

SYLLABUS

Unit – 1

Process Costing – 1

- a. Meaning, Definition and Features; Job Costing vs. Process Costing; Processes losses and gains; Accounting of waste, scrap, defectives and spoilage;
- b. Meaning of Joint products and By-products; Objectives of allocation of joint costs and Methods of Accounting for Joint products; Methods of Accounting for By-Products.

Unit – 2

Process Costing – 2

- a. Inter Process Profit and Transfer Price (valuing process stocks under FIFO and Average Cost Methods).
- b. Valuation of Work-in-Progress (under FIFO and Average Cost Methods)

SYLLABUS

Unit – 3

Amalgamation of Companies

- a. In the nature of Merger: Under Pooling of Interests Method (AS – 14)
- b. In the nature of Purchase:

Note: Includes additional points arising on Amalgamation.

Unit – 4

Absorption and Reconstruction (External)

- a. Inter – company transactions (except Inter-company Holdings and exchange of shares based on ‘intrinsic values’).



CHAPTER 1

PROCESS

COSTING - 1

Introduction

- In various industries, various methods of costing are used. E.g., in industries where production is continuous, the cost per unit is found out by using unit costing method. Where any job or contract is undertaken, job costing or contract costing is used. Similarly in certain industries, production is carried on in various stages. E.g., coconut oil is produced in this manner. First coconuts are crushed and oil is extracted. Then oil is refined and finally it is packed for selling. Here, the method of costing used is process costing.
- CIMA has defined Process Costing as follows: *“The costing method applicable where goods or services result from a sequence of continuous or repetitive operations or processes. Costs are average of the units produced during the period.”*
- In those industries where a product passes through distinct stages of production, the method of costing employed to ascertain cost of production at each stage is known as Process Costing. It is possible to ascertain the total cost of the product even in these industries, which is not enough. Different quantities and types of by-products and wastages arise in various processes, which makes it desirable to find out separate cost of each process of operation for each unit.

Procedure of Ascertaining Process Cost

In order to facilitate ascertaining separate cost for each process or operation, the following procedure may be followed:

- The total production is divided into separate processes or operations under which the cost can be conveniently collected.
- A separate account is opened for each process and each process account is charged with the material, labour and other expenses incurred directly for the process concerned as well as with its share of overhead charges.
- The total cost of each process is ascertained and it is divided by the total number of units produced during the specified period and the total cost per unit of each process is thus ascertained.
- The finished product of the first process is transferred to the second process; from second process to third process and so on. The finished product of the last process is transferred to finished stock account.
- Usually the finished product of one process is transferred to the next process at cost so that the last process account gives the actual cost of finished products. At times, the finished product of one process is transferred to the next process at cost plus a certain percentage of profit. In such case, the closing stock contains loading for profit charged by previous processes.

Difference between Job Costing and Process Costing

Bases of difference	Job costing	Process costing
1. Production	Production is against specific order or demand of the customers.	Production is in continues flow: as the products are homogeneous in nature.
2. dependence	Each job is separate and independent of others.	Products loss their individual identity as they are manufactured in a continuous flow.
3. transfer	No transfer is made from on job to another unless there is a surplus work or excess production.	The costs along with the output are transferred from on process to another to another, as the process moves likewise.
4. Cost determination	Costs are determined for each job separately irrespective of the time period.	Costs are complied for each process on time basis i.e., for production of a given time period.
5. Work-in-progress	There is handily any work-in-progress at the beginning or end of the time accounting period.	There is the existence of the work-in-progress at the beginning as well as at the end of accounting period.
6. control	As each product unit is different and the production is not continues, proper control is comparatively difficult.	As the production is scandalized and stable, proper control is comparatively easier.
7. suitability	It is suitable where the goods are produced to customers order that that can be identified in the value of production and the production is not continuous.	It is suitable where goods are made for stock and production is continuous.

Features of Process Costing

Some of the features of process costing may be stated as follows:

- **Transfer of Production to Another Process:** The finished product of one process becomes the raw-material of another process. E.g., in cotton textile industry, the first process is spinning. Raw cotton is converted into yarn. The finished product of spinning process viz. yarn becomes raw material for the next weaving process.
- **Wastage or Loss:** Ordinarily there is some wastage or loss in weight during various stages of production. E.g., in chemical or petroleum industry, some part of the raw material evaporates and some of it is thrown away as wastage.
- **By-product:** By-products are frequently obtained during the production of main product. E.g., in petroleum industry, while refining crude oil, various products of small value are obtained at various stage.
- **Allocation of Joint Costs:** At times, joint products are obtained during the same process of production and the problem of separation the joint costs arises. Various methods are used for separating the joint costs.
- **Inter-Process Profit:** There is practice in some firms to charge certain percentage of profit while transferring finished goods of one process to the next process. At the close of the year, there will be some stock of finished goods in each process, the value of which will contain the profit charged by the previous process. This profit is unrealized profit.

Elements of Cost of Each Process

The total cost of each process consists of three elements of cost viz. (i) Direct materials, (ii) Direct Wages and (iii) Overheads.

- (i) **Direct Materials:** Separate details are given for the cost of direct material used in each process. Each production department makes demand for raw materials on the basis of material requisition. On the basis of these requisitions, the total cost of raw materials used by each process is calculated and charged to various processes.
- (ii) **Direct Wages:** This cost can be easily computed separately for each process. Wage sheets for workers employed in each process may be separately kept or separate columns are kept for each process in the wage sheets. The total wage cost is found out on the basis of these sheets and is debited to respective process account. If the same worker works in two or more processes, then his wage is apportioned to various processes on the basis of time devoted by him.
- (iii) **Overheads:** These are the expenses common in all processes and have to be apportioned. We have already studied the basis of apportioning such overheads to various departments. E.g., rent is apportioned on the basis of space occupied. Most of the expenses are charged on the basis of direct wages of each process. However, various indirect expenses have to be allocated on the basis which is most suitable to case under consideration.

