,000. The following transactions took place between 23rd June to 30th June, 2016:

(i) Out of the goods sent on consignment, goods at cost worth ` 2,40,000 were unsold.

(ii) Purchases of ` 4,00,000 were made out of which goods worth ` 1,60,000 were delivered on 5th July, 2016.

(iii) Sales were ` 13,60,000, which include goods worth ` 3,20,000 sent on approval. Half of these goods were returned before 30th June, 2016, but no information is available regarding the remaining goods.

(iv) Goods are sold at cost plus 25%. However goods costing ` 2,40,000 had been sold for ` 1,20,000. Determine the value of stock on 30th June, 2016.

5. From the following information ascertain the value of stock as on 31st March, 2016 and also the profit for the year:

	`
Stock as on 1.4.2015	1,42,500
Purchases	7,62,500
Manufacturing expenses	1,50,000
Selling expenses	60,500
Administrative expenses	30,000
Financial charges	21,500
Sales	12,45,000

At the time of valuing stock as on 31st March, 2015, a sum of ` 17,500 was written off on a particular item, which was originally purchased for ` 50,000 and was sold during the year at ` 45,000. Barring the transaction relating to this item, the gross profit earned during the year.

B. VALUATION OF CL.INVENTORY USING DIFFERENT METHODS

Historical Cost Method of Valuation :

1. Bakbak Ltd. has furnished the following details:

Date	**Particulars**	**Units**	**Rate (`)**
01.03.2006	Opening stock	100	1.75
05.03.2006	Purchased	150	1.50
12.03.2006	Purchased	300	1.60
08.03.2006	Issued	200	-
18.03.2006	Issued	250	-

(i) What is the value of closing stock using FIFO method:

(a) ` 170 (b) ` 160 (c) ` 150 (d) ` 180

(ii) Using the information given in the problem, the value of issues using FIFO method:

(a) ` 700 (b) ` 580 (c) ` 605 (d) ` 720

(iii) Using the information given in problem, the value of closing stock as per LIFO method:

(a) ` 172.50 (b) ` 225 (c) ` 160 (d) ` 167.50

(iv) Using the information given in problem, the value of issues using LIFO method:

(a) ` 712.50 (b) ` 515.50 (c) ` 620 (d) ` 575.50

(v) Using the information given in problem, the value of closing stock as per weighted average method :

(a) ` 160 (b) ` 175.50 (c) ` 150 (d) ` 225.50

(vi) Using the information given in problem, the value of issues using weighted average method :

(a) `600.50 (b) `580 (c) `620 (d) `720

2. Bharat Indian Oil is a bulk distributor of petrol. A periodic inventory of petrol on hand is taken when the books are closed at the end of each month. The following summary of information is available for the month:

Sales ` 9,45,000

General administration cost ` 25,000

Opening Stock : 1,00,000 litres @ ` 3 per litre ` 3,00,000

Purcases (including freight inward) :

June 1 2,00,000 litres @ ` 2.85 per litre

June 30 1,00,000 litres @ ` 3.03 per litre

June 30 Closing litres 1,30,000 litres

(i) Compute the value of inventory on June 30 using FIFO method of inventory costing.

(a) ` 3,88,500 (b) ` 4,18,500 (c) ` 2,58,000 (d) ` 3,60,500

(ii) Using the information given in problem, comptue the amount of cost of goods sold for June using FIFO principle.

(a) ` 784,500 (b) ` 685,000 (c) ` 388,500 (d) ` 758,000

(iii) Compute the Net Profit or loss for June using FIFO method of inventory costing.

(a) ` 160,000 (b) ` 115,500 (c) ` 125,000 (d) ` 135,500

(iv) Compute the value of inventory on June 30 using weighted average method of inventory costing.

(a) ` 3,75,000 (b) ` 3,81,225 (c) ` 2,80,000 (d) ` 4,10,000

(v) Using the information given in problem, compute the amount of cost of goods sold for June using weighted average method.

(a) ` 8,15,000 (b) ` 7,52,000 (c) ` 7,91,775 (d) ` 6,79,000

(vi) Compute the Gross Profit of loss for June using weighted average method of inventory costing.

(a) ` 1,20,000 (b) ` 2,15,000 (c) ` 1,53,225 (d) ` 129,000

(vii) Compute the value of inventory on June 30 using LIFO method of inventory costing.

(a) ` 3,85,500 (b) ` 3,69,000 (c) ` 2,97,000 (d) ` 4,18,000

(viii) Using the information given in problem, compute the amount of cost of goods sold for June using LIFO principle.

