

MODULE 1- VALUATION OF INVENTORY (AS-2)

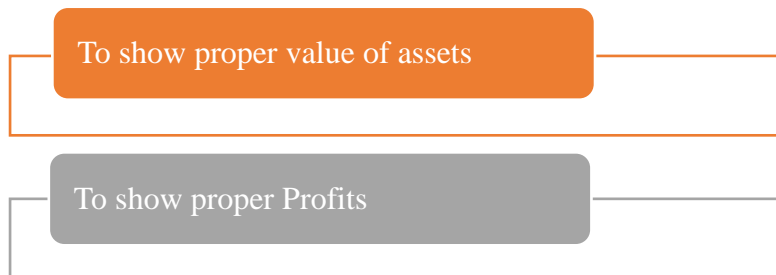
**Meaning of Inventory:**

- Inventory is tangible property to be consumed in production of goods or services or held for sale in the ordinary course of business.
- Inventories are unconsumed or unsold goods purchased or manufactured.
- Inventories generally constitute the largest current assets of manufacturing firms.

**AS 2 defines Inventory as ASSETS-**

- Held for sale for ordinary course of business (**FINISHED GOODS**)
- In the process of production for such sale (**WIP**)
- In the form of materials or supplies to be consumed in the production process or the rendering of services. (**RAW MATERIAL**)

**Objective of Inventory Valuation**



**Inventory System**



**DISTINCTION**

Sr. No.	Periodic Inventory System	Perpetual Inventory System
1	Based on physical verification	Based on actual records.
2	Provides information at particular date.	Provides continuous information.
3	First determines inventory , cost of goods sold as balancing figure.	Determines cost of goods sold, inventory as balancing figure.
4	Inventory control is not possible.	Inventory control is possible.
5	Complex and costlier.	Simple and less expensive.
6	Requires closure of business for counting the stock.	Can be determined without stopping the operations of the business.
7	Also known as Annual Stock Taking.	Also known as Continuous Inventory System.

**Inventory Valuation Methods**

1. First In First Out (FIFO)
2. Last In Last Out (LIFO) (**Not in Practice**)
3. Weighted Average Method

**1. First In First Out (FIFO)**

- Assumes materials received first in the stores are the first to be issued (or sold) and therefore, materials in stock are the materials purchased last.
- Inventory items are issued at the oldest price listed in the stores ledger until the first batch is fully utilized.
- This does not mean that the physical flow is FIFO!!!

**0 Advantages :**

1. Simple and easy
2. Closing stock valued nearer to current market prices
3. Based on realistic assumption because the actual physical flow too often follows the FIFO sequence.

## 0 Disadvantages

1. Improper matching of costs with revenues since the cost of goods sold is computed on the basis of old prices that are possibly unrealistic.
2. Difficult to compare jobs using the same type of material if different prices are charged

## 2. Weighted Average Method

- This method assumes that the goods available for sale are homogenous and values inventory on the basis of weighted average price
- This method is based on the presumption that once the materials or goods are put into a common bin, they lose their separate identity. Hence, the inventory consists of no specific batch of goods.
- The inventory is thus priced at weighted average price i.e. average prices paid for the goods, weighted according to the quantity purchased at each price.
- Weighted average cost is computed as follows:

$$\text{Weighted average cost} = \frac{\text{cost of goods available for sales}}{\text{Number of units available for sales}}$$

Where cost of good is available for sales=

$$\text{cost of beginning inventory} + \text{all purchases}$$

- A new weighted average price is calculated, whenever a new consignment is received, by adding value of consignment to cost of stock in hand divided by total units.
- This rate is used until new consignment arrives.

### **Advantage:**

1. It is more scientific and smoothens the fluctuation in purchase prices
2. Inventory is valued at one rate

### **Disadvantages**

1. Its tedious- Requires the issue price to be computed each time a consignment is received.

**PRACTICAL QUESTIONS:**

Q1. From the following of ABC and XYZ item value closing stock on 31-3-2004 applying (a) FIFO to “ABC” (b) Weighted average to “XYZ”.