Example - 1: A product passes through three distinct processes to completion. These processes are numbered respectively 1, 2 and 3. During the first week of March, 2013, 500 units are produced. The following information is obtained:

	Process I	Process II	Process III
	₹	₹	₹
Materials	30,000	15,000	10,000
Labour	25,000	20,000	25,000
Direct Expenses	5,000	1,000	5,000

The indirect expenses for the period were ₹ 14,000 apportioned to the processes on the basis of wages.

No work-in-progress or process stocks existed at the close of the work.

You are required to prepare Process Accounts showing total cost per unit in each process.

Solution:

Process I A/c			(500 Units)		
Particulars	Total Cost	Per Unit	Particulars	Total Cost	Per Unit
To Materials	30,000	60			
To Labour	25,000	50			
To Direct Exp.	5,000	10			
To Indirect Exp.	5,000	10	By Process II A/c	65,000	130
	65,000	130		65,000	130

Working Note: Indirect Expenses were apportioned to the processes on the basis of wages. The ratio of wages are 5 : 4 : 5.

$$\text{So, Indirect Exp. of Process I} = 14,000 \times \frac{5}{14} = ₹ 5,000$$

Process II A/c (500 Units)					
Particulars	Total Cost	Per Unit	Particulars	Total Cost	Per Unit
To Process I A/c	65,000	130			
To Materials	15,000	30			
To Labour	20,000	40			
To Direct Exp.	1,000	2			
To Indirect Exp.	4,000	8	By Process III A/c	1,05,000	210
	1,05,000	210		1,05,000	210

Working Note: Indirect Expenses were apportioned to the processes on the basis of wages. The ratio of wages are 5 : 4 : 5.

$$\text{So, Indirect Exp. of Process II} = 14,000 \times \frac{4}{14} = ₹ 4,000$$

Process III A/c			(500 Units)		
Particulars	Total Cost	Per Unit	Particulars	Total Cost	Per Unit
To Process II A/c	1,05,000	210			
To Materials	10,000	20			
To Labour	25,000	50			
To Direct Exp.	5,000	10			
To Indirect Exp.	5,000	10	By Finished Stock A/c	1,50,000	300
	1,50,000	300		1,50,000	300

Working Note: Indirect Expenses were apportioned to the processes on the basis of wages. The ratio of wages are 5 : 4 : 5.

$$\text{So, Indirect Exp. of Process III} = 14,000 \times \frac{5}{14} = ₹ 5,000$$

Normal Process Loss

The loss of material which is inherent in the manufacturing operation due to chemical changes or other physical factors will be treated as normal process loss. Normal process loss should be absorbed by good units produced. Hence normal wastage is credited to process account concerned in terms of quantity only and its process cost should be allowed to fall on good units produced. However, any value that can be realized on sale of wastage as scrap should be credited to the process a/c concerned.

- Thus, As normal wastage is inevitable, its loss must be spread over good units produced. For this, the number of units of normal wastage must be credited to Process Account Concerned.
- If any price is realized by selling the normal wastage, it should be credited to the Process Account.
- The total cost of the process less the price realized from normal wastage is treated as the Normal Cost and it must be divided by the number of good units produced (Normal Production) to get per unit cost of production.

Abnormal Wastage

Wastage in excess of normal expected wastage is known as Abnormal Wastage. It is caused by unexpected or abnormal conditions such as sub-standard materials, carelessness or inefficiency of workers, accidents, bad plant design, etc. This type of loss or wastage must be thoroughly investigated and necessary steps must be taken to prevent any recurrence.

Abnormal process loss arises due to special circumstances and the extent thereof will vary in different circumstances. Such abnormal loss is not separated and is not allowed to affect the cost of good units, otherwise cost of production will fluctuate and misleading information will be available.

Cost of abnormal wastage should be valued as if they are good units and should be transferred to a separate Abnormal Wastage Account. The cause of such abnormal wastage should be investigated and it should be charged to Profit and Loss Account.

Abnormal Wastage

In order to find out the cost of abnormal wastage or loss the following procedure should be followed :

- (1) Allow for the normal wastage. Deduct normal wastage from units introduced and also deduct the sale price of normal wastage from the total cost of process. This will give normal (expected) production and normal cost.
- (2) Apportion the balance of cost between good units and abnormal wastage units in proportion to their respective quantities.
- (3) Credit the Process Account with the resultant value of abnormal wastage and debit the Abnormal Loss or Wastage Account.
- (4) Credit the Abnormal Loss or Wastage Account with the sale proceeds of the abnormal wasted units, if any. The balance of abnormal wastage or loss will then be charged to Costing Profit and Loss Account treating it as a loss of an exceptional nature.

Abnormal Gain (Effective)

If the actual process loss (wastages), is less than the normal process loss (wastage), then it is considered as an abnormal gain or effective. The value of abnormal gain is calculated in the same manner as that of an abnormal loss and is credited to Abnormal Gains Account. The shortfall in the scrap value of normal wastage is debited to Abnormal Gains Account and the balance is credited to Profit and Loss Account.

Abnormal Gain (Effective)

Scrap Value of Loss :

The accounting treatment of scrap value of loss is as follows :

(1) Revenue (sales value) from scrap is not treated as an addition to sales revenue, but as a reduction in the cost of that process.

(2) The scrap value of normal loss is therefore used to reduce the materials costs of the process. It is credited to that process account. If we make a journal entry, scrap account is debited and process account is credited.

(3) The scrap value of abnormal loss is used to reduce the cost of abnormal loss. Thus the loss of abnormal wastage debited to profit and loss account is reduced to that extent. The entry is to debit scrap account and credit abnormal loss account.

