Stores Ledger Account

Theory

Solution :

In the books of Modern Manufacturers

Stores Ledger Account (Under Specific Price Method)

Date	Receipts				Issues				Balance			Remarks
2014	GRN No.	Qnty. Units	Rate ₹	Amt. ₹	SRN No.	Qnty. Units	Rate ₹	Amt. ₹	Qnty. Units	Rate ₹	Amt. ₹	
Jan. 2	Job 98	1,000	14	14,000	–	–	–	–	1,000	14	14,000	
4	Job 97	8,00	15	12,000	–	–	–	–	1,000	14		
									800	15	26,000	
7	–	–	–	–	Job 97	800	15	12,000	1,000	14	14,000	
9	Job 99	1,600	16	25,600	–	–	–	–	1,000	14	39,600	
									1,600	16		
11	–	–	–	–	Job 98	600	14	8,400	400	14	31,200	
									1,600	16		
14	–	–	–	–	Job 99	1,400	16	22,400	400	14		
									200	16	8,800	
17	–	–	–	–	Job 98	400	14	5,600	200	16	3,200	
20	Job100	2,000	17	34,000	–	–	–	–	200	16		
									2,000	17	37,200	
24	–	–	–	–	Job 100	1,000	17	17,000	200	16		
									1,000	17	20,200	
30	–	–	–	–	Job 99	200	16	3,200	1,000	17	17,000	
31	–	–	–	–	Job 100	400	17	6,800	600	17	* 10,200	*Cl. Stock for Job 100

N.B.: (a) Under Specific price Method the Job No. for which the material is purchased, is also mentioned in G.R.N. No. column;

(b) Value of closing stock is ₹ 10,200, i.e., 600 units @ ₹ 17 for Job No. 100 only.

2. First-in-First-Out (FIFO) Method :

Under this method, the material which is received first, is also issued first from the store and issue price is charged at the price of that first lot of material received or purchased. The stores ledger account is drawn on the assumption that at the time of issue, the store-keeper issues from the oldest lot of the material held at store and if that lot exhausted, the second oldest lot is issued and so on. So, issues are done in the order in which the materials are received.

The FIFO method is actually a "*Method of Pricing*" only, and not necessarily a "*Method of Physical Issue*" of material. The store-keeper issues the required material from any lot held in the store as convenient to him. The Cost Accountant need not see whether the oldest lot, new lot or any other lot has been issued. So, FIFO simply means that oldest costs are used for cost accounting purposes first regardless of actual flow of material.

Under FIFO method, the cost of production is charged out at old cost rates, whereas the closing stock indicates the current market prices. For income computation the matching of current cost with current revenues is not possible.

Application : First-in First-out (FIFO) method is highly useful where :

(i) the materials are slow-moving,

(ii) the cost of material is not very high and material is not bulky,

(iii) the prices of material are gardually decreasing/falling, i.e., during deflation,

(iv) old materials gradually become obsolete, wastages, deteriorates, etc.

Advantages : The main advantages or merits of First-in First-out (FIFO) method of pricing are :

(i) FIFO method is very simple to understand and easy to operate,

(ii) The issue price is based on actual cost,

(iii) The closing stock indicates the current market price of materials,

(iv) Generally order of physical issues and order of pricing coincide,

(v) Unrealised profit or loss is not included in the cost of material consumed.

Disadvantages : The important disadvantages or drawbacks of this method of pricing are : (i) The issue price does not indicate the current cost of material and so cost of production is charged at oldest rate, (ii) This method is not suitable during the period of inflation where prices of materials are gradually increasing, (iii) If the prices of materials fluctuate constantly, the cost of production changes from period to period, (iv) for issue of large or bulky quantity, a number of rates may applicable and so the valuation is complicated, (v) This method fails to fulfil the objective of matching current costs with current revenues.

Illustration 3 (M) : The following particulars have been extracted in respect of Material A.

Prepare the Stores Ledger Account pricing the material issues on the basis of First-in-First-out method :

Receipts :	1.3.2014	Opening Stock	– 100 units at ₹ 1.75
	5.3.2014	Purchased	– 150 units at ₹ 1.50
	12.3.2014	Purchased	– 300 units @ ₹ 1.60 each
	22.3.2014	Purchased	– 400 units at ₹ 1.70
Issues :	8.3.2014	Issued	– 200 units
	18.3.2014	Issued	– 250 units
	29.3.2014	Issued	– 400 units

Solution :

In the books of ....

