Process Costing

Process Costing

Example

 → Foundation → Inter → final → 

Student — CA

Example

 → Process I → Process II → Process III → 

Cloth — T-shirt.

	P1	P2	P3	
Budget	60	30	10	100
Actual	70	40	10	120
	↑ 10	↑ 10		↑ 20

CHAPTER OVERVIEW.

Process Costing

1. Process A/c without WIP
   - (6 steps)
     1. Normal loss & Abnormal loss
     2. Normal loss & Abnormal Gain
     3. Output of Process I
     4. Output of Last process.
     5. Costing P&L A/c
2. Process A/c with WIP
   - (6 steps)
     1. Process A/c with Two material
     2. Calculation of Normal loss
     3. Conversion cost
     4. method to be followed.
3. Inter process Profit

1. Process Account (without WIP)

	Qty	Amt
step 1 : Dr side : Input material	✓	✓

	Qty	Amt
step 2 : Dr side : Material		✓
labour		✓
OH		✓

	Qty	Amt
step 3 : Cr. side : Normal loss (NL)	✓	✓
	↓	↓
	% of Input material Qty	NL x scrap Qty value

step 4 : Formula :

$$\text{cost per unit (4 decimals)} = \frac{\text{Total cost - Scrap value}}{\text{Total Qty - NL Qty}} = \frac{\text{Amt (Dr-Cr)}}{\text{Qty (Dr-Cr)}}$$

	Qty	Amt
step 5 : Cr side : Actual output transferred to next process [If last process then to FG]	✓ (given)	✓ ↓ Qty x CPU

step 6 : Close process account.

If Balancing figure on

Debit side : Abnormal Gain (ANG)

Credit side : Abnormal loss (ANL)

1. Normal loss & Abnormal loss:

Step 1: Give second effect:

Normal loss A/c : Debit side : To Process A/c
Abnormal loss A/c : Debit side : To Process A/c

Step 2: Sale of scrap: (Qty x scrap value)

Normal loss A/c : Credit side : By Cash/Bank A/c
Abnormal loss A/c : Credit side : By Cash/Bank A/c

Step 3: Close respective accounts

Normal loss A/c : Tally
Abnormal loss A/c : Balancing figure on credit side will be transferred to costing P&L

2. Normal loss & Abnormal Gain Account:

Step 1: Give second effect:

Normal loss A/c : Debit side : To Process A/c
Abnormal Gain A/c : Credit side : By Process A/c

Step 2 : Sale of scrap

Normal loss A/c : Credit side :
- By cash/Bank (Normal loss - ANG units)
- By Abnormal Gain

ANG appearing in Normal loss A/c will be transfered on the debit side of ANG A/c

Step 3 : Close respective A/c.

Normal loss A/c : Tally
Abnormal Gain A/c : Balancing figure on debit side will be transferred to costing P&L

3. Output of process 1:

- Entire output transferred to next process → By output transferred to next process (Qty x CPU)
- Partly transfered & Partly sold (in market)
  - Partly transferred → By output transferred to next process (Qty x CPU)
  - Partly sold → By costing P&L (Qty x CPU)

4. Output of last process

- Entire output is sold → By costing P&L or FG (Qty x CPU)
- Partly sold & Partly in closing stock → By Finished Goods A/c (Qty x CPU)

5. Costing P&L account:

- common expenses: If Ratio for apportionment to process a/c is given
  - YES → Process A/c
  - NO → Costing P&L

- Shortcut for Abnormal Gain/loss = (Total CPU − Scrap value) x Qty

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2. Process Account (with WIP)

Step 1 : Process Account

Read entire question and fill up process account.

Step 2 : Quantity column

Close quantity column of process account.

If Balancing figure on

Debit side : Abnormal Gain (ANG)

Credit side : Abnormal loss (ANL)

NOTE: Amount column

We need to calculate the cost amount of following

a) Output transferred to next process

b) Closing wip

c) ANG or ANL.

Step 3	x	Step 4	=	Step 5
Equivalent Production	x	Cost per unit	=	Apportionment of cost.

Step 3 : Statement showing Equivalent Production.

FIFO: (current period)

Particulars	Qty	%
a) Output transferred to next process		
i) Opening wip completed	x	→ [% given in Question - 100]
ii) Started & completed	x	Always 100%
b) Closing wip	x	% given in Question
c) Abnormal loss	x	NOTE 1
or		
c) Abnormal Gain	(x)	Always 100% & substracted.

WAM: (last + current period)

Particulars	Qty	%
a) Output transferred to next process	x	Always 100%
b) Closing wip	x	% given in Question
c) Abnormal loss	x	NOTE 1
or		
c) Abnormal Gain	(x)	Always 100% & substracted.

NOTE 1 : % of Abnormal loss (Added)

Preference 1: % given in question

Preference 2: If Question is silent then always 100%.

Step 4 : Statement showing cost per unit.

FIFO (current period)

Particulars	Amt
Cost incurred in :	
current period	x
(-) Scrap	(x)
Net cost	x
÷ Equivalent Production	÷ x
current cost per unit	x (current period)

WAM

Particulars	Amt
Cost incurred in :	
Last period	x
current period	x
(-) Scrap	(x)
Net cost	x
÷ Equivalent Production	÷ x
cost per unit	x (last + current period)

NOTE: Scrap should be substracted from Main Material.

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Step 5 : Statement showing apportionment of cost

FIFO:

a) Output transferred to next process:

i) opening wip completed

Particulars	material	labour	OH
Eq. Production	x	x	x
x CPU	x	x	x
	x	x	x

+ last period cost — x

ii) started & completed (units x total CPU) — x

x

WAM

a) Output transferred to next process: x

(units x total CPU)

Step 6 : Amount column

Close Amount column of process account.

If Balancing figure on

Debit side : Abnormal Gain (ANG)

Credit side : Abnormal loss (ANL)

1. Process A/c with Two materials

material A (main material)
(Material received from earlier process)

Opening wip : NIL %

others : 100 %

(scrap is substracted from main material i.e. material A)

material B
(material input by current process)

solve like normal material

2. Calculation of Normal loss:

Question:

Opening wip : 100
Input material : 500
Closing wip : 150
Actual output transferred to next process : 400

cases:

1. Normal loss is 10% of Total Input including opening wip

Normal loss = (100 + 500) x 10% = 60 units

2. Normal loss is 10% of Input.

Normal loss = 500 x 10% = 50 units

3. Normal loss is 10% Production.

opening wip	100
(+) Input	500
(-) closing wip	(150)
Production	450
x Normal loss(%)	x 10%
	45 units

4. Normal loss is 10% of good units transferred to next process.

Normal loss = 400 x 10% = 40 units.

3. Conversion cost:

It means cost incurred to convert RM into FG

It includes : labour & factory OH

It does not include : Ram material.

4. Method to be followed

Preference 1
Method specified in the question.

Preference 2
If question is silent

Break-up of opening wip given in terms of

% of completion
FIFO
(current period)

Cost incurred for Material, Labour & OH
WAM
(Last + current period)

3. Inter Process Profit.

Particulars	cost	profit	Total

cost → cost to the company

Total → cost to process → To calculate profit this is cost.

CA RAHUL PANCHAL

REVISION TEST PAPER

RTP MAY 18

Star Ltd. manufactures chemical solutions for the food processing industry. The manufacturing takes place in a number of processes and the company uses FIFO method to value work-in-process and finished goods. At the end of the last month, a fire occurred in the factory and destroyed some of paper containing records of the process operations for the month.

Star Ltd. needs your help to prepare the process accounts for the month during which the fire occurred. You have been able to gather some information about the month's operating activities but some of the information could not be retrieved due to the damage. The following information was salvaged:

- Opening work-in-process at the beginning of the month was 800 litres, 70% complete for labour and 60% complete for overheads. Opening work-in-process was valued at ₹ 26,640.
- Closing work-in-process at the end of the month was 160 litres, 30% complete for labour and 20% complete for overheads.
- Normal loss is 10% of input and total losses during the month were 1,800 litres partly due to the fire damage.
- Output sent to finished goods warehouse was 4,200 litres.
- Losses have a scrap value of ₹15 per litre.
- All raw materials are added at the commencement of the process.
- The cost per equivalent unit (litre) is ₹39 for the month made up as follows:

	(₹)
Raw Material	23
Labour	7
Overheads	9
	39

Required:

(i) CALCULATE the quantity (in litres) of raw material inputs during the month.

(ii) CALCULATE the quantity (in litres) of normal loss expected from the process and the quantity (in litres) of abnormal loss / gain experienced in the month.

(iii) CALCULATE the values of raw material, labour and overheads added to the process during the month.

(iv) PREPARE the process account for the month.

ANSWER :

(i) Calculation of Raw Material inputs during the month:

Quantities Entering Process	Litres	Quantities Leaving Process	Litres
Opening WIP	800	Transfer to Finished Goods	4,200
Raw material input (balancing figure)	5,360	Process Losses	1,800
		Closing WIP	160
	6,160		6,160

(ii) Calculation of Normal Loss and Abnormal Loss/Gain

	Litres
Total process losses for month	1,800
Normal Loss (10% input)	536
Abnormal Loss (balancing figure)	1,264

(iii) Calculation of values of Raw Material, Labour and Overheads added to the process:

	Material	Labour	Overheads
Cost per equivalent unit	₹23.00	₹7.00	₹9.00
Equivalent units (litre) (refer the working note)	4,824	4,952	5,016
Cost of equivalent units	₹1,10,952	₹34,664	₹45,144
Add: Scrap value of normal loss (536 units × ₹ 15)	₹8,040	--	--
Total value added	₹1,18,992	₹34,664	₹45,144

Workings:

Statement of Equivalent Units (litre):

Input Details	Units	Output details	Units	Equivalent Production					
				Material		Labour		Overheads	
				Units	(%)	Units	(%)	Units	(%)
Opening WIP	800	Units completed:							
Units introduced	5,360	- Opening WIP	800	--	--	240	30	320	40
		- Fresh inputs	3,400	3,400	100	3,400	100	3,400	100
		Normal loss	536	--	--	--	--	--	--
		Abnormal loss	1,264	1,264	100	1,264	100	1,264	100
		Closing WIP	160	160	100	48	30	32	20
	6,160		6,160	4,824		4,952		5,016	

(iv) Process Account for Month

	Litres	Amount (₹)		Litres	Amount (₹)
To Opening WIP	800	26,640	By Finished goods	4,200	1,63,800
To Raw Materials	5,360	1,18,992	By Normal loss	536	8,040
To Wages	--	34,664	By Abnormal loss	1,264	49,296
To Overheads	--	45,144	By Closing WIP	160	4,304
	6,160	2,25,440		6,160	2,25,440

RTP NOV 18

From the following information for the month of January, 20X9, PREPARE Process-III cost accounts.