(4) In case of abnormal gain, there is no sale proceeds of scrap, because they are sold as good units. Thus the sale proceeds of scrap is reduced to that extent. The accounting entry is to debit abnormal gain account with the sale price of abnormal gain and credit scrap account. This will reduce the profit of abnormal gain.

(5) Finally, the cash received from the sale of scrap is debited to cash account and credited to scrap account with the value of the actual number of units scrapped.

Examples on Normal and Abnormal Wastage :

2 Manisha Automobiles Ltd., manufactures one article for the use of a motor car, which passes through three process. The normal wastage for Process 1 is 20% of the units introduced. The wastage (normal and abnormal) is sold at Rs. 50 per unit. 2,000 units were introduced in this process at Rs. 100 per unit. The additional expenditure incurred was Rs. 60,000.

Prepare Accounts showing the cost of production per unit under the following conditions :

- (i) If the production is 1,500 units
- (ii) If the production is 1,600 units
- (iii) If the production is 1,800 units

Show your calculations relating to the cost of production separately.

Solution: (i) If 1,500 units are produced:

Dr.		Process A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Raw Material (₹ 100 per unit)	2,000	2,00,000			
To Additional Exp.		60,000	By Wastage (20%) (₹ 50 per unit)	400	20,000
			By Abnormal Loss (₹ 150)	100	15,000
			By Process II A/c (₹ 150 per unit)	1,500	2,25,000
	2,000	2,60,000		2,000	2,60,000

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{2,60,000 - 20,000}{2,000 - 400} = \frac{2,40,000}{1,600} = \text{₹ } 150
 \end{aligned}$$

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process A/c (₹ 150)	100	15,000	By Sale of Wastage (₹ 50 per unit)	100	5,000
			By Profit & Loss A/c (Loss)	--	10,000
	100	15,000		100	15,000

(ii) If 1,600 units are produced:

Dr.		Process A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Raw Material (₹ 100 per unit)	2,000	2,00,000			
To Additional Exp.		60,000	By Wastage (20%) (₹ 50 per unit)	400	20,000
			By Process II A/c (₹ 150 per unit)	1,600	2,40,000
	2,000	2,60,000		2,000	2,60,000

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{2,60,000 - 20,000}{2,000 - 400} = \frac{2,40,000}{1,600} = ₹ 150
 \end{aligned}$$

(iii) If 1,800 units are produced:

Dr.		Process A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Raw Material (₹ 100 per unit)	2,000	2,00,000			
To Additional Exp.		60,000	By Wastage (20%) (₹ 50 per unit)	400	20,000
To Abnormal Gain (₹ 150)	200	30,000	By Process II A/c (₹ 150 per unit)	1,800	2,70,000
	2,200	2,90,000		2,200	2,90,000

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{2,60,000 - 20,000}{2,000 - 400} = \frac{2,40,000}{1,600} = ₹ 150
 \end{aligned}$$

Dr.

Abnormal Gain A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Shortfall in Sale of Wastage (₹ 50 per unit)	200	10,000	By Transfer from Process A/c (₹ 150)	200	30,000
To P & L A/c (Gain)	--	20,000			
	200	30,000		200	30,000

3 A product passes through two distinct processes A and B and thereafter, it is transferred to finished stock. The output of Process A passes to B and that of B to finished stock.

During the month ending on 31st March, 2013, 1,000 units of raw materials, valued at Rs. 20 per unit were issued to Process A.

Other relevant information is as under :

	Process A	Process B
Sundry Materials	Rs. 1,100	Rs. 2,650
Direct Wages	Rs. 10,000	Rs. 11,000
Manufacturing Expenses	Rs. 7,000	Rs. 7,500
Actual Output	900 Units	830 Units
Normal wastage (percentage of input)	5%	10%
Sales value of wastage (per unit)	Rs. 2	Rs. 5

From the above information, you are required to prepare Process Accounts and find out cost per unit of each process. Also give the Abnormal Wastage or Effectives (Gain) Accounts.

[Guj. Uni. April, 1979]

Solution:

Dr.		Process A A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Material (₹ 20)	1,000	20,000			
To Sundry Material		1,100			
To Direct wages		10,000			
To Manufacturing Exp.		7,000	By Wastage (5%) (₹ 2)	50	100
			By Abnormal Loss (₹ 40)	50	2,000
			By Process B A/c (₹ 40 per unit)	900	36,000
	1,000	38,100		1,000	38,100

$$\begin{aligned}\text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\ &= \frac{38,100 - 100}{1,000 - 50} = \frac{38,000}{950} = \text{₹ } 40\end{aligned}$$

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process A/c (₹ 40)	50	2,000	By Sale of Wastage (₹ 2 per unit)	50	100
			By Profit & Loss A/c (Loss)	--	1,900
	50	2,000		50	2,000

Dr.		Process B A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process A A/c (₹ 40)	900	36,000			
To Sundry Material		2,650			
To Direct wages		11,000			
To Manufacturing Exp.		7,500	By Wastage (10%) (₹ 5)	90	450
To Abnormal Gain (₹ 70)	20	1,400	By Finished Goods A/c (₹ 70 per unit)	830	58,100
	920	58,550		920	58,550

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{57,150 - 450}{900 - 90} = \frac{56,700}{810} = \text{₹ } 70
 \end{aligned}$$

Dr.