Stores Ledger Account (Under FIFO Method)

Material : 'A'	Maximum Level ....
Code No.	Minimum Level ....
Bin Card No.	Reorder Level ....
Folio No.	Reorder Quantity

Date	Receipts				Issues				Balance			Remarks
	GRN	Qnty.	Rate	Amt.	SRN	Qnty.	Rate	Amt.	Qnty.	Rate	Amt.	
2014	No.	Units	₹	₹	No.	Units	₹	₹	Units	₹	₹	
Mar. 1	–	–	–	–	–	–	–	–	*100	1.75	175	*Op. Stock
5	–	150	1.50	225	–	–	–	–	250 { 100 150	1.75 1.50	400	(100 units.)
8	–	–	–	–	–	200 { 100 100	1.75 1.50	325	50		1.50	75
12	–	300	1.60	480	–	–	–		350 { 50 300	1.50 1.60	555	
18	–	–	–	–	–	250 { 50 200	1.50 1.60	395		100	1.60	160
22	–	400	1.70	680	–	–	–		500 { 100 400	1.60 1.70	840	
29	–	–	–	–	–	400 { 100 300	1.60 1.70	670	*100	1.70	170	*Cl Stock

N.B.: So, Value of Closing Stock is ₹ 170, i.e., 100 units @ ₹ 1.70 each.

3. Last-in First-out (LIFO) Method :

Under this method of pricing material issues, the material which is received last, is issuesd first from the store and issue price is charged at the price of that last lot of material purchased or received. The store ledger account is drawn on the principle that at the time of issue, the storekeeper issues from the last (new) lot of the material held and if that lot exhausted, the second last (i.e., last but one) lot is issued and so on. So, issues are done in the opposite order in which the materials are received. In other words, LIFO method is purely opposite of FIFO method. The method is also known as Replacement Cost Method.

The LIFO method is also actually a *"Method of Pricing"* only and not necessarily a *"Method of Physical Issue"* of material. The store-keeper issues the required material from any lot held in the store as convenient to him. The Cost Accountant need not see whether last lot or any other lot has been issued. So, LIFO simply means that the latest costs are used for cost accounting purposes first regardless of actual flow of material.

Under LIFO method, the cost of production is charged out at current market price, whereas the closing stock is valued at old cost rate. For computation of income the matching of current cost with current revenues is possible.

Application : The LIFO method of pricing material issues is highly useful where :

(i) The materials are not slow-moving,
(ii) The cost of material is very high and the material is bulky,
(iii) The prices of materials are gradually increasing, i.e., during inflation,
(iv) There is no chance of becoming deterioration, obsolescence etc. of materials,
(v) inventory turnover is low.

Advantages : The main advantages or merits of LIFO method of pricing material issues are :

(i) The cost of production can be charged out at current market rates,
(ii) The issues can be done on actual cost basis,
(iii) When transactions are few, this method is very simple to understand and easy to operate,
(iv) This method fulfils the objective of matching current costs with current revenues,
(v) Prices for quotations and tenders and selling price of output can be fixed up properly,
(vi) Unrealised profit or loss is not included in the cost of materials consumed,
(vii) This method indicates the replacement cost of material issued.

Disadvantages : The LIFO major disadvantages or drawbacks of this method are : (i) The closing stock does not indicate current market price, (ii) This method is not suitable during the period of decreasing prices, i.e., deflation, (iii) If the price of materials fluctuates constantly, the cost of production changes from one period to another, (iv) For issue of large or bulky quantity, a number of rates may applicable and so the valuation is complicated, (v) This method is not permitted by Income Tax Authorities, (vi) Issues are not valued in the same order in which materials are issued physically.

Comparison between FIFO and LIFO Methods of Pricing : The following are the main differences between FIFO and LIFO methods of pricing material issues :

Points	FIFO Method	LIFO Method
(i) Issuing Principle	(i) The material which is received first, is also issued first.	(i) The material which is received last, is issued first.
(ii) Order of Issuing	(ii) Materials are issued in the same order in which they are received.	(ii) Materials are issued in the opposite order in which they are received.
(iii) Cost of Production	(iii) Cost of production or material issues are charged out at old prices.	(iii) Cost of production or material issues are charged out at current prices.

(iv) Value of Closing Stock	(iv) Closing stock is valued at current market prices.	(iv) Closing stock is valued at old prices.
(v) Increasing prices or inflation	(v) During inflation this method is not appropriate.	(v) During inflation this method is logically appropriate.
(vi) Decreasing prices or deflation	(vi) During deflation this method is more appropriate.	(vi) During deflation this method is not logically appropriate.
(vii) Pricing policy	(vii) The pricing policies are not suitable, actually erroneous.	(vii) The pricing policies are more realistic and correct.
(viii) Matching process	(viii) Income determination is not appropriate because matching of current cost and current revenue is not possible.	(viii) Income determination is appropriate as matching of current cost and current revenue is possible.
(ix) Nature of Profit & Decision-making	(ix) The profit can not be realistic and so decision making becomes difficult.	(ix) The profit is more realistic and so decision making becomes more easy.