	ABC	XYZ
Stocks (kgs) On 1-3-2004	2000 @ Rs. 28	4,000 @ Rs. 13
Purchases (kgs)		
(i) On 11-3-2004	1,800 @ Rs. 27	2,500 @ Rs. 14
(ii) On 21-3-2004	1,700 @ Rs. 25	2,000 @ Rs. 18
Sales (kgs)		
(i) On 6-3-2004	1,300	2,500
(ii) On 15-3-2004	1,400	2,000
(iii) On 18-3-2004	700	1,300
(iv) On 29-3-2004	1,100	1,700

2. From the following information relating A to Z item, value closing stock on 31-12-2003 applying:

(a) FIFO, (b) Weighted average

Stocks (kgs) on 1-12-2003	5,000 units @ Rs. 14
Purchases (kgs)	
(i) On 18-12-2003	4,200 units Rs. 13
(ii) On 23-12-2003	3,800 units @ Rs. 9
Sales (kgs)	
(i) On 7-12-2003	1200 units
(ii) On 16-12-2003	2600 units
(iii) On 19-12-2003	1800 units
(iv) On 30-12-2003	3400 units

3. The following particulars have been in respect of Material X. Purchase a stores ledger account receipt and issue principle the materials on the basis of (a) Weighted Average and (b) First in first out:

Receipts:		
01-10-2003	Opening Stock	200 units at Rs. 3.50 per unit
03-10-2003	Purchased	300 units at Rs. 4.00 per unit
13-10-2003	Purchased	900 units at Rs. 4.30 per unit
23-10-2003	Purchased	600 units at Rs. 3.80 per unit
Issue:		
05-10-2003	Issued	400 units
15-10-2003	Issued	600 units
25-10-2003	Issued	600 units

4. From the following particulars prepare stock record by FIFO and Weighted Average Method.

Date	Transaction	Units	Rate
04-1-2004	Purchase	40	30
17-1-2004	Purchase	60	28
20-1-2004	Sale	50	35
22-1-2004	Purchase	80	29
25-1-2004	Sale	80	33
28-1-2004	Sale	20	34
30-1-2004	Purchase	100	26
31-1-2004	Sale	90	35

The Stock on hand on 1<sup>st</sup> January, 2004 was 50 units @ Rs. 25 each.

5. Sumit Ltd. has purchased and issued the materials in the followings order:

Month	Date	Particulars	Units	Cost per unit
August, 2003	01	Purchases	300	3
	04	Purchases	600	4
	06	Issues	500	-
	10	Purchases	700	4
	15	Issues	800	-
	20	Purchases	300	5
	23	Issues	100	-

Ascertain the quantity of closing stock as on 31<sup>st</sup> August, 2003 and state what will be the value under the following method. (i) First in first out method. (ii) Weighted Average method.

6. Stock of material on 1-3-2003 was 1,000 units at Rs. 10 per unit. The following purchases and issue were made during the month of March, 2003.

Purchases		
2-3-2003	2,000 units	At Rs. 11 per unit
3-3-2003	3,000 units	At Rs. 12 per unit
11-3-2003	4,000 units	At Rs. 13 per unit
21-3-2003	5,000 units	At Rs. 14 per unit
Issues		
5-3-2003	5,400 units	
15-3-2003	2,600 units	
31-3-2003	5,000 units	

You are required to prepare:

- (1) Stock Ledger A/c under FIFO method
- (2) Stock Ledger A/c under Weighted Average Cost Method.

7. Calculated by FIFO method and Weighted Average Cost of inventory valuation, the cost of goods sold and value of closing inventory from the following data:

Date	Transaction	Units	Price per unit
01-01-2003	Opening Stock	1,500	20
05-02-2003	Purchases	750	25
10-03-2003	Purchases	600	22
15-03-2003	Sales	1,800	30
12-04-2003	Sales	750	31
16-05-2003	Purchases	600	25
25-06-2003	Sales	750	32

8. The Stock of material on hand on 1<sup>st</sup> Dec. 2003 was 1300 units @ Rs. 3.50 each. The following purchased and issues took place subsequently. Calculate quantity and value of stock on hand on 31<sup>st</sup> Dec. 2003 under FIFO method.

Date	Purchases Quantity	Rate Per Unit Rs.
2-12-2003	500 units	4
4-12-2003	2000 units	5.50
18-12-2003	400 units	5

Date	Issues Quantity
6-12-2003	2300 units
8-12-2003	300 units
15-12-2003	700 units

Stock verification revealed of 25 units on 17<sup>th</sup> Dec. 2003.

9. M/s. Desai & Co. a trader of Plastic Toys had 12,000 toys valued at Rs. 3 per toy. His purchases and sales during first six months ending 31<sup>st</sup> December, 2003 were as under:

On 22 <sup>nd</sup> July, 2003	Sales	5,000 Toys @ Rs. 20 each
On 23 <sup>rd</sup> July, 2003	Purchased (Carriage Inward Rs. 1,000)	10,000 Toys @ Rs. 15 each
On 25 <sup>th</sup> October, 2003	Sales	8,000 Toys @ Rs. 24 each
On 26 <sup>th</sup> October, 2003	Purchased (Carriage Inward Rs. 1,200)	12,000 Toys @ Rs. 18 each
On 31 <sup>st</sup> December, 2003	Sales	13,000 Units @ Rs. 20 each.