Abnormal Gain A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Shortfall in Sale of Wastage (₹ 5 per unit)	20	100	By Transfer from Process B A/c (₹ 70)	20	1,400
To P & L A/c (Gain)	--	1,300			
	20	1,400		20	1,400

5 A product passes through three processes 'A', 'B' and 'C'. 10,000 units were introduced to process 'A' at Rs. 10/- per unit. The other direct expenses were as follows :

Particulars	Process A	Process B	Process C
Expenses :			
(1) Sundry materials	Rs. 10,000	15,000	5,000
(2) Labour	Rs. 50,000	80,000	65,000
(3) Direct Expenses	Rs. 10,500	11,875	20,090
Other Information :			
(4) Actual output (in units)	9,500	9,100	8,100
(5) Normal wastage	3 %	5 %	(?)
(6) Selling prices of normal wastage per unit	Rs. 2.50	5.00	10.00

The final product was sold at Rs. 51 per unit fetching a profit of 16.2/3% on sales. Prepare Process Accounts and find out the percentage of normal wastage in Process 'C'.
[Sau. Uni., T. Y., April, 1996, 2009]

Solution:

Dr.	Process A A/c				Cr.
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Material (₹ 10)	10,000	1,00,000			
To Sundry Material		10,000			
To Labour		50,000			
To Direct Expenses		10,500			
			By Wastage (3%) (₹ 2.5)	300	750
			By Abnormal Loss (₹ 17.5)	200	3,500
			By Process B A/c (₹ 17.5 per unit)	9,500	1,66,250
	10,000	1,70,500		10,000	1,70,500

$$\text{Cost Per Unit} = \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}}$$

$$= \frac{1,70,500 - 750}{10,000 - 300}$$

$$= \frac{1,69,750}{9700}$$

$$= \text{₹ } 17.5$$

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process A A/c (₹ 17.5)	200	3,500	By Sale of Wastage (₹ 2.5 per unit)	200	500
			By Profit & Loss A/c (Loss)	--	3,000
	200	3,500		200	3,500

Dr.		Process B A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process A (₹ 17.5)	9,500	1,66,250			
To Sundry Material		15,000			
To Labour		80,000			
To Direct Expenses		11,875			
			By Wastage (5%) (₹ 5)	475	2,375
To Abnormal Gain (₹ 30)	75	2,250			
			By Process C A/c (₹ 30 per unit)	9,100	2,73,000
	9,575	2,75,375		9,575	2,75,375

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{2,73,125 - 2,375}{9,500 - 475} = \frac{2,70,750}{9025} = \text{₹ } 30
 \end{aligned}$$

Dr.

Abnormal Gain A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Shortfall in Sale of Wastage (₹ 5 per unit)	75	375	By Transfer from Process B A/c (₹ 30)	75	2,250
To P & L A/c (Gain)	--	1,875			
	75	2,250		75	2,250

Dr.		Process C A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process B (₹ 30)	9,100	2,73,000			
To Sundry Material		5,000			
To Labour		65,000			
To Direct Expenses		20,090			
			By Wastage (8 %) (₹ 10)	728	7,280
			By Abnormal Loss (₹ 42.5)	272	11,560
			By Finished goods A/c (₹ 42.5 per unit)	8,100	3,44,250
	9,100	3,63,090		9,100	3,63,090

Here, Cost per unit is find out from selling price per unit.

Suppose, Selling price is 100 then cost price is 83.33 (100 – 16.67 profit)

So, when selling price is ₹ 51 then cost price per unit is ₹ 42.50 ($51 \times \frac{83.33}{100}$).

Now, in this sum Normal wastage in units or in percentage for process C is not given.

So, we have to find out normal wastage units from the following formula. We assume units of normal wastage as X.

$$\text{Cost Per Unit} = \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}}$$

$$₹ 42.5 = \frac{3,63,090 - 10 X}{9100 - X}$$

$$42.5 (9,100 - X) = 3,63,090 - 10 X$$

$$3,86,750 - 42.5 X = 3,63,090 - 10 X$$

$$3,86,750 - 3,63,090 = -10 X + 42.5 X$$

$$32.5 X = 23,660 \quad \text{So, } X = 728 \text{ units}$$

Now, Percentage of Normal wastage:

Here, units of input is 9,100 then normal wastage is 728 units

So, if units of input is 100 then normal wastage is **8%** ($100 \times \frac{728}{9,100}$).

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process C A/c (₹ 42.5)	272	11,560	By Sale of Wastage (₹ 10 per unit)	272	2,720
			By Profit & Loss A/c (Loss)	--	8,840
	272	11,560		272	11,560

14 A product passes through three processes viz. F.Y., S.Y. and T.Y. and thereafter it is transferred to finished stock. The information is as under :

Particulars	Process		
	F.Y.	S.Y.	T.Y.
(1) Units introduced (per unit Rs. 100)	(?)	—	—
(2) Normal wastage (percentage of input)	2.5%	5%	10%
(3) Sales value of wastage (per unit) Rs.	25	50	60
(4) Abnormal wastage (No. of units)	500	550	—
(5) Cost per unit of abnormal wastage Rs.	150	200	—
(6) Abnormal gain (No. of units)	—	—	250
(7) Cost per unit of abnormal gain Rs.	—	—	250
(8) Actual production (Percentage of units introduced)	95%	(?)	(?)

Additional Information :

- (1) The abnormal wastage was 100% of the normal wastage in process F.Y.
- (2) Factory overheads to be distributed as 25% of direct wages in all three processes.

From the above informations, prepare Process Accounts, Abnormal Loss Account and Abnormal Gains Account.

Solution:

Dr.		F.Y. A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Material (₹ 100)	20,000	20,00,000			
To Direct wages		7,50,000			
To Factory O/hs		1,87,500			
			By Wastage (2.5%) (₹ 25) (100% of abnormal loss)	500	12,500
			By Abnormal Loss (₹ 150)	500	75,000
			By Process S.Y. A/c (95%) (₹ 150 per unit)	19,000	28,50,000
	20,000	29,37,500		20,000	29,37,500

Here, units of input is not given. So, it will be find out from normal wastage which is 2.5% of input.

Units of Normal wastage is 500. So, Units introduced in process F.Y. is 20,000 ($500 \times 100 / 2.5$).