Illustration 4(M): From the information provided as under, you are required to prepare a statement showing how the issues would be priced if LIFO method is followed:

1.2.2014	Opening balance 100 units at ₹ 10 each
2.2.2014	Received 200 units at ₹ 10.50 each
3.2.2014	Received 300 units at ₹ 10.60 each
4.2.2014	Issued 400 units to Job A
6.2.2014	Issued 120 units to Job K
7.2.2014	Received 400 units to at ₹ 11 each
10.2.2014	Issued 200 units to Job B
11.2.2014	Received 300 units at ₹ 11.40 each
13.2.2014	Received 200 units at ₹ 11.50 each
17.2.2014	Issued 400 units to Job D

Solution : ***In the books of ....***

Stores Ledger Account (Under LIFO Method)

Material : 'A' — Maximum Level ....
Code No. .... — Minimum Level ....
Bin Card No. .... — Reorder Level ....
Folio No. .... — Reorder Quantity

Date	Receipts				Issues				Balance			Remarks
	GRN	Qnty.	Rate	Amt.	SRN	Qnty.	Rate	Amt.	Qnty.	Rate	Amt.	
2014	No.	Units	₹	₹	No.	Units	₹	₹	Units	₹	₹	
Feb. 1	–	–	–	–	–	–	–	–	*100	10	1,000	*Opening Stock
2	–	200	10.50	2,100	–	–	–	–	300 {100 200	10.00 10.50	3,100	
3	–	300	10.60	3,180	–	– –	–		600 {100 200 300	10.00 10.50 10.60	6,280	
4	–	–	–	–	JobA	400 {300 100	10.60 10.50	4,230	200 {100 100	10.00 10.50	2,050	
6	–	–	–	–	JobK	120 {100 20	10.50 10.00	1,250	80	10.00	800	
7	–	400	11	4,400	–	–	–	–	480 {80 400	10.00 11.00	5,200	

10	-	-	-	-	JobB	200	11	2,200	280 { 80 200	10.00 11.00	3,000	
11	-	300	11.40	3,420	-	-	-	-	580 { 80 200 300	10.00 11.00 11.40	6,420	
13	-	200	11.50	2,300	-	-	-	-	780 { 80 200 300 200	10.00 11.00 11.40 11.50	8,720	
17	-	-	-	-	JobD	400 { 200 200	11.50 11.40	4,580	*380 { 80 200 100	10.00 11.00 11.40	4,140	*Cl Stock

N.B.: The Closing Stock consists of :	**80 units @ ₹ 10.00 each**	₹	**800**
	200 units @ ₹ 11.00 each	₹	**2,200**
	100 units @ ₹ 11.40	₹	**1,140**
	Value of Closing Stock	₹	**4,140**

4. Highest In First Out (HIFO) Method :

Under this method of pricing material issues, the lot of the material whose price is the highest, is issued at first from the store irrespective of its date of purchase and the issue price is charged at that highest price.

The stores ledger account is drawn on the principle that material cost is charged on the cost of production at the highest possible cost price and closing stock is valued at the lowest or minimum value. At the time of issue, the store-keeper assumed issues from the highest valued lot held in the store and if that lot is exhausted, the second highest valued lot is issued and so on.

During the period of inflation when prices increase constantly, HIFO method coincides with LIFO method and during the period of deflation, this method is similar to FIFO method. Practically this method is not so used for pricing of materials issues.

Application : This method of pricing material issues is highly useful where : (i) cost plus contract is used, (iii) prices are heavy fluctuating, (iii) monopoly pricing policy is considered.

5. Next-In First Out (NIFO) Method :

Under this method of pricing material issues, the price of the material which is to be received immediately after that issue of the material, is to be used for pricing of that material issues. The store ledger accounts drawn on the principle of valuing the material issues at the very close to the market price. Here, the pricing of material issues is not charged at a cost price which has already been paid, but rather at a price at which an order has been placed but not yet received, i.e., the price of materials that will be next delivered.

There is no practical utility of this method. However, this method is theoretically sound. The main argument is favour of NIFO method is that this is based on a more up-to-date replacement price than LIFO method.