Opening WIP in Process-III	1,600 units at ₹ 24,000
Transfer from Process-II	55,400 units at ₹ 6,23,250
Transferred to warehouse	52,200 units
Closing WIP of Process-III	4,200 units
Units Scrapped	600 units

Direct material added in Process-III	₹ 2,12,400
Direct wages	₹ 96,420
Production overheads	₹ 56,400

Degree of completion:

	Opening Stock	Closing Stock	Scrap
Material	80%	70%	100%
Labour	60%	50%	70%
Overheads	60%	50%	70%

The normal loss in the process was 5% of the production and scrap was sold @ ₹ 5 per unit.
(Students may treat material transferred from Process – II as Material – A and fresh material used in Process – III as Material B)

ANSWER :

Statement of Equivalent Production Process III

Input Details	Units	Output Particulars	Units	Equivalent Production					
				Material-A		Material-B		Labour & Overhead	
				%	Units	%	Units	%	Units
Opening WIP	1,600	Work on Op. WIP	1,600	-	-	20	320	40	640
Process-II Transfer	55,400	Introduced & completed during the month	50,600	100	50,600	100	50,600	100	50,600
		Normal loss (5% of 52,800 units)	2,640	-	-	-	-	-	-
		Closing WIP	4,200	100	4,200	70	2,940	50	2,100
		Abnormal Gain	(2,040)	100	(2,040)	100	(2,040)	100	(2,040)
	57,000		57,000		52,760		51,820		51,300

Working note:

Production units = Opening units + Units transferred from Process-II – Closing Units
= 1,600 units + 55,400 units – 4,200 units
= 52,800 units

Statement of Cost

	Cost (₹)	Equivalent units	Cost per equivalent units (₹)
Material A (Transferred from previous process)	6,23,250		
Less: Scrap value of normal loss (2,640 units × ₹ 5)	(13,200)		
	6,10,050	52,760	11.5627
Material B	2,12,400	51,820	4.0988
Labour	96,420	51,300	1.8795
Overheads	56,400	51,300	1.0994
	9,75,270		18.6404

Statement of apportionment of Process Cost

		Amount (₹)	Amount (₹)
Opening WIP	Material A		24,000
Completed opening	Material B (320 units × ₹ 4.0988)	1311.62	
WIP units-1600			
	Wages (640 units × ₹ 1.8795)	1202.88	
	Overheads (640 units × ₹ 1.0994)	703.62	3,218.12
Introduced &	50,600 units × ₹ 18.6404		9,43,204.24
Completed- 50,600			
units			
Total cost of 52,200			9,70,422.36
finished goods units			
Closing WIP units-	Material A (4,200 units × ₹ 11.5627)		48,563.34
4,200			
	Material B (2,940 units × ₹ 4.0988)		12,050.47
	Wages (2,100 units × ₹ 1.8795)		3,946.95
	Overheads (2,100 units × ₹ 1.0994)		2,308.74
			66,869.50
Abnormal gain units	(2,040 units × ₹ 18.6404)		38026.42
- 2,040			

Process III A/c

Particulars		Units	Amount (₹)	Particulars		Units	Amount (₹)
To	Balance b/d	1,600	24,000	By	Normal loss	2,640	13,200
To	Process II A/c	55,400	6,23,250	By	Finished goods	52,200	9,70,422.36
To	Direct material		2,12,400	By	Closing WIP	4,200	66,874.06*
To	Direct wages		96,420				
To	Production overheads		56,400				
To	Abnormal gain	2,040	38,026.42				
		59,040	10,50,496.42			59,040	10,50,496.42

* Difference in figure due to rounding off has been adjusted with closing WIP

RTP NOV 19

A product is manufactured in two sequential processes, namely Process-1 and Process-2. The following information relates to Process-1. At the beginning of June 2019, there were 1,000 WIP goods (60% completed in terms of conversion cost) in the inventory, which are valued at ₹2,86,020 (Material cost: ₹2,55,000 and Conversion cost: ₹31,020). Other information relating to Process-1 for the month of June 2019 is as follows;

Cost of materials introduced- 40,000 units (₹)	96,80,000
Conversion cost added (₹)	18,42,000
Transferred to Process-2 (Units)	35,000
Closing WIP (Units) (60% completed in terms of conversion cost)	1,500

100% of materials are introduced to Process-1 at the beginning. Normal loss is estimated at 10% of input materials (excluding opening WIP).

Required:

(i) PREPARE a statement of equivalent units using the weighted average cost method and thereby calculate the following:

(ii) CALCULATE the value of output transferred to Process-2 and closing WIP.

ANSWER :

(i) Statement of Equivalent Production

Particulars	Input Units	Particulars	Output Units	Equivalent Production			
				Material		Conversion cost	
				%	Units	%	Units
Opening WIP	1,000	Completed and transferred to Process-2	35,000	100	35,000	100	35,000
Units introduced	40,000	Normal Loss (10% of 40,000)	4,000	--	--	--	--
		Abnormal loss (Balancing figure)	500	100	500	60	300
		Closing WIP	1,500	100	1,500	60	900
	41,000		41,000		37,000		36,200

(ii) Calculation of value of output transferred to Process-2 & Closing WIP

	Amount (₹)	Amount (₹)
1. Value of units completed and transferred (35,000 units × ₹ 320.25) (Refer working note)		1,12,08,750
3. Value of Closing W-I-P:		
- Materials (1,500 units × ₹ 268.51)	4,02,765	
- Conversion cost (900 units × ₹ 51.74)	46,566	4,49,331

Workings:

Cost for each element

Particulars	Materials (₹)	Conversion (₹)	Total (₹)
Cost of opening work-in-process	2,55,000	31,020	2,86,020
Cost incurred during the month	96,80,000	18,42,000	1,15,22,000
Total cost: (A)	99,35,000	18,73,020	1,18,08,020
Equivalent units: (B)	37,000	36,200	
Cost per equivalent unit: (C) = (A ÷ B)	268.51	51.74	320.25

RTP MAY 20

Star Ltd. manufactures chemical solutions for the food processing industry. The manufacturing takes place in a number of processes and the company uses FIFO method to value work-in-process and finished goods. At the end of the last month, a fire occurred in the factory and destroyed some of papers containing records of the process operations for the month.

Star Ltd. needs your help to prepare the process accounts for the month during which the fire occurred. You have been able to gather some information about the month's operating activities

but some of the information could not be retrieved due to the damage. The following information was salvaged:

- Opening work-in-process at the beginning of the month was 1,600 litres, 70% complete for labour and 60% complete for overheads. Opening work-in-process was valued at ₹ 1,06,560.
- Closing work-in-process at the end of the month was 320 litres, 30% complete for labour and 20% complete for overheads.
- Normal loss is 10% of input and total losses during the month were 1,200 litres partly due to the fire damage.
- Output sent to finished goods warehouse was 8,400 litres.
- Losses have a scrap value of ₹15 per litre.
- All raw materials are added at the commencement of the process.
- The cost per equivalent unit (litre) is ₹78 for the month made up as follows:

	(₹)
Raw Material	46
Labour	14
Overheads	18
	78

Required:

(i) CALCULATE the quantity (in litres) of raw material inputs during the month.

(ii) CALCULATE the quantity (in litres) of normal loss expected from the process and the quantity (in litres) of abnormal loss / gain experienced in the month.

(iii) CALCULATE the values of raw material, labour and overheads added to the process during the month.

(iv) PREPARE the process account for the month.

ANSWER :

(i) Calculation of Raw Material inputs during the month:

Quantities Entering Process	Litres	Quantities Leaving Process	Litres
Opening WIP	1,600	Transfer to Finished Goods	8,400
Raw material input (balancing figure)	8,320	Process Losses	1,200
		Closing WIP	320
	9,920		9,920

(ii) Calculation of Normal Loss and Abnormal Loss/Gain

	Litres
Total process losses for month	1,200
Normal Loss (10% input)	832
Abnormal Loss (balancing figure)	368

(iii) Calculation of values of Raw Material, Labour and Overheads added to the process:

	Material	Labour	Overheads
Cost per equivalent unit	₹46.00	₹14.00	₹18.00
Equivalent units (litre) (refer the working note)	7,488	7,744	7,872
Cost of equivalent units	₹3,44,448	₹1,08,416	₹1,41,696

Add: Scrap value of normal loss (832 units × ₹15)	₹12,480	--	--
Total value added	₹3,56,928	₹1,08,416	₹1,41,696

Workings:

Statement of Equivalent Units (litre):

Input Details	Units	Output details	Units	Equivalent Production					
				Material		Labour		Overheads	
				Units	(%)	Units	(%)	Units	(%)
Opening WIP	1,600	Units completed:							
Units introduced	8,320	- Opening WIP	1,600	--	--	480	30	640	40
		- Fresh inputs	6,800	6,800	100	6,800	100	6,800	100
		Normal loss	832	--	--	--	--	--	--
		Abnormal loss	368	368	100	368	100	368	100
		Closing WIP	320	320	100	96	30	64	20
	9,920		9,920	7,488		7,744		7,872	

(iv) Process Account for the month

	Litres	Amount (₹)		Litres	Amount (₹)
To Opening WIP	1,600	1,06,560	By Finished goods [8400 x ₹ 78]	8,400	6,55,200
To Raw Materials	8,320	3,56,928	By Normal loss [832 x ₹ 15]	832	12,480
To Wages	--	1,08,416	By Abnormal loss [368 x ₹ 78]	368	28,704
To Overheads	--	1,41,696	By Closing WIP [(320 x ₹ 46) + (320 x .30 x ₹ 14) + (320 x .20 x ₹ 18)]	320	17,216
	9,920	7,13,600		9,920	7,13,600

RTP NOV 20

M Ltd. produces a product-X, which passes through three processes, I, II and III. In Process-III a by-product arises, which after further processing at a cost of ₹85 per unit, product Z is produced. The information related for the month of August 2020 is as follows:

	Process-I	Process-II	Process-III
Normal loss	5%	10%	5%
Materials introduced (7,000 units)	1,40,000	-	-
Other materials added	62,000	1,36,000	84,200
Direct wages	42,000	54,000	48,000
Direct expenses	14,000	16,000	14,000

Production overhead for the month is ₹2,88,000, which is absorbed as a percentage of direct wages.