Now, Factory o/h are 25% of Direct wages. So, we can say that the ratio between them is 4:1.

Here, difference in cost are ₹ 9,37,500, which is divided into 4:1 to direct wages and factory o/h.

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process F.Y. A/c (₹ 150)	500	75,000	By Sale of Wastage (₹ 25 per unit)	500	12,500
			By Profit & Loss A/c (Loss)	--	62,500
	500	75,000		500	75,000

Dr.	S.Y. A/c				Cr.
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process F.Y. (₹ 150)	19,000	28,50,000			
To Direct wages		6,46,000			
To Factory O/hs (25% of direct wages)		1,61,500			
			By Wastage (5%) (₹ 50)	950	47,500
			By Abnormal Loss (₹ 200)	550	1,10,000
			By Process T.Y. A/c (₹ 200 per unit)	17,500	35,00,000
	19,000	36,57,500		19,000	36,57,500

Here, difference in cost are ₹ 8,07,500, which is divided into 4:1 to direct wages and factory o/h.

$$\text{Direct wages} = 8,07,500 \times \frac{4}{5} = ₹ 6,46,000$$

$$\text{Factory o/h} = 8,07,500 \times \frac{1}{5} = ₹ 1,61,500.$$

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process S.Y. A/c (₹ 200)	550	1,10,000	By Sale of Wastage (₹ 50 per unit)	550	27,500
			By Profit & Loss A/c (Loss)	--	82,500
	550	1,10,000		550	1,10,000

Dr.	T.Y. A/c			Cr.		
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)	
To Process S.Y. (₹ 200)	17,500	35,00,000				
To Direct wages		4,34,000				
To Factory O/hs (25% of direct wages)		1,08,500				
To Abnormal Gain (₹ 250)	250	62,500	By Wastage (10%) (₹ 60)	1,750	1,05,000	
			By Finished goods A/c (₹ 250 per unit)	16,000	40,00,000	
	17,750	41,05,000		17,750	41,05,000	

Here, difference in cost are ₹ 5,42,500, which is divided into 4:1 to direct wages and factory o/h.

$$\text{Direct wages} = 5,42,500 \times \frac{4}{5} = ₹ 4,34,000$$

$$\text{Factory o/h} = 5,42,500 \times \frac{1}{5} = ₹ 1,08,500.$$

Dr.

Abnormal Gain A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Shortfall in Sale of Wastage (₹ 60 per unit)	250	15,000	By Transfer from Process T.Y A/c (₹ 250)	250	62,500
To P & L A/c (Gain)	--	47,500			
	250	62,500		250	62,500

A product passes through three different Processes 'A', 'B' and 'C' and thereafter it is transferred to finished stock, the information is as under :

Particulars	Process A	Process B	Process C
1. Units introduced (Per unit Rs. 20)	?	-	-
2. Actual Production (Number of Units)	27,900	?	?
3. Normal wastage (Percentage of inputs)	4%	8%	12%
4. Sales value of wastage (Per 50 units)	Rs. 25	Rs. 100	Rs. 150
5. Abnormal wastage (Number of units cost per unit Rs. 40)	900	Nil	-
6. Abnormal gain (Number of units)	-	Nil	632
7. Normal cost of normal output (per unit)	-	Rs. 55	-
8. Cost of Abnormal gain (per unit)	-	-	Rs. 80

Additional information :

- (1) Factory Overheads to be distributed as 100 percentage of direct wages in all three processes.
- (2) The abnormal wastage was 75% of the normal wastage in Process 'A'.

From the above information prepare Process Accounts, Abnormal Accounts and Abnormal Gain Accounts.

Solution:

Dr.		Process A A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Material (₹ 20)	30,000	6,00,000			
To Direct wages		2,76,300			
To Factory O/hs		2,76,300			
			By Wastage (4%) (₹ 0.50)	1200	600
			By Abnormal Loss (₹ 40) (75% of normal loss)	900	36,000
			By Process B A/c (₹ 40 per unit)	27,900	11,16,000
	30,000	11,52,600		30,000	11,52,600

Here, units of input is not given. So, it will be find out from normal wastage which is 4% of input.

Units of Normal wastage is 1,200. So, Units introduced in process A is 30,000 ($1,200 \times 100 / 4$).

Now, Factory o/h are 100% of Direct wages. So, we can say that the ratio between them is 1:1.

Here, difference in cost are ₹ 5,52,600, which is divided into 1:1 to direct wages and factory o/h.

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process A A/c (₹ 40)	900	36,000	By Sale of Wastage (₹ 0.50 per unit)	900	450
			By Profit & Loss A/c (Loss)	--	35,550
	900	36,000		900	36,000

Dr.		Process B A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process A (₹ 40)	27,900	11,16,000			
To Direct wages		1,50,102			
To Factory O/hs (100% of direct wages)		1,50,102			
			By Wastage (8%) (₹ 2) (₹ 100 per 50 units)	2,232	4,464
			By Process C A/c (₹ 55 per unit)	25,668	14,11,740
	27,900	14,16,204		27,900	14,16,204

Here, difference in cost are ₹ 3,00,204, which is divided into 1:1 to direct wages and factory o/h.

$$\text{Direct wages} = 3,00,204 \times \frac{1}{2} = ₹ 1,50,102$$

$$\text{Factory o/h} = 3,00,204 \times \frac{1}{2} = ₹ 1,50,102.$$

Dr.		Process C A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process B (₹ 55)	25,668	14,11,740			
To Direct wages		2,02,270			
To Factory O/hs (100% of direct wages)		2,02,270			
To Abnormal Gain (₹ 80)	632	50,560	By Wastage (12%) (₹ 3)	3,080	9,240
			By Finished goods A/c (₹ 80 per unit)	23,220	18,57,600
	26,300	18,66,840		26,300	18,66,840

Here, difference in cost are ₹ 4,04,540, which is divided into 1:1 to direct wages and factory o/h.

$$\text{Direct wages} = 4,04,540 \times \frac{1}{2} = ₹ 2,02,270$$

$$\text{Factory o/h} = 4,04,540 \times \frac{1}{2} = ₹ 2,02,270.$$

Dr.