You are required to ascertain:

Cost of Stock on hand as on 31<sup>st</sup> Dec. 2003 under each of the following method.

(1) FIFO (2) Weighted Average

10. The following is provided by 'S' Ltd. for the fortnight at April, 2004. Stock on 1-4-2004 of material 'X' 100 units @ Rs. 5 per Units:

Purchases	Units
05-04-2004	300 @ Rs. 6
08-04-2004	500 @ Rs. 7
12-04-2004	600 @ Rs. 8
Sales	Units
06-04-2004	250
10-04-2004	400
14-04-2004	500

Calculate using FIFO method of pricing issues

- (1) The value of materials consumed during the period and
- (2) The value of Stock of Material as on 14-4-2004.

11. From the following details find out closing stock of Bharat Industrial Ltd. as per FIFO method:

Date	Purchases (Units)	Sales (Units)	Price Per Unit Rs.
1-11-2004	Balance 40	-	14
2-11-2004	30	-	15
4-11-2004	20	-	15
5-11-2004	-	40	18.50
10-11-2004	-	10	19
17-11-2004	30	-	16
20-11-2004	-	25	20
28-11-2004	50	-	13
30-11-2004	-	40	16

On 29-11-2004 two units were found damaged and had to be discarded.

12. From the following data of March, 2006, calculate the cost of goods sold and value of closing stock of closing stock using the following methods-FIFO and Weighted Average Price:

Purchases			Sale	
Date	Quantity	Rate per unit (Rs.)	Date	Quantity
01	2000	10	06	1200
02	300	12	11	1000
10	200	14	30	200
22	300	11		

13. Keep stock record on FIFO and Weighted Average basis from the following transactions:

Purchases: March, 2004		
Date	Units	Rate Per Unit (Rs.)
01	500	18
04	700	20
09	900	18
15	300	25
25	200	20
31	500	25
Sales: March, 2004		
02	200	22
07	500	25
11	400	21
18	800	28
27	500	25

Find out cost of goods sold and the profit.

14. Following are the purchases and sales of wheat in the months of March, 2004. Prepare a statement showing valuation of stock on the basis of (i) FIFO and (ii) Weighted Average Cost method.

Date	Purchases	Rate	Sales
2004	(Kg)	(Rs.)	(Kg)
March 1	600	4	-
4	-	-	300
5	300	3.80	-
10	-	-	200
18	200	4.20	-
23	-	-	400
29	400	4.40	-
31	-	-	300

Out of purchases March, 5, 50 Kgs were returned to the supplier on March 8.

Out of Sales on March, 23 a customer returned 20 Kgs on March, 26.

15. A Company details in 3 products viz. A, B and C. The details for purchases and sales for January 2004 are as under.

Product	A		B		C	
	Units	Rs.	Units	Rs.	Units	Rs.
Selling Price per Unit		100		200		250
Opening Stock	100	60	100	100	50	120
Purchases:						
Jan 9	300	65	200	110	50	135
Jan 20	100	64	50	120	100	140
Jan 29	50	68	50	125	20	130
Closing Stock	140		70		60	

You are required to prepare a trading and profit and loss account for the assuming the selling and distribution expenses to be Rs. 63,000. Use FIFO method for stock valuation.

16. Roop Nagar Hospital provides you with the following information:

1-1-2004 Opening Stock 100 units @ Rs. 1.00; 2-1-2004 Purchased 400 units @ Rs. 1.50; 3-1-2004 Issued 450 units; 4-1-2004 Purchased 500 units @ Rs. 2.06; 5-1-2004 Issued 300 units.

Compute the Value of Inventory as on 5-1-2004 by (i) FIFO (ii) Weighted Average assuming Perpetual System (iii) Weighted Average Periodic System.

17. A Company started on 1<sup>st</sup> January, 2003 purchased raw material during 2003 as started below:

January 2	800 kg.	@ Rs. 62 per kg.
February 26	1,200 kg.	@ Rs. 57 per kg.
April 13	2,500 kg.	@ Rs. 59 per kg.
July 13	3,000 kg.	@ Rs. 56 per kg.
September 18	1,500 kg.	@ Rs. 60 per kg.
November 29	1,000 kg.	@ Rs. 65 per kg.

While preparing its final accounts on 31<sup>st</sup> December, 2003 the Company had 1,300 kg. of raw material in its godown .