The scrapes are sold at ₹10 per unit

Product-Z can be sold at ₹135 per unit with a selling cost of ₹15 per unit No. of units produced: Process-I- 6,600; Process-II- 5,200, Process-III- 4,800 and Product-Z- 600 There is not stock at the beginning and end of the month.

You are required to PREPARE accounts for:

(i) Process-I, II and III

(ii) By-product process.

ANSWER :

(i)

Process-I A/c

Particulars	Units	Amt.(₹)	Particulars	Units	Amt.(₹)
To Materials	7,000	1,40,000	By Normal loss (5% of 7,000)	350	3,500
To Other materials	-	62,000	By Process-II*	6,600	3,35,955
To Direct wages	-	42,000	By Abnormal loss*	50	2,545
To Direct expenses	-	14,000			
To Production OH (200% of ₹42,000)	-	84,000			
	7,000	3,42,000		7,000	3,42,000

* $\frac{₹(3,42,000 - 3,500)}{(7,000 - 350)\text{units}}$ = ₹50.9022

Process-II A/c

Particulars	Units	Amt.(₹)	Particulars	Units	Amt.(₹)
To Process-I A/c	6,600	3,35,955	By Normal loss (10% of 6,600)	660	6,600
To Other materials	-	1,36,000	By Process-III**	5,200	5,63,206
			By Abnormal loss**	740	80,149
To Direct wages	-	54,000			
To Direct expenses	-	16,000			
To Production OH (200% of ₹54,000)	-	1,08,000			
	6,600	6,49,955		6,600	6,49,955

** $\frac{₹(6,49,955 - 6,600)}{(6,600 - 660)\text{units}}$ = ₹50.9022

Process-III A/c

Particulars	Units	Amt.(₹)	Particulars	Units	Amt.(₹)
To Process-I A/c	5,200	5,63,206	By Normal loss (5% of 5,200)	260	2,600
To Other materials	-	84,200	By Product-X***	4,800	8,64,670
To Direct wages	-	48,000			
To Direct expenses	-	14,000	By Product-Z# (₹35×600)	600	21,000

	To Production OH (200% of ₹48,000)	-	96,000			
	To Abnormal gain***	460	82,864			
		5,660	8,88,270		5,660	8,88,270

** ₹(8,05,406 - 2,600 - 21,000) / (5,200 - 260 - 600)units = ₹180.1396

Realisable value = ₹135 – (85+15) = ₹35

(ii) By-Product Process A/c

Particulars	Units	Amt.(₹)	Particulars	Units	Amt.(₹)
To Process-III A/c	600	21,000	By Product-Z	600	81,000
To Processing cost	-	51,000			
To Selling expenses	-	9,000			
	600	81,000		600	81,000

RTP MAY 21

A company produces a component, which passes through two processes. During the month of November, 2020, materials for 40,000 components were put into Process- I of which 30,000 were completed and transferred to Process- II. Those not transferred to Process- II were 100% complete as to materials cost and 50% complete as to labour and overheads cost. The Process- I costs incurred were as follows:

Direct Materials	₹ 3,00,000
Direct Wages	₹ 3,50,000
Factory Overheads	₹ 2,45,000

Of those transferred to Process II, 28,000 units were completed and transferred to finished goods stores. There was a normal loss with no salvage value of 200 units in Process II. There were 1,800 units, remained unfinished in the process with 100% complete as to materials and 25% complete as regard to wages and overheads.

Costs incurred in Process-II are as follows:

Packing Materials	₹ 80,000
Direct Wages	₹ 71,125
Factory Overheads	₹ 85,350

Packing material cost is incurred at the end of the second process as protective packing to the completed units of production.

Required:

(i) PREPARE Statement of Equivalent Production, Cost per unit and Process I A/c.

(ii) PREPARE statement of Equivalent Production, Cost per unit and Process II A/c.

ANSWER :

Process I

Statement of Equivalent Production and Cost

Input (Units)	Particulars	Output Units	Equivalent Production					
			Materials		Labour		Overheads	
			(%)	Units	(%)	Units	(%)	Units
40,000	Completed	30,000	100	30,000	100	30,000	100	30,000

	Closing WIP	10,000	100	10,000	50	5,000	50	5,000
40,000		40,000		40,000		35,000		35,000

Particulars	Materials	Labour	Overhead	Total
Cost incurred (₹)	3,00,000	3,50,000	2,45,000	8,95,000
Equivalent units	40,000	35,000	35,000	
Cost per equivalent unit (₹)	7.50	10.00	7.00	24.50

Process-I Account

Particulars	Units	(₹)	Particulars	Units	(₹)
To Materials	40,000	3,00,000	By Process-II A/c (30,000 units × ₹24.5)	30,000	7,35,000
To Labour		3,50,000	By Closing WIP*	10,000	1,60,000
To Overhead		2,45,000			
	40,000	8,95,000		40,000	8,95,000

* (Material 10,000 units × ₹ 7.5) + (Labour 5,000 units × ₹ 10) + (Overheads 5,000 units × ₹7)
= ₹ 75,000 + ₹ 50,000 + ₹ 35,000 = ₹ 1,60,000

Process II

Statement of Equivalent Production and Cost

Input (Units)	Particulars	Output Units	Equivalent Production					
			Materials		Labour		Overheads	
			(%)	Units	(%)	Units	(%)	Units
30,000	Completed	28,000	100	28,000	100	28,000	100	28,000
	Normal loss	200		--		--		--
	Closing WIP	1,800	100	1,800	25	450	25	450
30,000		30,000		29,800		28,450		28,450

Particulars	Materials	Labour	Overhead	Total
Process-I Cost	7,35,000	--	--	7,35,000
Cost incurred (₹)	--	71,125	85,350	1,56,475
Equivalent units	29,800	28,450	28,450	--
Cost per equivalent unit (₹)	24.6644	2.5000	3.0000	30.1644

Process-II Account

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-I A/c	30,000	7,35,000	By Normal loss A/c	200	--
To Packing Material	--	80,000	By Finished Goods Stock A/c	28,000*	9,24,604
To Direct Wages	--	71,125	By Closing WIP	1,800**	46,871
To Factory Overhead	--	85,350			
	30,000	9,71,475		30,000	9,71,475

* 28,000 × ₹ 30.1644 = ₹ 8,44,603 + ₹ 80,000 (Packing Material Cost) = ₹ 9,24,604

** 1,800 units × ₹ 24.6644 + 450 units × (₹ 2.5 + ₹3) = ₹ 46,871

RTP NOV 21

Following information is available regarding Process-I of a manufacturing company for the month of February:

Production Record:	
Units in process as on 1st February	
(All materials used, 1/4th complete for labour and overhead)	8,000
New units introduced	32,000
Units completed	28,000
Units in process as on 28th February	
(All materials used, 1/3rd complete for labour and overhead)	12,000
Cost Records:	(₹)
Work-in-process as on 1st February	
Materials	1,20,000
Labour	20,000
Overhead	20,000
	1,60,000
Cost during the month:	
Materials	5,12,000
Labour	3,00,000
Overhead	3,00,000
	11,12,000

Presuming that average method of inventory is used, PREPARE the following:

(i) Statement of equivalent production.

(ii) Statement showing cost for each element.

(iii) Statement of apportionment of cost.

(iv) Process cost account for Process-I.

ANSWER :

(i) Statement of equivalent production (Average cost method)

Particulars	Input Units	Particulars	Output Units	Equivalent Production			
				Material		Labour & O.H.	
				%	Units	%	Units
Opening WIP	8,000	Completed and transferred	28,000	100	28,000	100	28,000
Units introduced	32,000	Closing WIP	12,000	100	12,000	1/3rd	4,000
	40,000		40,000		40,000		32,000

(ii) Statement showing cost for each element

Particulars	Materials (₹)	Labour (₹)	Overhead (₹)	Total (₹)
Cost of opening work-in- process	1,20,000	20,000	20,000	1,60,000
Cost incurred during the month	5,12,000	3,00,000	3,00,000	11,12,000
Total cost: (A)	6,32,000	3,20,000	3,20,000	12,72,000
Equivalent units: (B)	40,000	32,000	32,000	
Cost per equivalent unit: (C) = (A ÷ B)	15.8	10	10	35.8

(iii) Statement of apportionment of cost

Particulars	Amount (₹)	Amount (₹)
1. Value of units completed and transferred (28,000 units × ₹ 35.8)		10,02,400
2. Value of Closing W-I-P:		
- Materials (12,000 units × ₹ 15.8)	1,89,600	
- Labour (4,000 units × ₹ 10)	40,000	
- Overheads (4,000 units × ₹ 10)	40,000	2,69,600

(iv) Process-I Cost Account

Particulars	Units	(₹)	Particulars	Units	(₹)
To Opening W-I-P	8,000	1,60,000	By Completed units	28,000	10,02,400
To Materials	32,000	5,12,000	By Closing W-I-P	12,000	2,69,600
To Labour	--	3,00,000			
To Overhead	--	3,00,000			
	40,000	12,72,000		40,000	12,72,000

RTP MAY 22

A company produces a component, which passes through two processes. During the month of December, 2021, materials for 40,000 components were put into Process-I of which 30,000 were completed and transferred to Process-II. Those not transferred to Process- II were 100% complete as to materials cost and 50% complete as to labour and overheads cost. The Process- I costs incurred were as follows:

Direct Materials	₹ 6,00,000
Direct Wages	₹ 7,00,000
Factory Overheads	₹ 4,90,000

Of those transferred to Process II, 28,000 units were completed and transferred to finished goods stores. There was a normal loss with no salvage value of 200 units in Process II. There were 1,800 units, remained unfinished in the process with 100% complete as to materials and 25% complete as regard to wages and overheads.