Abnormal Gain A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Shortfall in Sale of Wastage (₹ 3 per unit)	632	1,896	By Transfer from Process C A/c (₹ 80)	632	50,560
To P & L A/c (Gain)	--	48,664			
	632	50,560		632	50,560

18. The following details are extracted from the costing records of The Prashant Oil Mill for the year ended March, 2020.

Purchases : 600 tonnes of copra at Rs. 60,000.

	Crushing	Refining	Finishing
	Rs.	Rs.	Rs.
Labour	20,000	15,000	10,000
Electric power	5,000	3,000	1,000
Steam	2,000	1,000	500
Sundry materials	4,000	2,000	1,000
Factory expenses	6,000	5,000	3,000
Cost of casks		Rs. 20,000	
Crude oil produced		400 tonnes	
Refining oil produced		300 tonnes	
After refining oil produced		280 tonnes	
Copra sacks sold for		Rs. 10,000.	

170 tonnes Copra residue sold of for Rs. 5,000.

75 tonnes of by-product obtained from Refining process sold at Rs. 400.

You are required to show the accounts in respect of each of following stages of manufacture for the purpose of arriving at the cost per tonne of each process and the total cost per ton of finished oil.

(1) Copra Crushing Process (2) Refining Process, and (3) Finishing Process including casking.

Solution:

Dr.	Crushing Process A/c				Cr.
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Material	600	60,000			
To Labour		20,000			
To Electric Power		5,000			
To Steam		2,000	By Sale of Copra sacks		10,000
To Sundry Material		4,000	By Copra residue	170	5,000
To Factory Expenses		6,000	By Loss in weight	30	---
			By Refining Process A/c (₹ 205 per unit)	400	82,000
	600	97,000		600	97,000

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{97,000 - 15,000}{600 - 170 - 30} = \frac{82,000}{400} = \text{₹ } 205
 \end{aligned}$$

Dr.		Refining Process A/c				Cr.
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)	
To Crushing A/c (₹ 205)	400	82,000				
To Labour		15,000				
To Electric Power		3,000				
To Steam		1,000				
To Sundry Material		2,000	By by-product of refining	75	400	
To Factory Expenses		5,000	By Loss in weight	25	---	
			By Finishing Process A/c (₹ 358.67 per unit)	300	1,07,600	
	400	1,08,000		400	1,08,000	

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{1,08,000 - 400}{400 - 75 - 25} = \frac{1,07,600}{300} = \text{₹ } 358.67
 \end{aligned}$$

Dr.			Finishing Process A/c			Cr.		
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)			
To Refining A/c (₹ 358.67)	300	1,07,600						
To Labour		10,000						
To Electric Power		1,000						
To Steam		500						
To Sundry Material		1,000						
To Factory Expenses		3,000						
To Cost of Casks		20,000	By Loss in weight	20	---			
			By Fini. Goods A/c (₹ 511.07)	280	1,43,100			
	300	1,43,100		300	1,43,100			

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{1,43,100 - 0}{300 - 20} = \frac{1,43,100}{280} = \text{₹ } 511.07
 \end{aligned}$$

35. The following details are available from the books of Kavish Manufacturing Co. Ltd., regarding the two processes of their factory :

Particulars	Process-1	Process-2
Raw materials introduced	5,000 units at Rs. 30 per unit	—
Direct Wages	Rs. 70,000	Rs. 96,000
Production Overheads	80% of Direct Wages	75% of Direct Wages
Wastage	500 units	250 units
Sales value of wastage (per unit)	Rs.12	Rs. 31.20
By-products	600 units	750 units
Sales of by-products	Cost plus 20%	Sold at price so as to realize 25% profit on sale

Solution:

Dr.	Process - 1 A/c				Cr.
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Material (₹ 30)	5,000	1,50,000			
To Direct wages		70,000			
To Production o/hs (80% of Direct wages)		56,000			
			By N. Wastage (₹ 12)	500	6,000
			By by-product of Process-1 (₹ 60 per unit)	600	36,000
			By Process-2 A/c (₹ 60)	3,900	2,34,000
	5,000	2,76,000		5,000	2,76,000

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{2,76,000 - 6,000}{5,000 - 500} = \frac{2,70,000}{4,500} = \text{₹ } 60
 \end{aligned}$$

Dr.	By-Product of Process-1 A/c				Cr.
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process 1 A/c (₹ 60)	600	36,000	By Sale of by-product (₹ 72 per unit)	600	43,200
To Profit & Loss A/c (Profit)	--	7,200			
	600	43,200		600	43,200

Here, Selling price of by-product of process 1 is cost plus 20%.

Cost of by-product is ₹ 60 + profit 20% = ₹ 72

Dr.		Process - 2 A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process 1 A/c (₹ 60)	3,900	2,34,000			
To Direct wages		96,000			
To Production o/hs (75% of Direct wages)		72,000			
			By N. Wastage (₹ 31.20)	250	7,800
			By by-product of Process-2 (₹ 108 per unit)	750	81,000
			By Fini. Goods A/c (₹ 108)	2,900	3,13,200
	3,900	4,02,000		3,900	4,02,000

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{4,02,000 - 7,800}{3,900 - 250} = \frac{3,94,200}{3,650} = \text{₹ } 108
 \end{aligned}$$

Dr.		By-Product of Process-2 A/c				Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)		
To Transfer from Process 2 A/c (₹ 108)	750	81,000	By Sale of by-product (₹ 144 per unit)	750	1,08,000		
To Profit & Loss A/c (Profit)	--	27,000					
	750	1,08,000		750	1,08,000		

Here, Selling price of by-product of process 2 is Selling price plus 25%.