Calculate the values of closing stock of raw material s according to:

(i) “First In First Out” basis.

(ii) “Weighted Average” basis. (Periodic Inventory System)

18. The following are the details of spare part of Sriram Mills:

01-01-2004	Opening Stock	Nil
01-01-2004	Purchases	100 units @ Rs. 30 per unit
15-01-2004	Issued for Consumption	50 units
01-02-2004	Purchases	300 units @ Rs. 40 per unit
15-02-2004	Issued for Consumption	100 units
20-02-2004	Issued for Consumption	100 units
01-03-2004	Purchases	150 units @ Rs. 50 per unit
15-03-2004	Issued for Consumption	100 units.

Find out the value of stock as on 31-3-2004 if the company follows: (a) First in First Out Basis; (b) Weighted Average basis.

19. The stock of material in hand on 1-4-2004 was 400 units at Rs. 50 per unit. The following receipts and issues were recorded. Prepare Stock Ledger Account under: (i) FIFO Method (ii) Weighted Average Method.

2-4-2004	Purchased 100 unit	@ Rs. 55 per unit
6-4-2004	Issued 400 units	
10-4-2004	Purchased 600 units	@ Rs. 60 per unit
13-4-2004	Issued 500 units	
20-4-2004	Purchased 500 units	@ Rs. 65 per unit
25-4-2004	Issued 600 units	
10-5-2004	Purchased 800 units	@ Rs. 70 per unit
12-5-2004	Issued 500 units	
13-5-2004	Issued 200 units	
15-5-2004	Purchased 500 units	@ Rs. 75 per unit
12-6-2004	Issued 400 units	
15-6-2004	Purchased 300 units	@ Rs. 80 per unit

20. From the following details calculate value of the closing stock on 31-12-2003 according to: (i) FIFO Method. (ii) Weighted Average Method.

Purchases:	
1-7-2003	10 units @ Rs. 20 each
1-9-2003	20 units @ Rs. 26 each
1-11-2003	30 units @ Rs. 32 each
1-12-2003	20 units @ Rs. 36 each
Sales:	
1-10-2003	20 units @ Rs. 50 each
10-11-2003	30 units @ Rs. 55 each
10-12-2003	20 units @ Rs. 60 each

21. Draw a stores ledger card recording the following transactions that took place in the month under the following two methods.

(i) FIFO Method (ii) Weighted Averages Method.

1-1-2004	Opening Stock	200 pieces	@ Rs. 2 each
5-1-2004	Purchase	100 pieces	@ Rs.2.20 each
10-1-2004	Purchase	150 pieces	@ Rs. 2.40 each
20-1-2004	Purchase	180 pieces	@ Rs. 2.50 each
1-1-2004	Issues	150 pieces	
7-1-2004	Issues	100 pieces	
12-1-2004	Issues	100 pieces	
28-1-2004	Issues	200 pieces	

22. From the following particulars relating to material A. Show how the value of the issues and closing stock should be arrived at under FIFO method.

1-1-2004	Opening Stock 100 units at Rs. 5 each
3-1-2004	Purchases 900 units at Rs. 6 each
7-1-2004	Issued to Job No. 137, 1200 units vide M. R. No. 34
11-1-2004	Purchased 800 units at Rs. 6.20 each.
13-1-2004	Purchased 300 units at Rs. 6.40 each.
15-1-2004	Issued 400 units to job. No. 142 vide M. R. No. 042
17-1-2004	Issued 600 units to Job. No. 147vide M.R. No. 048
19-1-2004	Purchased 200 units at Rs. 6.50 each
25-1-2004	Issued 600 units to Job No. 150 M. R. No. 072

23. Navakar Ltd. was following LIFO method of valuation of stock. Due to promulgation of revised accounting standard, they want to switch over to FIFO method. From the following information:

(a) Draw up stock ledgers under FIFO.

(b) Find out the closing stock and cost of materials consumed under FIFO method.

Opening Stock 5,000 MT @ Rs. 22 per MT Rs. 1,10,000

Purchases:	
1-6-07	1,000 MT @ Rs. 30 per MT
5-6-07	2,000 MT @ Rs.35 per MT
10-6-07	1,500 MT @ Rs. 38 per MT
15-6-07	1,500 MT @ Rs. 35 per MT
20-6-07	2,000 MT @ Rs. 32 per MT
28-6-07	2,000 MT @ Rs. 35 per MT
30-6-07	1,500 MT @ Rs. 30 per MT
Issues:	
05-6-07	2,000 MT
10-6-07	3,000 MT
20-6-07	4,000 MT
25-6-07	3,000 MT
30-6-07	3,000 MT