Costs incurred in Process-II are as follows:

Packing Materials	₹ 1,60,000
Direct Wages	₹ 1,42,250
Factory Overheads	₹ 1,70,700

Packing material cost is incurred at the end of the second process as protective packing to the completed units of production.

Required:

(i) PREPARE Statement of Equivalent Production, Cost per unit and Process I A/c.

(ii) PREPARE statement of Equivalent Production, Cost per unit and Process II A/c.

ANSWER :

(i) Process I

Statement of Equivalent Production and Cost

Input (Units)	Particulars	Output Units	Equivalent Production					
			Materials		Labour		Overheads	
			(%)	Units	(%)	Units	(%)	Units
40,000	Completed	30,000	100	30,000	100	30,000	100	30,000
	Closing WIP	10,000	100	10,000	50	5,000	50	5,000
40,000		40,000		40,000		35,000		35,000

Particulars	Materials	Labour	Overhead	Total
Cost incurred (₹)	6,00,000	7,00,000	4,90,000	17,90,000
Equivalent units	40,000	35,000	35,000	
Cost per equivalent unit (₹)	15	20	14	49

Particulars	Units	(₹)	Particulars	Units	(₹)
To Materials	40,000	6,00,000	By Process-II A/c (30,000 units × ₹49)	30,000	14,70,000
To Labour		7,00,000	By Closing WIP*	10,000	3,20,000
To Overhead		4,90,000			
	40,000	17,90,000		40,000	17,90,000

* (Material 10,000 units × ₹ 15) + (Labour 5,000 units × ₹ 20) + (Overheads 5,000 units × ₹ 14)

= ₹ 1,50,000 + ₹ 1,00,000 + ₹ 70,000 = ₹ 3,20,000

(ii) Process II

Statement of Equivalent Production and Cost

Input (Units)	Particulars	Output Units	Equivalent Production					
			Materials		Labour		Overheads	
			(%)	Units	(%)	Units	(%)	Units
30,000	Completed	28,000	100	28,000	100	28,000	100	28,000
	Normal loss	200		--		--		--
	Closing WIP	1,800	100	1,800	25	450	25	450
30,000		30,000		29,800		28,450		28,450

Particulars	Materials	Labour	Overhead	Total
Process-I Cost	14,70,000	--	--	14,70,000
Cost incurred (₹)	--	1,42,250	1,70,700	3,12,950
Equivalent units	29,800	28,450	28,450	--
Cost per equivalent unit (₹)	49.3289	5.00	6.00	60.3289

Process-II Account

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-I A/c	30,000	14,70,000	By Normal loss A/c	200	--
To Packing Material	--	1,60,000	By Finished Goods Stock A/c	28,000*	18,49,209

To Direct Wages	--	1,42,250	By Closing WIP	1,800**	93,741
To Factory Overhead	--	1,70,700			
	30,000	19,42,950		30,000	19,42,950

* 28,000 × ₹ 60.3289 = ₹ 16,89,209 + ₹1,60,000 (Packing Material Cost)
= ₹ 18,49,209
** 1,800 units × ₹ 49.3289 + 450 units × (₹ 5 + ₹6) = ₹ 93,741

RTP NOV 22

SM Pvt. Ltd. manufactures their products in three consecutive processes. The details are as below:

	Process A	Process B	Process C
Transferred to next Process	60%	50%	
Transferred to warehouse for sale	40%	50%	100%

In each process, there is a weight loss of 2% and scrap of 8% of input of each process. The realizable value of scrap of each process is as below:
Process A @ ₹ 2 per ton
Process B @ ₹ 4 per ton
Process C @ ₹ 6 per ton.
The following particulars relate to April, 2022:

	Process A	Process B	Process C
Materials used (in Tons)	1,000	260	140
Rate per ton	₹ 20	₹ 15	₹ 10
Direct Wages	₹ 4,000	₹ 3,000	₹ 2,000
Direct Expenses	₹ 3,160	₹ 2,356	₹ 1,340

PREPARE Process Accounts- A, B and C & calculate cost per ton at each process.

ANSWER :

Process A Account

Particulars	Tones	Amount (₹)	Particulars	Tones	Amount (₹)
To Materials	1,000	20,000	By Weight Loss	20	---
To Wages		4,000	By Scrap	80	160
To Direct Expenses		3,160	By Process B	540	16,200
			By Warehouse	360	10,800
Total	1,000	27,160	Total	1,000	27,160

$$\text{Cost per Tonne} = \frac{27,160 - 160}{1,000 - 20 - 80}$$

$$= \frac{27,000}{900}$$

= ₹ 30 per ton

Process B Account

Particulars	Tones	Amount (₹)	Particulars	Tones	Amount (₹)
To Process A	540	16,200	By Weight Loss	16	---
To Materials	260	3,900	By Scrap	64	256
To Wages		3,000	By Process C	360	12,600
To Direct Expenses		2,356	By Warehouse	360	12,600
Total	800	25,456	Total	800	25,456

Cost per Tonne = $\frac{25,456 - 256}{800 - 16 - 64}$

= $\frac{25,200}{720}$

= ₹35 per ton

Process C Account

Particulars	Tones	Amount (₹)	Particulars	Tones	Amount (₹)
To Process B	360	12,600	By Weight Loss	10	---
To Materials	140	1,400	By Scrap	40	240
To Wages		2,000	By Warehouse	450	17,100
To Direct Expenses		1,340			
Total	500	17,340	Total	500	17,340

Cost per Tonne = $\frac{17,340 - 240}{500 - 10 - 40}$

= $\frac{17,100}{450}$

= ₹ 38 per ton

RTP MAY 23

'Dairy Wala Private limited' is engaged in the production of flavoured milk. Its process involve filtration and boiling of milk after that some sugar, flavour, colour is added and then letting it cool to fill the product into clean and sterile bottles. For Producing 10 litre of flavour milk, 100 litre of Raw milk is required, which extracts only 45 litres of standardized milk.

Following information regarding Process – I has been obtained from the manufacturing department of Dairy Wala Private limited for the month of December 2022:

Items	(₹)
Opening work-in process (13,500 litre)	
Milk	1,50,000
Labour	45,000
Overheads	1,35,000
Milk introduced for filtration and boiling (3,00,000 litre)	15,00,000
Direct Labour	6,00,000
Overheads	18,00,000
Abnormal Loss: 3,000 litres	
Degree of completion:	
Milk	100%

Labour and overheads	80%
Closing work-in process: 27,000 litres	
Degree of completion:	
Milk	100%
Labour and overheads	80%
Milk transferred for Packing: 1,18,500 litres	
You are required to PREPARE using average method:	
(i) Statement of equivalent production,	
(ii) Statement of cost,	
(iii) Statement of distribution cost, and	
(iv) Process-I Account.	

ANSWER :

(i) Statement of Equivalent Production

Particulars	Input Units	Particulars	Output Units	Equivalent Production			
				Material		Labour & O.H.	
				%	Units	%	Units
Opening WIP	13,500	Completed and transferred to Process-II	1,18,500	100	1,18,500	100	1,18,500
Units introduced	3,00,000	Normal Loss (55%* of 3,00,000)	1,65,000	--	--	--	--
		Abnormal loss	3,000	100	3,000	80	2400
		Closing WIP	27,000	100	27,000	80	21,600
	3,13,500		3,13,500		1,48,500		1,42,500

* 100 litre of milk extracts only 45 litre of standardized milk. Thus, normal loss = 100 – 45 = 55%

(ii) Statement showing cost for each element

Particulars	Milk (₹)	Labour (₹)	Overhead (₹)	Total (₹)
Cost of opening work-in- process	1,50,000	45,000	1,35,000	3,30,000
Cost incurred during the month	15,00,000	6,00,000	18,00,000	39,00,000
Total cost: (A)	16,50,000	6,45,000	19,35,000	42,30,000
Equivalent units: (B)	1,48,500	1,42,500	1,42,500	
Cost per equivalent unit: (C) = (A ÷ B)	11.111	4.526	13.578	29.216

(iii) Statement of Distribution of cost

		(₹)	(₹)
1.	Value of units completed and transferred (1,18,500 units × ₹ 29.216)		34,62,096
2.	Value of Abnormal Loss: -		
	Milk (3,000 units × ₹ 11.111)	33,333	
	Labour (2400 units × ₹ 4.526)	10,863	

	Overheads (2400 units × ₹ 13.579)	32,590	76,786
3.	Value of Closing W-I-P:		
	Milk (27,000 units × ₹ 11.111)	299997	
	Labour (21,600 units × ₹ 4.526)	97,762	
	Overheads (21,600 units × ₹ 13.579)	2,93,306	6,91,065

(iv) Process-I A/c

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Opening W.I.P:			By Normal Loss	1,65,000	--
Milk	13,500	1,50,000	By Abnormal Loss (₹.44 difference due to approximation)	3,000	76,839
Labour	--	45,000	By Process-II A/c	1,18,500	34,62,096
Overheads	--	1,35,000	By Closing WIP	27,000	6,91,065
To Milk introduced	3,00,000	15,00,000			
To Direct Labour		6,00,000			
To Overheads		18,00,000			
	3,13,500	42,30,000		3,13,500	42,30,000

RTP NOV 23

The following information is furnished by ABC Company for Process - II of its manufacturing activity for the month of April 2023:

(i) Opening Work-in-Progress – Nil

(ii) Units transferred from Process I – 55,000 units at ₹ 3,27,800

(iii) Expenditure debited to Process – II:

Consumables ₹ 1,57,200

Labour ₹ 1,04,000

Overhead ₹ 52,000

(iv) Units transferred to Process III – 51,000 units

(v) Closing WIP – 2,000 units (Degree of completion):

Consumables 80%

Labour 60%

Overhead 60%

(vi) Units scrapped - 2,000 units, scrapped units were sold at ₹ 5 per unit

(vii) Normal loss – 4% of units introduced

You are required to:

(i) Prepare a Statement of Equivalent Production.