Suppose, Selling price is 100 so Cost of by-product is 75.

So, if Cost is ₹ 108 per unit, then Selling price is ₹ 144 ($₹ 108 \times 100/75$).

Accounting of Joint Products

“Joint products represent two or more products separated in the course of the same processing operation, usually requiring further processing, each product being in such proportion that no single product can be designated as a major product.”

e.g., in dairy industry milk powder, butter, butter cream, etc. are joint products available. In petroleum industry petrol, diesel, kerosene, etc. are joint products available.

In joint products, expenses upto certain stage are joint or combined and thereafter expenditure on subsequent processes are considered as separate expenses.

CIMA has defined joint product as *“two or more products separated in processing each having a sufficiently high sale value to merit recognition as a main product.”*

Apportionment of Joint Cost

The expenditure incurred in the process from which the two products are derived, is common for both the products. The difficult problem is to apportion the joint cost up to the point of separation. The following methods of apportioning joint costs are generally used:

- On the basis of Production (Physical Measurement basis)
- On the basis of Relative Sales Value Method
- On the basis of Relative Sales Value minus further Processing Cost Method
- On the basis of Weighted Average Units Method
- On the basis of Selling Price Per Unit

22. In Asha Manufacturing Company, By-products named B and C are obtained during the manufacture of product A. Joint expenses of production are as under :

	Rs.	Rs.
Raw Materials	10,000	
Wages	11,500	
Other Expenses	7,700	29,200

Separate expenses are as under :

	A	B	C
	Rs.	Rs.	Rs.
Materials	2,500	1,200	1,400
Wages	1,900	1,600	2,000
Other expenses	<u>1,500</u>	<u>900</u>	<u>1,050</u>
	<u><u>5,900</u></u>	<u><u>3,700</u></u>	<u><u>4,450</u></u>
Selling price	30,000	20,000	15,000
Estimated rates of profit on sale	40%	30%	25%

Show how joint expenses of production can be allocated.

Solution:**Statement Showing Allocation of Joint Expenses**

Particulars	A	B	C	Total (₹)
Selling Price	30,000	20,000	15,000	65,000
Less: Estimated Profit on Sales	12,000	6,000	3,750	21,750
Total Cost (A)	18,000	14,000	11,250	43,250
Less: Separate Expenses				
Materials	2,500	1,200	1,400	5,100
Wages	1,900	1,600	2,000	5,500
Other Expenses	1,500	900	1,050	3,450
Total Separate Expenses (B)	5,900	3,700	4,450	14,050
Allocation of Joint Expenses (A – B)	12,100	10,300	6,800	29,200

Ratio of Apportionment of Joint Expenses = 121 : 103 : 68.

Example - 42: In Sagar company Main product is X and By-products are A and B. The combined expenses of production are as under:

Materials	₹ 1,36,400
Labour	₹ 96,800
Overheads	₹ 74,800

Separate expenses are as under:

Particulars	Product X (₹)	By-Product A (₹)	By-Product B (₹)
Materials	24,000	19,200	21,600
Labour	28,800	16,800	20,400
Overheads	31,200	12,000	14,000
Selling Price	5,04,000	2,08,000	2,00,000
Profit on Selling Price	50%	50%	30%

Prepare statement showing distribution of combined expenses and Cost Sheet for Main Product X.

Solution:

Statement Showing Allocation of Joint Expenses

Particulars	X	A	B	Total (₹)
Selling Price	5,04,000	2,08,000	2,00,000	9,12,000
Less: Estimated Profit on Sales	2,52,000	1,04,000	60,000	4,16,000
Total Cost (A)	2,52,000	1,04,000	1,40,000	4,96,000
Less: Separate Expenses				
Materials	24,000	19,200	21,600	64,800
Labour	28,800	16,800	20,400	66,000
Overheads	31,200	12,000	14,000	57,200
Total Separate Expenses (B)	84,000	48,000	56,000	1,88,000
Allocation of Joint Expenses (A – B)	1,68,000	56,000	84,000	3,08,000

Ratio of Apportionment of Joint Expenses = 168 : 56 : 84.
= 6 : 2 : 3.

Cost Sheet for Main Product X

Particulars		X
Materials:		
Separate Expense	24,000	
+ Joint Allocated (1,36,400 * 6/11)	74,400	98,400
Labour:		
Separate Expense	28,800	
+ Joint Allocated (96,800 * 6/11)	52,800	81,600
Overheads:		
Separate Expense	31,200	
+ Joint Allocated (74,800 * 6/11)	40,800	72,000
Total Cost of Product X		2,52,000

Example – 3: The following information is extracted from the costing records of a factory producing a commodity in the manufacturing of which three processes are involved. The output of each process is transferred to the next process at cost on completion. The stocks which consist of raw materials are valued at cost per unit of the preceding process:

Prepare Process Cost Accounts showing the cost of output and the cost per unit at each stage of manufacture.

	Process A	Process B	Process C
	₹	₹	₹
Direct Wages	12,800	24,000	58,500
Machine Expenses	7,200	6,000	7,200
Factory Expenses	4,000	4,500	4,800
Raw Materials Consumed	48,000	--	--
	Units	Units	Units
Production (Gross)	74,000	--	--
Wastage	2,000	3,000	1,000
Opening Stock (Raw Material)	--	8,000	33,000
Closing Stock (Raw Material)	--	2,000	11,000

Solution:

Process A A/c

Dr.