6. Base Stock Method :

Under this method of pricing material issues, a minimum quantity of stock of material is always held in the storehouse at the original price and the balance material issued under first-in first out (FIFO) or last-in first out (LIFO) system. This minimum quantity as held, is called as ***Base Stock*** or ***Safety Stock*** and is not ordinarily issued unless an emergency situation arises. The base stock is valued at original or prevailing rate, i.e., the rate when the concern is started or the base stock method was adopted.

The actual stock of the material must be at or above the base stock. Whenever any material is issued either the FIFO or LIFO method, considering the base stock, is to be followed. As a result of which some accountants prefer to use the "base stock" not as a method of pricing material issues, but as a technique

(B) ***Average Cost Methods :*** When the pricing of materials issues to different jobs, orders, contracts, process, departments etc. are made not on the basis of prices or rates of individual lots of materials purchased but on the basis of average rates of the lots held, then the methods are known as average cost methods. These methods are based on the assumption that when materials are purchased in different lots and stored together, their identity is actually lost and so the issues are charged out at average prices. The averages are of two types– simple average and weighted average. Both of these are of three categories– such as, general, periodic and moving averages.

7. Simple Average Method :

Under this method of pricing material issues, the issue price or rate is charged at simple arithmetic average price which is computed by averaging the prices or rates of all lots available at the time of issue without considering the quantities included in each lot purchased or held. In other words, The simple average price is ascertained by adding the price rates of all lots held on the date of issue and dividing the sum by the number of such lots. Where $P_1, P_2, P_3 .... P_n$ are the prices of n lots of materials held on the date of issue, then

$$\text{The Simple Average Rate of an issue} = \frac{p_1 + p_2 + p_3 + ...p_n}{n} = \frac{\sum P}{n}$$

The simple average price thus ascertained would also be used in the next issues unless the first one or more lots are exhausted or new purchase is made. So, the next issue price would be changed either if any old lot is exhausted or if any new lot is purchased.

Application : This method of pricing material issues is highly useful where :

(i) Materials are purchased in uniform lot quantities,
(ii) It is difficult to identify the lots received or the lots issued,
(iii) The purchase prices do not fluctuate considerably,
(iv) The pruchases are numerous.

Advantages : The main advantages or merits of this pricing of materials issues are:

(i) It is simple to calculate and easy to operate,
(ii) It smoothens the price fluctuations for materials,
(iii) The purchase of a lot at too high or low price, does not disturb the issue price to a large extent,
(iv) It reduces the clerical job to some extent.

Disadvantages : The major disadvantages or drawbacks of this pricing of materials issues are : (i) The issue price does not represent the actual cost price, (ii) Some unrealised profit or loss is included in the cost of materials consumed, (iii) The value of closing stock becomes unrealistic, (iv) It does not consider the quantities included in each lot, (v) The value of closing stock cannot be verified.

Illustration 6(M) : From the following transactions relating to the material in Rainbow Engineering Co. in March, 2014, prepare the Stores Ledger Account under Simple Average Method :

March. 1 Opening stock 400 units @ ₹ 10 each
3 Issued 300 units
5 Purchased 600 units @ ₹ 11 each
7 Issued 500 units
11 Purchased 400 units @ ₹ 12 each
15 Purchased 600 units @ 13 each
19 Issued 500 units
26 Issued 300 units

Solution : ***In the books of Rainbow Engineering Company***

Stores Ledger Account (under Simple Average Method)

Material : .... Maximum Level ....
Code No. .... Minimum Level ....
Bin Card No. .... Reorder Level ....
Folio No. .... Reorder Quantity ......

Date	Receipts				Issues				Balance			Remarks
	GRN	Qnty.	Rate	Amt.	SRN	Qnty.	Rate	Amt	Qnty.	Rate	Amt.	
2014	No.	Units	₹	₹	No.	Units	₹	₹	Units	₹	₹	
Mar. 1	–	–	–	–	–	–	–	–	*400	10	4,000	*Op Stock
3	–	–	–	–	–	300	10	3,000	100	10	1,000	
5	–	600	11	6,600	–	–		–	700	–	7,600	
7	–	–	–	–	–	500	10.50	5,250	200	–	2,350	
11	–	400	12	4,800	–	–	–	–	600	–	7,150	
15	–	600	13	7,800	–	–	–	–	1,200	–	14,950	
19	–	–	–	–	–	500	12	6,000	700	–	8,950	
26	–	–	–	–	–	300	12.50	3,750	**400	13	5,200	*Cl. Stock

Working Notes : (i) Rate of issue on 3.3.2014 = ₹ 10, as only one lot was held on that date, (ii) Rate os issue on 7.3.2012 = $\frac{₹\,(10 + 11)}{2}$ = ₹ 10.50 as two lots were held on this date of issue; (iii) Rate of issue on 19.3.2012 = $\frac{₹\,(11 + 12 + 13)}{3}$ = ₹ $\frac{36}{3}$ = ₹ 12, because total issues made before this issue are 800 units which exhausted the lot of opening stock but not any other lot. (iv) Rate of issue on 26.3.2012= $\frac{₹\,(12 + 13)}{2}$ = ₹ 25/2 = ₹ 12.50, because total earlier issues were 1,300 units which exhausted the lot of op. stock and lot purchased on 5.3.2012 but not later.