(a) ` 7,87,500 (b) ` 6,75,000 (c) ` 8,15,000 (d) ` 7,95,000

(ix) Compute the Gross Profit or loss for June using LIFO method of inventory costing :

(a) ` 1,95,500 (b) 165,000 (c) ` 1,57,500 (d) ` 1,95,000

Non Historical Cost Method of Valuation :

Q-3 M/s X, Y and Z are in retail business, following information are obtained from their records for the year ended 31st March, 2016:

Goods received from suppliers		
(subject to trade discount and taxes)	`	15,75,500
Trade discount 3% and sales tax 11%		
Packaging and transportation charges	`	87,500
Sales during the year	`	22,45,500
Sales price of closing inventories	`	2,35,000

Find out the cost of inventories using adjusted selling price method.

C. OBJECTIVE QUESTIONS

1. The amount of purchase if Cost of goods sold is ` 80,700

   Opening Inventory ` 5,800

   Closing Inventory ` 6,000

   (a) ` 80,500 (b) ` 74,900 (c) ` 80,900.

2. Average Inventory = ` 12,000. Closing Inventory is ` 3,000 more than opening Inventory. The value of closing Inventory = ______.

   (a) ` 12,000 (b) ` 24,000 (c) ` 13,500.

3. While finalizing the current year's profit, the company realized that there was an error in the valuation of closing Inventory of the previous year. In the previous year, closing Inventory was valued more by ` 50,000. As a result

   (a) Previous year's profit is overstated and current year's profit is also overstated

   (b) Previous year's profit is overstated and current year's profit is understated

   (c) Previous year's profit is understated and current year's profit is also understated

4. Consider the following for Q Co. for the year 2015-16:

Cost of goods available for sale	` 1,00,000
Total sales	` 80,000
Opening inventory of goods	` 20,000
Gross profit margin on sales	25%

   Closing inventory of goods for the year 2015-16 as

   (a) ` 80,000 (b) ` 60,000 (c) ` 40,000

5. Average Inventory = ` 12,000. Closing Inventory is ` 3,000 more than opening Inventory. The value of closing Inventory = ______.

   (a) ` 12,000 (b) ` 24,000 (c) ` 13,500

6. If the profit is 25% of the cost price then it is

   (a) 25% of the sales price (b) 33% of the sales price

   (c) 20% of the sales price

7. Goods purchased ` 1,00,000. Sales ` 90,000. Margin 20% on cost. Closing Inventory = ?

   (a) ` 20,000  (b) ` 10,000 (c) ` 25,000

8. A company is following weighted average cost method for valuing its inventory. The details of its purchase and issue of raw-materials during the week are as follows:

   1.12.2015 opening Inventory 50 units value ` 2,200.

   2.12.2015 purchased 100 units @ `47.

   4.12.2015 issued 50 units.

   5.12.2015 purchased 200 units @ ` 48.

   The value of inventory at the end of the week and the unit weighted average costs is

   (a) ` 14,200 – ` 47.33 (b) ` 14,300 – ` 47.67 (c) ` 14,000 – ` 46.66

9. The cost of sales is equal to

   (a) Opening stock plus purchases (b) Purchases minus Closing stock

   (c) Opening stock plus purchases minus closing stock.

10. Inventory is disclosed in financial statements under:

    (a) Fixed Assets (b) Current Assets

    (c) Current Liabilities

11. Accounting Standards do not permit following method of inventory valuation

    (a) FIFO (b) Average cost (c) LIFO

12. Which inventory costing formula calculates value of closing inventory considering that inventory most recently purchased has not been sold?

    (a) FIFO (b) LIFO (c) Weighted average cost

13. Valuing inventory at cost or net releasable value is based on which principle

    (a) Consistency (b) Conservatism (c) Going concern

14. Under inflationary trend, which of the methods will show highest value of inventory?

    (a) FIFO (b) Weighted average (c) LIFO

15. Which of the following methods does not consider historical cost of inventory?

    (a) Weighted average (b) FIFO (c) Retail price method

HOME WORK

INVENTORIES TAKING

Q-1 A trader prepared his accounts on 31st March, each year. Due to some unavoidable reasons, no inventory taking could be possible till 15th April, 2017 on which date the total cost of goods in his godown came to ` 5,00,000. The following facts were established between 31st March and 15th April, 2017.

(i) Sales ` 4,10,000 (including cash sales ` 1,00,000)

(ii) Purchases ` 50,340 (including cash purchases ` 19,900)

(iii) Sales Return ` 10,000.

Goods are sold by the trader at a profit of 20% on sales.