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Raw Material	74,000	48,000			
To Direct Wages		12,800			
To Machine Exp.		7,200			
To Factory Exp.		4,000			
			By Wastage	2,000	--
			By Process B A/c	72,000	72,000
	74,000	72,000		74,000	72,000

$$\begin{aligned} \text{Cost Per Unit in Process A} &= \frac{\text{Total Cost}}{\text{No. of units}} \\ &= \frac{72,000}{72,000} = ₹ 1 \end{aligned}$$

Process B A/c

Dr.			Cr.		
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process A A/c	72,000	72,000			
To Opg. Stock (₹ 1)	8,000	8,000			
To Direct Wages		24,000			
To Machine Exp.		6,000	By Wastage	3,000	--
To Factory Exp.		4,500	By Clg. Stock (₹ 1)	2,000	2,000
			By Process C A/c	75,000	1,12,500
	80,000	1,14,500		80,000	1,14,500

$$\begin{aligned}
 \text{Cost Per Unit in Process B} &= \frac{\text{Total Cost}}{\text{No. of units}} \\
 &= \frac{1,12,500}{75,000} && = ₹ 1.5
 \end{aligned}$$

Process C A/c

Dr.			Cr.		
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process B A/c	75,000	1,12,500			
To Opg. Stock(₹1.5)	33,000	49,500			
To Direct Wages		58,500			
To Machine Exp.		7,200	By Wastage	1,000	--
To Factory Exp.		4,800	By Clg. Stock(₹ 1.5)	11,000	16,500
			By Fini. Stock A/c	96,000	2,16,000
	1,08,000	2,32,500		1,08,000	2,32,500

$$\begin{aligned}
 \text{Cost Per Unit in Process C} &= \frac{\text{Total Cost}}{\text{No.of units}} \\
 &= \frac{2,16,000}{96,000} && = ₹ 2.25
 \end{aligned}$$

7. The product of a company passes through three different process A, B and C. It is ascertained from past experience that normal loss in each process is always 10% of input units of the process concerned. The loss of each process has a scrap value. Realisable value of scrap of each process is as under :

Process A Rs. 5 per unit, Process B Rs. 10 per unit and Process C Rs. 15 per unit.

The company gives you the following information for the month of January, 2013.

2,000 units of chemical material were introduced in process A at cost of Rs. 8 per unit. Besides this, the following were other expenses :

Particulars	Process A Rs.	Process B Rs.	Process C Rs.
Materials consumed	8,000	3,000	2,000
Direct wages	12,000	8,000	1,000
Work Expenses	1,000	1,000	5,500
	Units	Units	Units
Actual output	1,700	1,400	1,500
Stock of Finished units :			
January 1	300	600	—
January 31	500	200	—
Valuation on January 1	Rs. 20	Rs. 30	—

Finished Stock on 31st January are to be valued at cost as shown by month's product accounts. Prepare the process accounts and other necessary accounts.

[Ans. : Process A, B, C]

Solution:

Dr.			Process A A/c			Cr.		
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Material (₹ 8)	2,000	16,000						
To Opg. Stock (₹ 20)	300	6,000						
To Sundry Material		8,000						
To Direct wages		12,000						
To Work Expenses		1,000	By Wastage (10 %) (₹ 5)	200	1000			
			By Closing Stock (₹ 20)	500	10,000			
To Abnormal Gain (₹ 20)	100	2,000						
			By Process B A/c (₹ 20)	1,700	34,000			
	2,400	45,000		2,400	45,000			

$$\begin{aligned}\text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\ &= \frac{43,000 - 1000}{2,300 - 200} = \frac{42,000}{2100} = ₹ 20\end{aligned}$$

Dr.

Abnormal Gain A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Shortfall in Sale of Wastage (₹ 5 per unit)	100	500	By Transfer from Process A A/c (₹ 20)	100	2,000
To P & L A/c (Gain)	--	1,500			
	100	2,000		100	2,000

Dr.		Process B A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process A (₹ 20)	1,700	34,000			
To Opg. Stock (₹ 30)	600	18,000			
To Sundry Material		3,000			
To Direct wages		8,000			
To Work Expenses		1,000	By Wastage (10 %) (₹ 10)	170	1,700
			By Closing Stock (₹ 29.25)	200	5,850
			By Abnormal Loss (₹ 29.25)	530	15,502
			By Process C A/c (₹ 29.25)	1,400	40,948
	2,300	64,000		2,300	64,000

$$\text{Cost Per Unit} = \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}}$$

$$= \frac{64,000 - 1,700}{2,300 - 170}$$

$$= \frac{62,300}{2,130}$$

$$= ₹ 29.25$$

Dr.

Abnormal Loss A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Transfer from Process B A/c (₹ 29.25)	530	15,502	By Sale of Wastage (₹ 10 per unit)	530	5,300
			By Profit & Loss A/c (Loss)	--	10,202
	530	15,502		530	15,502

Dr.		Process C A/c		Cr.	
Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Process B (₹ 29.25)	1,400	40,948			
To Sundry Material		2,000			
To Direct wages		1,000			
To Work Expenses		5,500			
To Abnormal Gain (₹ 37.58 per unit)	240	9,019	By Wastage (10 %) (₹ 15)	140	2,100
			By Fini. goods A/c (₹ 37.58)	1,500	56,367
	1,640	58,467		1,640	58,467

$$\begin{aligned}
 \text{Cost Per Unit} &= \frac{\text{Total Cost} - \text{Scrap}}{\text{Units introduced} - \text{Normal Wastage}} \\
 &= \frac{49,448 - 2,100}{1,400 - 140} = \frac{47,348}{1,260} = \text{₹ } 37.58
 \end{aligned}$$

Dr.

Abnormal Gain A/c

Cr.

Particulars	Units	Total (₹)	Particulars	Units	Total (₹)
To Shortfall in Sale of Wastage (₹ 15 per unit)	240	3,600	By Transfer from Process C A/c (₹ 37.58)	240	9,019
To P & L A/c (Gain)	--	5,419			
	240	9,019		240	9,019