8. Weighted Average Method :

Under this method of pricing material issues, the issue price or rate is charged at weighted arithmetic average price which is computed by averaging the prices or rates of total materials held taken the quantities of the lots purchaed as the weights. In other words, the weighted average price is ascertained by adding the values/cost of all lots held on the date of issue and dividing the sum by the total quantities of materials held in such lots. Where P_1, P_2, P_3.... P_a are the prices of different lots held having quantities Q_1, Q_2, Q_3.... Q_n respectively, then

$$\text{The Weighted Average Rate of an issue} = \frac{P_1Q_1 + P_2Q_2 + P_3Q_3 + \ldots\ldots P_nQ_n}{Q_1 + Q_2 + Q_3 + \ldots\ldots Q_n} = \frac{\sum PQ}{\sum Q}$$

The weighted average price thus ascertained would be used in the next issues until the new purchase is made. So, the next issue price would be changed only if new lot is purchased. It is now the matter whether the old lots are physically exhausted or not.

Application : The method of pricing material issues is highly useful where;

(i) The prices are fluctuating widely over the period,

(ii) The number of issues are maximum,

(iii) The number of purchases are few.

Advantages : The main advantages or merits of this method of pricing material issues are :

(i) It smoothens the price fluctuations effectively,

(ii) It is more logical and consistent,

(iii) No unrealisable profit or loss is included in the cost of materials consumed,

(iv) Closing stock is valued at weighted average rate which is more realistic,

(v) It is simple to understand and easy to compute,

(vi) It is acceptable to Income Tax Authorities.

Disadvantages : The principles disadvantages or drawbacks of this method are : (i) The issue price does not represent the actual cost price, (ii) If receipts are numerous, it requires heavy calculations, (iii) The value of closing stock does not represent the current market prices, (iv) It may create error in calculation unless the average figures are not drawn upto 4 or 5 decimal places in certain cases.

Illustration 7 (M) : From the same problem as given in **Illustration 6**, prepare a Stores Ledger Account under Weighted Average Method.

Solution : ***In the books of Rainbow Engineering Company***

Stores Ledger Account (under Weighted Average Method)

Material : ....

Code No. ....

Bin Card No. ....

Folio No. ....

Maximum Level ....

Minimum Level ....

Reorder Level ....

Reorder Quantity ......

Date	*Receipts*				*Issues*				*Balance*			*Remarks*
	GRN	Qnty.	Rate	Amt.	SRN	Qnty.	Rate	Amt.	Qnty.	Rate	Amt.	
2014	No.	Units	₹	₹	No.	Units	₹	₹	Units	₹	₹	
Mar. 1	–	–	–	–	–	–	–	–	*400	10	4,000	*Op Stock
3	–	–	–	–	–	300	10	3,000	100	10	1,000	
5	–	600	11	6,600	–	–	–	–	700	10.857	7,600	
7	–	–	–	–	–	500	10.857	5,429	200	10.857	2,171	
11	–	400	12	4,800	–	–	–	–	600	11.618	6,971	
15	–	600	13	7,800	–	–	–	–	1,200	12.309	14,771	
19	–	–	–	–	–	500	12.309	6,155	700	12.309	8,616	
26	–	–	–	–	–	300	12.309	3,693	**400	12.309	4,923	**Cl. Stock

Working Notes : (i) Rate of issue on 3.3.2014 = ₹ 10 as only one lot was held on that date. (ii) After purchase of new lot on 5.3.2014 at another rate the weighted average rate appears at ₹ 7,600/700 = ₹ 10,857. This rate is used for issue on 7.3.2014 (iii) The weighted average rate per unit changes after new purchase on 11.3.2014 to ₹ 11,618 (i.e., ₹ 6,971/600). This rate also changed to ₹ 12.309 (14,771/1,200) just after new purchase on 15.3.2014. This new weighted average rate is used for issue on 19.3.2014. Again, as there is no further purchase, this rate is also used for issue on 26.3.2014.