(ii) Determine the cost per unit

(iii) Determine the value of Work-in-Process and units transferred to Process – III

ANSWER :

(i) Statement of Equivalent Production

Input Details	Units	Output details	Units	Equivalent Production					
				Material- A*		Consumables		Labour & Overheads	
				%	Units	%	Units	%	Units
Units transferred from Process-I	55,000	Units transferred to Process-III	51,000	100	51,000	100	51,000	100	51,000
		Normal loss (4% of 55,000)	2,200	-	-	-	-	-	-
		Closing W-I-P	2,000	100	2,000	80	1,600	60	1,200
		Abnormal Gain	(200)	100	(200)	100	(200)	100	(200)
	55,000		55,000		52,800		52,400		52,000

*Material A represent transferred-in units from process-I

(ii) Determination of Cost per Unit

Particulars	Amount (₹)	Units	Per Unit (₹)
(i) Direct Material (Consumables) :			
Value of units transferred from Process-I	3,27,800		
Less: Value of normal loss (2,200 units × ₹ 5)	(11,000)		
	3,16,800	52,800	6.00
(ii) Consumables added in Process-II	1,57,200	52,400	3.00
(iii) Labour	1,04,000	52,000	2.00
(iii) Overhead	52,000	52,000	1.00
Total Cost per equivalent unit			12.00

(iii) Determination of value of Work-in-Process and units transferred to Process-III

Particulars	Units	Rate (₹)	Amount (₹)
Value of Closing W-I-P:			
Material from Process-I	2,000	6.00	12,000
Consumables	1,600	3.00	4,800
Labour	1,200	2.00	2,400
Overhead	1,200	1.00	1,200
			20,400
Value of units transferred to Process-III	51,000	12.00	6,12,000

RTP MAY 24

The following data are available in respect of Process-I for January 2024:

(1) Opening stock of work in process: 600 units at a total cost of ₹ 4,200.

(2) Degree of completion of opening work in process:

Material	100%
Labour	60%
Overheads	60%

(3) Input of materials at a total cost of ₹ 55,200 for 9,200 units.

(4) Direct wages incurred ₹ 18,600

(5) Overheads ₹ 8,630.

(6) Units scrapped 200 units. The stage of completion of these units was:

Materials	100%
Labour	80%
Overheads	80%

(7) Closing work in process; 700 units. The stage of completion of these units was:

Material	100%
Labour	70%
Overheads	70%

(8) 8,900 units were completed and transferred to the next process.

(9) Normal loss is 4% of the total input (opening stock plus units put in)

(10) Scrap value is ₹ 6 per unit.

You are required to:

(i) PREPARE using FIFO method, Statement of equivalent production,

(ii) PREPARE Statement of cost,

(iii) CALCULATE cost of closing WIP,

(iv) CALCULATE the cost of the units to be transferred to the next process.

ANSWER :

(i) Statement of Equivalent Production (FIFO Method)

Input		Output		Equivalent Production					
				Material		Labour & O.H.		Overheads	
Details	Units	Details	Units	%	Units	%	Units	%	Units
Opening Stock	600	Finished goods transferred to next process: -From opening stock	600	-	-	40	240	40	240
		-From fresh materials	8,300	100	8,300	100	8,300	100	8,300
		Closing W-I-P	700	100	700	70	490	70	490
Fresh inputs	9,200	Normal loss	392	-	-	-	-	-	-
			9,992		9,000		9,030		9,030
		Less: Abnormal Gain	(192)	100	(192)	100	(192)	100	(192)
	9,800		9,800		8,808		8,838		8,838

(ii) Statement of Cost per equivalent units

Elements	(₹)	Cost (₹)	Equivalent units	Cost per equivalent Unit (₹)
Material Cost	55,200			
Less: Scrap realisation 392 units @ ₹ 6/- p.u.	2,352	52,848	8,808	6.00
Labour cost		18,600	8,838	2.10
Overheads		8,630	8,838	0.98
Total Cost		80,078		9.08

Cost of Abnormal Gain – 192 Units

	(₹)	(₹)
Material cost of 192 units @ ₹ 6.00/- p.u.	1,152.00	
Labour cost of 192 units @ ₹ 2.10/- p.u.	403.20	
Overheads of 192 units @ ₹ 0.98/- p.u.	188.16	1,743.36

(iii) Cost of closing WIP – 700 Units

Material cost of 700 equivalent units @ ₹ 6.00/- p.u.	4,200.00	
Labour cost of 490 equivalent units @ ₹2.10/- p.u.	1,029.00	
Overheads of 490 equivalent @ ₹ 0.98/- p.u.	480.20	5709.20

(iv) Calculation of cost of 8,900 units transferred to next process

		(₹)
(i)	Cost of opening W-I-P Stock b/f – 600 units	4,200.00
(ii)	Cost incurred on opening W-I-P stock	
	Material cost –	
	Labour cost 240 equivalent units @ ₹ 2.10 p.u. 504.00	
	Overheads 240 equivalent units @ ₹ 0.98/- p.u. 235.20	
		739.20
(iii)	Cost of 8,300 completed units	
	8,300 units @ ₹9.08 p.u.	75,364.00
	Total cost [(i) + (ii) + (iii))]	80,303.20

PAST YEAR QUESTIONS

PYQ MAY 18 (10 MARKS) **Q. 3B**

Alpha Ltd. is engaged in the production of a product A which passes through 3 different process - Process P, Process Q and Process R. The following data relating to cost and output is obtained from the books of accounts for the month of April 2017:

Particulars	Process P	Process Q	Process R
Direct Material	38,000	42,500	42,880
Direct Labour	30,000	40,000	50,000

Production overheads of ₹ 90,000 were recovered as percentage of direct labour.

10,000 kg of raw material @ ₹ 5 per kg. was issued to Process P. There was no stock of materials or work in process. The entire output of each process passes directly to the next process and finally to warehouse. There is normal wastage, in processing, of 10 %. The scrap value of wastage is ₹ 1 per kg. The output of each process transferred to next process and finally to warehouse are as under:

Process P = 9,000 kg

Process Q = 8,200 kg

Process R = 7,300 kg

The company fixes selling price of the end product in such a way so as to yield a profit of 25% selling price.

Prepare Process P, Q and R accounts. Also calculate selling price per unit of end product.

ANSWER :

Process- P Account

Particulars	Kg.	Amount (₹)	Particulars	Kg.	Amount (₹)
To Input	10,000	50,000	By Normal wastage (1,000 kg. × ₹ 1)	1,000	1,000
To Direct Material	---	38,000	By Process- Q (9,000 kg. × ₹ 15.50)	9,000	1,39,500
To Direct Labour	---	30,000			
To Production OH (₹ 90,000 × 3/12)	---	22,500			
	10,000	1,40,500		10,000	1,40,500

$$\text{Cost per unit} = \frac{₹1,40,500 - ₹1,000}{10,000\,kg. - 1,000\,kg.} = ₹\ 15.50$$

Process- Q Account

Particulars	Kg.	Amount (₹)	Particulars	Kg.	Amount (₹)
To Process-P A/c	9,000	1,39,500	By Normal wastage (900 kg. × ₹ 1)	900	900
To Direct Material	---	42,500	By Process- Q (8,200 kg. × ₹ 31)	8,200	2,54,200

To Direct Labour	---	40,000			
To Production OH (₹ 90,000 × 4/12)	---	30,000			
To Abnormal Gain (100 kg. × ₹ 31)	100	3,100			
	9,100	2,55,100		9,100	2,55,100

$$\text{Cost per unit} = \frac{₹\,2,52,000 - ₹\,900}{9,000\text{kg.} - 900\text{kg.}} = ₹\,31$$

Process- R Account

Particulars	Kg.	Amount (₹)	Particulars	Kg.	Amount (₹)
To Process-Q A/c	8,200	2,54,200	By Normal wastage (820 kg. × Re.1)	820	820
To Direct Material	---	42,880	By Abnormal loss (80 kg. × ₹ 52)	80	4,160
To Direct Labour	---	50,000	By Finished Goods (7,300 kg. × ₹52)	7,300	3,79,600
To Production OH (₹ 90,000 × 5/12)	---	37,500			
	8,200	3,84,580		8,200	3,84,580

$$\text{Cost per unit} = \frac{₹3,84,580 - ₹\,820}{8,200\text{kg.} - 820\text{kg.}} = ₹\,52$$

Calculation of Selling price per unit of end product:

Cost per unit	₹ 52.00
Add: Profit 25% on selling price i.e. 1/3rd of cost	₹ 17.33
Selling price per unit	₹ 69.33

PYQ NOV 18 (5 MARKS) Q. 1C

(c) Following details have been provided by M/s AR Enterprises:

(i) Opening works-in-progress - 3000 units (70% complete

(ii) Units introduced during the year - 17000 units

(iii) Cost of the process (for the period) - ₹ 33,12,720

(iv) Transferred to next process - 15000 units

(v) Closing works-in-progress - 2200 units (80% complete)

(vi) Normal loss is estimated at 12% of total input (including units in process in the beginning). Scraps realise ₹ 50 per unit. Scraps are 100% complete.

Using FIFO method, compute:

(i) Equivalent production

(ii) Cost per equivalent unit

ANSWER :

Statement of Equivalent Production Units (Under FIFO Method)

Particulars	Input units	Particulars	Output units	Equivalent Production	
				(%)	Equivalent units
Opening W-I-P	3,000	From opening W-I-P	3,000	30	900
Units introduced	17,000	From fresh inputs	12,000	100	12,000
		Units completed (Transferred to next process)	15,000		
		Normal Loss {12% (3,000 + 17,000 units)}	2,400	--	--
		Closing W-I-P	2,200	80	1760
		Abnormal loss (Balancing figure)	400	100	400
	20,000		11,000		15,060

Computation of cost per equivalent production unit :

Cost of the Process (for the period)	₹ 33,12,720
Less: Scrap value of normal loss (₹ 50 × 2,400 units)	(₹ 1,20,000)
Total process cost	₹ 31,92,720

PYQ MAY 19 (10 MARKS) Q.3B

KT Ltd. produces a product EMM which passes through two processes before it is completed and transferred to finished stock. The following data relate to May 2019:

Particulars	Process		Finished stock
	A (₹)	B (₹)	(₹)
Opening Stock	5,000	5,500	10,000
Direct Materials	9,000	9,500	
Direct Wages	5,000	6,000	
Factory Overheads	4,600	2,030	
Closing Stock	2,000	2,490	5,000
Inter-process profit included in opening stock		1,000	4,000

Output of Process A is transferred to Process B at 25% profit on the transfer price and output of Process B is transferred to finished stock at 20% profit on the transfer price. Stock in process is valued at prime cost. Finished stock is valued at the price at which it is received from Process B. Sales during the period are ₹ 75,000.