You are required to ascertain the value of inventory as on 31st March, 2017.

Ans **Total : 7,69,660**

Q-2 Inventory taking for the year ended 31st March, 2016 was completed by 10th April' 2016, the valuation of which showed a inventory figure of ` 16,75,000 at cost as on the completion date. After the end of the accounting year and till the date of completion of inventory taking, sales for the next year were made for ` 68,750, profit margin being 33.33 percent on cost. Purchases for the next year included in the inventory amounted to ` 90,000 at cost less trade discount 10 percent. During this period, goods were added to inventory at the mark up price of ` 3,000 in respect of sales returns. After inventory taking it was found that there were certain very old slow moving items costing ` 11,250, which should be taken at ` 5,250 to ensure disposal to an interested customer. Due to heavy flood, certain goods costing ` 15,500 were received from the supplier beyond the delivery date of customer. As a result, the customer refused to take delivery and net realizable value of the goods was estimated to be ` 12,500 on 31st March. Compute the value of inventory for inclusion in the final accounts for the year ended 30th March, 2016.

Ans **Total : 16,34,310**

Q-3 Gee Ltd. follows perpetual inventory system. On March 31st 2014, the company took physical inventory verification and found the value of inventory as per records different from the value as per the physical inventory due to:

Goods purchased for ` 10,000 were received and included in the physical inventory but no entry were made in the books. Goods costing ` 30,000 were sold and entered in the books but the goods are yet to be delivered.

Goods worth ` 5,000 are returned to the supplier but is omitted to be recorded. If the inventory is valued in the books at ` 1,50,000, the value of the physical inventory is ?.

Ans **Total : 1,85,000**

Q-4 Kanika traders close their books of accounts on 31st March every year. As stores manager was on leave inventory taking was done on 7th April, 2014. On this date, cost of goods in godown was ` 44,500. During 1st April, 2014 to 7th April, 2014 sales were ` 1,76,000, Purchases ` 1,12,000. Purchase returns ` 8,630. Sales return ` 4,200. Gross Profit earned during the year was 25% on cost. Calculate the value of inventory as on 31st March, 2014.

Ans **Total : 78,570**

Q-5 Veeru makes up his annual accounts to 31st December each year. He was unable to take stock of physical inventory till January 9, 2016 on which date the physical stock at cost was valued at Rs.70,000. You are required to ascertain the value of physical stock at cost on 31st December, 2015 from the following information regarding period from 1st January, 2016 to 9 January, 2016.

Sale of goods amounted to Rs.48,000 of which goods of a sale value of Rs.5,000 had not been delivered at the time of verification and goods of a sale value of Rs.3,000 had been delivered on 29.12.2015.

The rate of gross profit was 25% on the cost price.

Ans **Total : 1,02,000**

Q-6 Mr. A, a dealer of construction material, due to unavoidable reasons took physical stock of inventories on 11th April. The cost of stock was ` 4,20,000 (including goods received on consignment).

The dealer received goods costing ` 1,00,000 in March for sale on consignment basis. 20% of the goods had been sold before 31st March and 60% between 1st April & 10th April. What was the cost of stock as at 31st March?

Ans **Total : 4,00,000**

VALUATION OF CL.INVENTORY USING DIFFERENT METHODS

Historical Cost Methods of Valuation :

Q-7 The following are the details of a spare part of Sriram mills:

1-1-2016	Opening Inventory	Nil
1-1-2016	Purchases	100 units @ ` 30 per unit
15-1-2016	Issued for consumption	50 units
1-2-2016	Purchases	200 units @ ` 40 per unit
15-2-2016	Issued for consumption	100 units
20-2-2016	Issued for consumption	100 units

Find out the value of Inventory as on 31-3-2016 if the company follows First in first out basis.

Ans **Total : Value of Inventory= Rs. 2,000**

Q-8 The following are the details of a spare part of Sriram Mills:

1-1-2016	Opening Inventory	Nil
1-1-2016	Purchases	100 units @ ` 30 per unit
15-1-2016	Issued for consumption	50 units
1-2-2016	Purchases	200 units @ ` 40 per unit
15-2-2016	Issued for consumption	100 units
20-2-2016	Issued for consumption	100 units

Find out the value of Inventory as on 31-3-2016 if the company follows Weighted Average basis.

Ans **Total : Value of Inventory = Rs. 1,900**

Non Historical Cost Method of Valuation :

Q-9 From the following information, calculate the historical cost of inventories using adjusted selling price method:

	`
Sales during the year	2,00,000
Cost of purchases	2,00,000
Opening inventory	Nil
Closing inventory at selling price	50,000

Ans **Total : Cost of closing inventory = Rs. 40,000**

Q-10 X, Y and Z are in retail business, following information are obtained from their records for the year ended 31st March, 2014.