Prepare the Process cost accounts and Finished stock account showing the profit element at each stage

ANSWER :

Process-A A/c

Particulars	Total (₹)	Cost (₹)	Profit (₹)	Particulars	Total (₹)	Cost (₹)	Profit (₹)
Opening stock	5,000	5,000	-	Process B A/c	28,800	21,600	7,200
Direct materials	9,000	9,000	-				
Direct wages	5,000	5,000	-				
	19,000	19,000	-				
Less: Closing stock	(2,000)	(2,000)	-				
Prime Cost	17,000	17,000	-				
Overheads	4,600	4,600	-				
Process Cost	21,600	21,600	-				
Profit (33.33% of total cost)	7,200	-	7,200				
	28,800	21,600	7,200		28,800	21,600	7,200

Process-B A/c

Particulars	Total (₹)	Cost (₹)	Profit (₹)	Particulars	Total (₹)	Cost (₹)	Profit (₹)
Opening stock	5,500	4,500	1,000	Finished stock A/c	61,675	41,550	20,125
Process A A/c	28,800	21,600	7,200				
Direct materials	9,500	9,500	_				
Direct wages	6,000	6,000	_				
	49,800	41,600	8,200				
Less: Closing stock	(2,490)	(2,080)	(410)				
Prime Cost	47,310	39,520	7,790				
Overheads	2,030	2,030	_				
Process Cost	49,340	41,550	7,790				
Profit (25% of total cost)	12,335	-	12,335				
	61,675	41,550	20,125		61,675	41,550	20,125

Finished Stock A/c

Particulars	Total (₹)	Cost (₹)	Profit (₹)	Particulars	Total (₹)	Cost (₹)	Profit (₹)
Opening stock	10,000	6,000	4,000	Costing P&L A/c	75,000	44,181	30,819
Process B A/c	61,675	41,550	20,125				
	71,675	47,550	24,125				
Less: Closing stock	(5,000)	(3,369)	(1,631)				
COGS	66,675	44,181	22,494				
Profit	8,325	-	8,325				
	75,000	44,181	30,819		75,000	44,181	30,819

PYQ NOV 19 (10 MARKS) **Q.4B**

A product passes through two distinct processes before completion. Following information are available in this respect :

	Process-1	Process-
Raw materials used	10,000 units	-
Raw material cost (per unit)	₹ 75	-
Transfer to next process/Finished good	9,000 units	8,200 units
Normal loss (on inputs)	5%	10%
Direct wages	₹ 3,00,000	₹ 5,60,000
Direct expenses	50% of direct wages	65% of direct wages
Manufacturing overheads	25% of direct wages	15% of direct wages
Realisable value of scrap (per unit)	₹ 13.50	₹ 145

8,000 units of finished goods were sold at a profit of 15% on cost. There was no opening and closing stock of work-in-progress.

Prepare:

(i) Process-1 and Process-2 Account
(ii) Finished goods Account
(iii) Normal Loss Account
(iv) Abnormal Loss Account
(v) Abnormal Gain Account.

ANSWER :

Process-1 Account

	Particulars	Units	Total (₹)		Particulars	Units	Total (₹)
To	Raw Material Consumed	10,000	7,50,000	By	Normal Loss A/c @ 13.5	500	6,750
"	Direct Wages	--	3,00,000	"	Process 2 @ 133.5	9,000	12,01,500
"	Direct	--	1,50,000	"	By Abnormal	500	66,750
	Expenses	Expenses			Loss @ 133.5		
"	Manufacturing Overheads		75,000				
		10,000	12,75,000			10,000	12,75,000

Cost per unit of completed units and abnormal loss:

$= \frac{₹12,75,000 - ₹6,750}{10,000 \text{ units} - 500 \text{ units}} = ₹ 133.5$

(ii)

Dr. Process-2 Account Cr.

	Particulars	Units	Total (₹)		Particulars	Units	Total (₹)
To	Process-I A/c	9,000	12,01500	By	Normal Loss A/c @ 145	900	1,30,500
"	To Direct Wages	--	5,60,000	"	By Finished Stock A/c [bal fig]	8,200	21,04,667
"	Direct Expenses	--	3,64,000				
"	Manufacturing Overheads	--	84,000				
"	To Abnormal gain (₹ 256.67 × 100 units)	100	25,667				
		9,100	22,35,167			9,100	22,35,167

Cost per unit of completed units and abnormal gain

$= \frac{₹22,09,500 - ₹130500}{8,100 \text{ units}} = ₹ 256.67$

Dr. Finished Goods A/c Cr.

	Particulars	Units	Total (₹)		Particulars	Units	Total (₹)
To	Process II A/c	8,200	21,04,667	By	By Cost of Sales	8,000	20,53,333
				"	By Balance c/d	200	51,334
		8,200	21,04,667			8,200	21,04,667

(iii)

Dr. Cr.

	Particulars	Units	Total (₹)		Particulars	Units	Total (₹)
To	Process I	500	6,750	By	By abnormal Gain II	100	14,500
	Process II	900	1,30,500		By Cash	500	6,750
					By Cash	800	1,16,000
		1400	1,37,250			1400	1,37,250

(iv)

Dr. Cr.

	Particulars	Units	Total (₹)		Particulars	Units	Total (₹)
To	Process I	500	66,750	By	By Cost Ledger Control A/c	500	6,750
					By Costing P& L A/C (Abnormal Loss)		60,000
			66,750				66,750

(v) Abnormal Gain A/c

Dr. Cr.

	Particulars	Units	Total (₹)		Particulars	Units	Total (₹)
To	Normal Loss A/c @ 145	100	14,500	By	Process II	100	25,667
To	Costing P & L A/C		11,167				
		100	25,667			100	25,667

PYQ NOV 20 (10 MARKS) **Q.4A**

Following details are related to the work done in Process-I by ABC Ltd. during the month of May 2019 :

	(₹)
Opening work in process (3,000 units)	
Materials	1,80,500
Labour	32,400
Overheads	90,000
Materials introduced in Process-I (42,000 units)	36,04,000
Labour	4,50,000
Overheads	15,18,000

Units Scrapped : 4,800 units
Degree of completion :
Materials : 100%
Labour & overhead : 70%
Closing Work-in-process : 4,200 units
Degree of completion :
Materials : 100%
Labour & overhead : 5%
Units finished and transferred to Process-II : 36,000
units Normal loss:
4% of total input including opening work-in-process
Scrapped units fetch ₹ 62.50 per piece
Prepare:
(i) Statement of equivalent production.
(ii) Statement of cost per equivalent unit.
(iii) Process-I A/c
(iv) Normal Loss Account and
(v) Abnormal Loss Account

ANSWER :

(i) Statement of Equivalent Production (Weighted Average method)

Particulars	Input Units	Particulars	Output Units	Equivalent Production			
				Material		Labour & O.H.	
				%	Units	%	Units
Opening WIP	3,000	Completed and transferred to Process-II	36,000	100	36,000	100	36,000
Units introduced	42,000	Normal Loss (4% of 45,000 units)	1,800	--	--	--	--
		Abnormal loss (Balancing figure	3,000	100	3,000	70	2,100
		Closing WIP	4,200	100	4,200	50	2,100
	45,000		45,000		43,200		40,200

(ii) Statement showing cost for each element

Particulars	Materials (₹)	Labour (₹)	Overhead (₹)	Total (₹)
Cost of opening work-in-process	1,80,500	32,400	90,000	3,02,900
Cost incurred during the month	36,04,000	4,50,000	15,18,000	55,72,000
Less: Realisable Value of normal scrap (₹ 62.50 × 1,800 units)	(1,12,500)	--	--	(1,12,500)
Total cost: (A)	36,72,000	4,82,400	16,08,000	57,62,400
Equivalent units: (B)	43,200	40,200	40,200	
Cost per equivalent unit: (C) = (A ÷ B)	85.00	12.00	40.00	137.00

Statement of Distribution of cost

Particulars	Amount (₹)	Amount (₹)
1. Value of units completed and transferred: (36,000 units × ₹ 137)		49,32,000
2. Value of Abnormal Loss:		
- Materials (3,000 units × ₹ 85)	2,55,000	
- Labour (2,100 units × ₹ 12)	25,200	
- Overheads (2,100 units × ₹ 40)	84,000	3,64,200
3. Value of Closing W-I-P:		
- Materials (4,200 units × ₹ 85)	3,57,000	
- Labour (2,100 units × ₹ 12)	25,200	
- Overheads (2,100 units × ₹ 40)	84,000	4,66,200

(iii) Process-I A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Opening W.I.P:					
-Materials	3,000	1,80,500	By Normal Loss	1,800	1,12,500
-Labour	--	32,400	(₹ 62.5 × 1,800		
-Overheads	--	90,000	units)		
To Materials introduced	42,000	36,04,000	By Abnormal loss	3,000	3,64,200
To Labour		4,50,000	By Process-I A/c	36,000	49,32,000
To Overheads		15,18,000	By Closing WIP	4,200	4,66,200
	45,000	58,74,900		45,000	58,74,900

(iv) Abnormal Loss A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-I A/c	1,800	1,12,500	By Cost Ledger Control A/c	1,800	1,12,500
	1,800	1,12,500		1,800	1,12,500

(v) Abnormal Loss A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-I A/c	3,000	3,64,200	By Cost Ledger Control A/c (₹ 62.5 × 3,000 units)	3,000	1,87,500
			By Costing Profit & Loss A/c (Bal. Figure)		1,76,700
	3,000	3,64,200		3,000	3,64,200

PYQ JAN 21 (5 MARKS) Q.1C

MNO Ltd has provided following details:

- Opening work in progress is 10,000 units at ₹ 50,000 (Material 100%, Labour and overheads 70% complete).
- Input of materials is 55,000 units at ₹ 2,20,000. Amount spent on Labour and Overheads is ₹ 26,500 and ₹ 61,500 respectively.
- 9,500 units were scrapped; degree of completion for material 100% and for labour & overheads 60%.
- Closing work in progress is 12,000 units; degree of completion for material 100% and for labour & overheads 90%.
- Finished units transferred to next process are 43,500 units.

Normal loss is 5% of total input including opening work in progress. Scrapped units would fetch ₹ 8.50 per unit.

You are required to prepare using FIFO method:

(i) Statement of Equivalent production

(ii) Abnormal Loss Account

ANSWER :

(i) Statement of Equivalent Production (Using FIFO method)

Particulars	Input Unit	Particulars	Output Units	Equivalent Production			
				Material		Labour & O.H.	
				%	Units	%	Units
Opening WIP	10,000	Completed and transferred to Process-II					
Units introduced	55,000	-From opening WIP	10,000	-		30	3,000
		-From fresh inputs	33,500	100	33,500	100	33,500
			43,500		33,500		36,500
		Normal Loss {5% (10,000 + 55,000 units)}	3,250	-			-
		Abnormal loss (9,500 – 3,250)	6,250	100	6,250	60	3,750
		Closing WIP	12,000	100	12,000	90	10,800
	65,000		65,000		51,750		51,050

(ii) Abnormal Loss A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-I A/c (Refer Working Note-2)	6,250	29,698	By Cost Ledger Control A/c (6,250 units × ₹ 8.5)	6,250	53,125
To Costing Profit & Loss A/c	-	23,427			
	6,250	53,125		6,250	53,125

Working Notes:

1. Computation of Cost per unit

Particulars	Materials (₹)	Labour (₹)	Overhead (₹)
Input costs	2,20,000	26,500	61,500
Less: Realisable value of normal scrap (3,250 units x ₹ 8.5)	(27,625)	--	--
Net cost	1,92,375	26,500	61,500
Equivalent Units	51,750	51,050	51,050
Cost Per Unit	3.7174	0.5191	1.2047

Total cost per unit = ₹ (3.7174 + 0.5191 + 1.2047) = ₹ 5.4412

2. Valuation of Abnormal Loss

	(₹)
Materials (6,250 units × ₹ 3.7174)	23,233.75
Labour (3,750 units × ₹ 0.5191)	1,946.63
Overheads (3,750 units × ₹ 1.2047)	4,517.62
	29,698

PYQ JULY 21 (10 MARKS) **Q.4A**

A Manufacturing unit manufactures a product 'XYZ' which passes through three distinct Processes - X, Y and Z. The following data is given:

	Process X	Process Y	Process Z
Material consumed (in ₹)	2,600	2,250	2,000
Direct wages (in ₹)	4,000	3,500	3,000

- The total Production Overhead of ₹ 15,750 was recovered @ 150% of Direct wages.
- 15,000 units at ₹ 2 each were introduced to Process 'X'.
- The output of each process passes to the next process and finally, 12,000 units were transferred to Finished Stock Account from Process 'Z'.
- No stock of materials or work in progress was left at the end.

The following additional information is given:

Process	% of wastage to normal input	Value of Scrap per unit (₹)
X	6%	1.10
Y	?	2.00
Z	5%	1.00

You are required to:

(i) Find out the percentage of wastage in process 'Y', given that the output of Process 'Y' is transferred to Process 'Z' at ₹ 4 per unit.

(ii) Prepare Process accounts for all the three processes X, Y and Z.

ANSWER :

Dr. Process-X Account Cr

Particulars	Units	(₹)	Particulars	Units	(₹)
To Material introduced	15,000	30,000	By Normal Loss A/c [(6% of 15,000 units) x ₹ 1.1]	900	990
" Additional material	--	2,600	" Process-Y A/c (₹ 2.951* × 14,100 units)	14,100	41,610
" Direct wages	--	4,000			
" Production OH	--	6,000			
	15,000	42,600		15,000	42,600

*Cost per unit of completed units

$$= \frac{\text{Total Cost} - \text{Realisable value from normal loss}}{\text{Inputs units} - \text{Normal loss units}} = \frac{₹\ 42,600 \quad ₹\ 990}{15,000 \text{ units} - 900 \text{ units}} = ₹\ 2.951$$

Dr. Process-Y Account Cr

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-X A/c	14,100	41,610	By Normal Loss A/c [(#13.44% of 14,100 units) x ₹ 2]	1,895	3,790
"Additional material	--	2,250	" Process-Z A/c (₹ 4 × 12,205 units)	12,205	48,820
" Direct wages	--	3,500			
" Production OH	--	5,250			
	14,100	52,610		14,100	52,610

Calculation for % of wastage in process 'Y'

Let's consider number of units lost under process 'Y' = A

Now, $\frac{\text{Total Cost - Realisable value from normal loss}}{\text{Inputs units - Normal loss units}} = 4$

$\frac{₹\ 52,610 - ₹\ 2A}{14,100 \text{ units} - A} = ₹\ 4$

₹ 52,610 – ₹ 2A = ₹ 56,400 – ₹ 4A

2A = ₹ 3,790 => A = 1,895 units

% of wastage = $\frac{1,895 \text{ units}}{14,100 \text{ units}}$ = **13.44%**

Dr. Process-Z Account Cr

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-X A/c	12,205	48,820	By Normal Loss A/c [(5% of 12,205 units) x ₹ 1]	610	610
"Additional material	--	2,000	" Finished Stock A/c (₹ 4.9771$ × 12,000 units)	12,000	59,726
" Direct wages	--	3,000			
" Production OH	--	4,500			
" Abnormal gain (₹ 4.9771$ × 405 units)	405	2,016		14,100	52,610
	12,610	60,336		12,610	60,336

$Cost per unit of completed units

= $\frac{\text{Total Cost – Realisable value from normal loss}}{\text{Inputs units – Normal loss units}} = \frac{₹\ 58,320 - ₹\ 610}{12,205 \text{ units} - 610 \text{ units}}$ = ₹ 4.9771

Alternative Solution

Dr. Process-X Account Cr

Particulars	Units	(₹)	Particulars	Units	(₹)
To Material introduced	15,000	30,000	By Normal Loss A/c [(6% of 15,000 units) x ₹ 1.1]	900	990
" Additional material	--	2,600	" Process-Y A/c (₹ 2.951* × 14,100 units)	14,100	41,610
" Direct wages	--	4,000			
" Production OH	--	6,000			
	15,000	42,600		15,000	42,600

*Cost per unit of completed units

= $\frac{\text{Total Cost – Realisable value from normal loss}}{\text{Inputs units – Normal loss units}} = \frac{₹\ 42,600 \quad ₹\ 990}{15,000 \text{ units} - 900 \text{ units}}$ = ₹ 2.951

Dr. Process-Y Account Cr

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-X A/c	14,100	41,610	By Normal Loss A/c [(#13.44% of 14,100 units) x ₹ 2]	1,895	3,790
"Additional material	--	2,250	" Process-Z A/c (₹ 4 × 12,631@ units)	12,631	50,524
" Direct wages	--	3,500			
" Production OH	--	5,250			
" Abnormal gain(₹ 4 × 426 units)	426	1,704			
	14,526	54,314		14,526	54,314

Working Notes:

@1. Units Transferred from Process Z Account to Finished Stock = 12,000 Units i.e 95% of Inputs. So, Input of Z or Output of Y is 12,000 x 100/95 = 12,631 Units and Normal Loss (5%) is 631 units.

2. Let's consider number of units lost under process 'Y' as:

For Normal loss = A

For Abnormal loss = B

Now, A + B = 1,469 [i.e. 14,100 – 12,631] (I)

(A x ₹ 2 per unit) + (B x ₹ 4 per unit) = [52,610 – 50,524]

2A + 4B = 2,086 (II)

Now, putting the values of (I) in (II), we get, 2(1,469 – B) + 4B = 2,086

2938 – 2B + 4B = 2,086

2B = - 852 => B = - 426 units

Since, the figure of B is in negative, it is an abnormal gain of 426 units.

Further, A (i.e. normal loss) = 1,469 + 426 = 1,895 units

#3. % of wastage in Process Y Account = $\frac{1,895 \text{ units}}{14,100 \text{ units}}$ = **13.44%**

Dr. Process-Z Account Cr

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process-X A/c	12,631	50,524	By Normal Loss A/c [(5% of 12,631 units) x ₹ 1]	631	631
" Additional material	--	2,000	" Finished Stock A/c (₹ 4.9771$ × 12,000 units)	12,000	59,393
" Direct wages	--	3,000			
" Production OH	--	4,500			
	12,631	60,024		12,631	60,024

$Cost per unit of completed units

$= \frac{\text{Total Cost-Realisable value from normal loss}}{\text{Inputs units-Normal loss units}} = \frac{₹ 60,024 \quad ₹ 631}{12,631 \text{ units} - 631 \text{ units}} = ₹ 4.9494$

PYQ DEC 21 (5 MARKS) **Q.1D**

A product passes through Process-I and Process-II. Particulars pertaining to the Process-I are: Materials issued to Process-I amounted to ₹ 80,000, Wages ₹ 60,000 and manufacturing overheads were ₹ 52,500. Normal Loss anticipated was 5% of input, 9,650 units of output were produced and transferred out from Process-I to Process-II. Input raw materials issued to Process-I were 10,000 units.

There were no opening stocks.