Goods received from suppliers	` 18,00,000
(Subject to trade discount & taxes)	
Trade discount 3% and sales tax @ 11%	
Packaging and transportation charges	` 80,000
Sates during the year	` 25,00,000
Sates price of closing stock	` 4,00,000

Find out the historical cost of inventories using adjusted selling price method.

Ans **Total : Cost of Closing stock = Rs. 2,78,360.**

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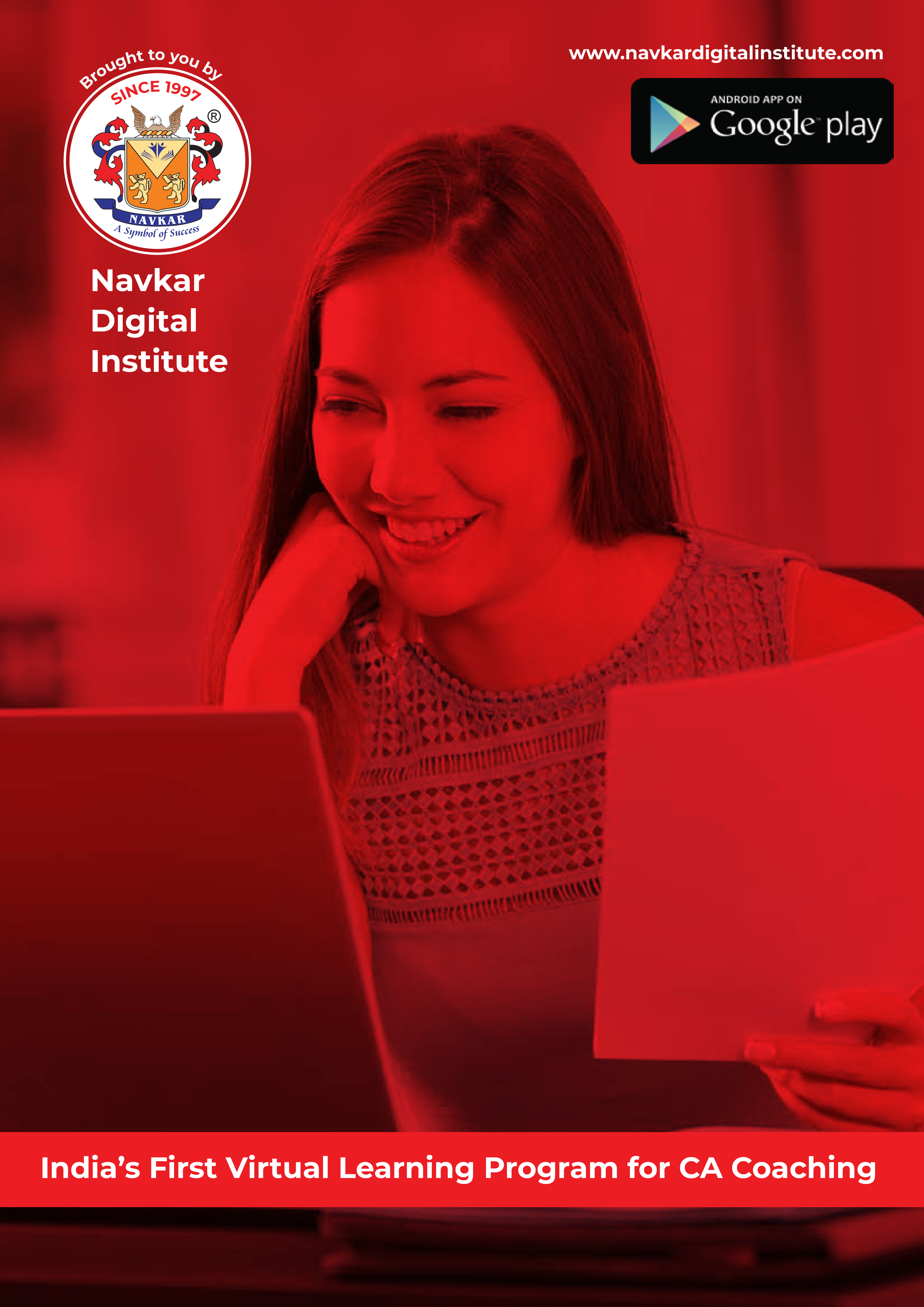
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