Scrap has realizable value of ₹ 5 per unit. You are required to prepare:

(i) Process-I Account

(ii) Abnormal Gain/Loss Account

ANSWER :

(i) Process - I Account

Particulars	Units	(₹)	Particulars	Units	(₹)
To Materials	10,000	80,000	By Normal loss (5%of 10,000)	500	2,500
To Wages	-	60,000	By Process-II A/c (₹20*×9,650units)	9,650	1,93,000
To Manufacturing OH		52,500			
To Abnormal Gain A/c (₹20*×150units)	150	3,000			
	10,150	1,95,500		10,150	1,95,500

$$* \frac{(80,000 + 60,000 + 52,500) - 2,500}{10,000 \quad 500} = ₹ 20$$

(ii) Abnormal Gain - Account

Particulars	Units	(₹)	Particulars	Units	(₹)
To Normal loss A/c	150	750	By Process-I A/c	150	3,000
To Costing P&L A/c	-	2,250			
	150	3,000		150	3,000

PYQ MAY 22 (10 MARKS) **Q.4A**

STG Limited is a manufacturer of Chemical 'GK', which is required for industrial use. The complete production operation requires two processes. The raw material first passes through Process I, where Chemical 'G' is produced. Following data is furnished for the month April 2022:

INTERMEDIATE EXAMINATION: MAY, 2022

Particulars	(in kgs.)
Opening work-in-progress quantity	9,500
(Material 100% and conversion 50% complete)	
Material input quantity	1,05,000
Work Completed quantity	83,000
Closing work-in-progress quantity	16,500
(Material 100% and conversion 60% complete)	

You are further provided that:

Particulars	(in ₹)
Opening work-in-progress cost	
Material cost	29,500
Processing cost	14,750
Material input cost	3,34,500
Processing cost	2,53,100

Normal process loss may be estimated to be 10% of material input. It has no realizable value. Any loss over and above normal loss is considered to be 100% complete in material and processing. The Company transfers 60,000 kgs. of output (Chemical G) from Process I to Process II for producing Chemical 'GK'. Further materials are added in Process II which yield 1.20 kg. of Chemical 'GK' for every kg. of Chemical 'G' introduced. The chemicals transferred to Process II for further processing are then sold as Chemical 'GK' for ₹ 10 per kg. Any quantity of output completed in Process I, are sold as Chemical 'G' @ ₹ 9 per kg.

The monthly costs incurred in Process II (other than the cost of Chemical 'G') are: Input 60,000 kg. of Chemical 'G'

Materials Cost ₹ 85,000

Processing Costs ₹ 50,000

You are required:

(i) Prepare Statement of Equivalent production and determine the cost per kg. of Chemical 'G' in Process I using the weighted average cost method.

(ii) Prepare a statement showing cost of Chemical 'G' transferred to Process II, cost of abnormal loss and cost of closing work-in progress.

(iii) STG is considering the option to sell 60,000 kg. of Chemical 'G' of Process I without processing it further in Process-II. Will it be beneficial for the company over the current pattern of processing 60,000 kg in process-II?

(Note: You are not required to prepare Process Accounts)

ANSWER :

(i) Statement of Equivalent Production

Particulars	Input quantity	Particulars	Total	Material		Processing Cost	
				%	Units	%	Units
Opening WIP	9,500	Units completed	83,000	100%	83,000	100%	83,000
Material Input	1,05,000	Normal loss (10% of 1,05,000)	10,500	-	-	-	-
		Abnormal loss (Bal. fig.)	4,500	100%	4,500	100%	4,500
		Closing WIP	16,500	100%	16,500	60%	9,900
	1,14,500		1,14,500		1,04,000		97,400

Statement of Cost for each element

Particulars	Material (₹)	Processing (₹)	Total cost (₹)
Cost of opening WIP	29,500	14,750	44,250
Cost incurred during the month	3,34,500	2,53,100	5,87,600
Total cost (A)	3,64,000	2,67,850	6,31,850
Equivalent production (B)	1,04,000	97,400	
Cost per kg of Chemical 'G' (A/B)	3.5	2.75	6.25

Alternative Presentation

Statement showing cost per kg of each statement

	(₹)	(₹)
Material	29,500 + 3,34,500 / 1,04,000	3.5
Processing cost	14,750 + 2,53,100 / 97,400	2.75
Total Cost per kg		6.25

(ii) Statement showing cost of Chemical 'G' transferred to Process II, cost of abnormal loss and cost of closing work-in- progress

	(₹)
Units transferred (60,000 × 6.25)	3,75,000
Abnormal loss (4,500 × 6.25)	28,125
Closing work in progress:	
Material (16,500 × 3.5)	57,750
Processing cost (9,900 × 2.75)	27,225
	84,975

(iii) Calculation of Incremental Profit / Loss after further processing

Particulars	(₹)	(₹)
Sales if further processed (A) (60,000 x 1.20 x ₹ 10)	7,20,000	
Calculation of cost in Process II		
Chemical transferred from Process I	3,75,000	
Add: Material cost	85,000	
Add: Process cost	50,000	
Total cost of finished stock (B)	5,10,000	
Profit, if further processed (C = A – B)		2,10,000
If sold without further processing then,		
Sales (60,000 x ₹ 9)	5,40,000	
Less: Cost of input without further processing	3,75,000	
Profit without further processing (D)		1,65,000
Incremental Profit after further processing (C – D)		45,000
Additional net profit on further processing in Process II is 45,000. Therefore, it is advisable to process further chemical 'G'.		

Alternative Presentation

Calculation of Incremental Profit / Loss after further processing

	(₹)
If 60,000 units are sold @ ₹ 9	5,40,000
If 60,000 units are processed in process II (60,000 × 1.2 × ₹ 10)	7,20,000
Incremental Revenue (A)	1,80,000
Incremental Cost: (B)	
Material Cost	85,000
Processing Cost	50,000
	1,35,000
Incremental Profit (A-B)	45,000

Additional net profit on further processing in Process II is 45,000. Therefore, it is advisable to process further chemical 'G'.

PYQ NOV 22 (10 MARKS) **Q.3B**

N Ltd. produces a product which passes through two processes – Process – I and Process-II. The company has provided following information related to the Financial Year 2021-22

	Process-I	Process -II
Raw Material @₹ 65 per unit	6,500 units	-
Direct Wages	₹ 1,40,000	₹ 1,30,000
Direct Expenses	30% of Direct Wages	35% of Direct Wages
Manufacturing Overheads	₹ 21,500	₹ 24,500
Realisable value of scrap per unit	₹ 4.00	₹ 16.00
Normal Loss	250 units	500 units
Units transferred to Process-II / finished stock	6,000 units	5,500 units
Sales	-	5,000 units

There was no opening or closing stock of work-in progress.

You are required to prepare:

(i) Process-I Account

(ii) Process -II Account

(iii) Finished Stock Account

ANSWER :

Process-I A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Raw material used (₹ 65 × 6,500 units)	6,500	4,22,500	By Normal loss (250 units × ₹ 4)	250	1,000
To Direct wages	--	1,40,000	By Process- II A/c (₹ 100 × 6,000 units)	6,000	6,00,000
To Direct expenses (30% of ₹ 1,40,000)	--	42,000	By Abnormal loss (₹ 100 × 250 units)	250	25,000
To Manufacturing overhead		21,500			
	6,500	6,26,000		6,500	6,26,000

Cost per unit of completed units and abnormal loss: $\frac{\text{Total Cost-Realisable value from normal loss}}{\text{Inputs Units-Normal loss units}}$

$= \frac{₹\ 6,26,000 - ₹\ 1,000}{6,500 \text{ units} - 250 \text{ units}} = \frac{₹\ 6,25,000}{6,250 \text{ units}} = ₹\ 100$

Process- II A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process - I A/c	6,000	6,00,000	By Normal loss (500 units × ₹16)	500	8,000
To Direct wages	--	1,30,000	By Finished Stock A/c (₹144 × 5,500 units)	5,500	7,92,000
To Direct expenses (35% of ₹ 1,30,000)	--	45,500			
To Manufacturing overhead	--	24,500			
	6,000	8,00,000		6,000	8,00,000

Cost per unit of completed units and abnormal loss:

$\frac{\text{Total Cost - Realisable value from normal loss}}{\text{Inputs units - Normal loss units}}$

$= \frac{₹\ 8,00,000 - ₹\ 8,000}{6,000 \text{ units} - 500 \text{ units}} = \frac{₹\ 7,92,000}{5,500 \text{ units}} = ₹144$

Finished Goods Stock A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process II A/c	5,500	7,92,000	By Cost of Sales (₹144 × 5,000 units)	5,000	7,20,000
			By Balance c/d	500	72,000
	5,500	7,92,000		5,500	7,92,000

PYQ NOV 23 (5 MARKS) Q.4C

A product passes through two processes; Process A and Process B. The output of Process A is treated as input of Process B.

The following information has been furnished:

	Process A	Process B
Input Material 78,000 Kg.@ ₹ 5	₹ 3,90,000	-
Indirect Material	-	₹34,320
Wages	₹ 2,85,000	₹ 3,30,000
Overhead	₹ 1,67,400	₹ 1,11,600
Output transferred to Process B	68,640 kgs	
Transfer to Finished Stock	-	69,000 kgs
Normal loss of input material (weight in kgs.)	7,800 kgs	240 kgs

There is no realisable value for normal loss. No stock of raw materials on work-in-process was left at the end.

You are required to prepare the Process account for each Process.

ANSWER :

Process A Account

Particulars	Units	₹	Particulars	Units	₹
To Material	78,000	3,90,000	By Normal Loss	7,800	-
To Wages		2,85,000	By Abnormal Loss	1,560	18,720
To Overheads		1,67,400	By Process B A/c	68,640	8,23,680
Total	78,000	8,42,400	Total	78,000	8,42,400

Cost per unit of completed units and abnormal loss = $\frac{8,42,400}{78,000 \text{ units} - 7,800 \text{ units}}$ = ₹ 12 unit

Process B Account

Particulars	Units	₹	Particulars	Units	₹
To Process A A/c	68,640	8,23,680	By Normal loss	240	-
To Indirect Material		34,320	By Finished stock	69,000	13,11,000
To Wages		3,30,000			
To Overheads		1,11,600			
To Abnormal gain	600	11,400			
Total	69,240	13,11,000	Total	69,240	13,11,000

Cost per unit of completed units and abnormal gains:

$\frac{\text{Total cost}}{\text{Inputs - Normal loss}} = \frac{₹12,99,600}{68,640 \text{ units} - 240 \text{ units}} = ₹19$