ILLUSTRATIONS ON PROCESS COSTING:

Q1)Y Ltd. produces a single product which undergoes two processes. From the following information prepare Process Accounts, Normal Loss Account, Abnormal Loss Account and Abnormal Gain Account.

	Process A	Process B
Raw Materials issued (3000 units)	Rs. 15000	-
Additional Materials	Rs. 1000	Rs. 780
Direct Wages	Rs. 14000	Rs. 20000
Production Overhead	Rs.3000	Rs. 7500
Normal Loss as % of input	10%	5%
Scrap Value per unit	2	5
Output in Units	2800	2600

Solution:

In the Books of Y Ltd

Dr. Process A Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Raw Materials	3000	15000	By Normal LossA/C (units 10% of 3000; Rate / unit=Rs. 2)	300	600
To Materials introduced further		1000	By Process B A/C	2800	33600
To Direct Wages		14000			
To Production Overhead		3000			
To Abnormal Gain A/C(balance of units)	100	1200			
	3100	34200		3100	34200

Cost per unit = $\frac{\text{Rs.33000-Rs.600}}{\text{3000-300}}$

=Rs. 12

Abnormal Gain= 100X Rs. 12= Rs.1200

Dr. Process B Account Cr.

Particulars	Units	Amount(Rs)	Particulars	Units	Amount(Rs)
To Process A A/C	2800	33600	By Normal Loss A/C (units 5% of 2800; Rate Rs. 5 each)	140	700
To Materials		780	By Abnormal LossA/C(Bal. of	60	1380

			units)		
To Direct Wages		20000	By finished stock A/C	2600	59800
To Production Overhead		7500			
	2800	61880		2800	61880

Cost per unit = Rs. 61880-Rs. 700

2800-140

=Rs. 23

Abnormal loss= 60 x Rs.23 = Rs. 1380

Transfer to finished Stock A/C= 2600 X Rs. 23 =Rs. 59800

Dr. Normal Loss Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Process A A/C	300	600	By Cash /Debtors A/C(200x Rs. 2)	200	400
To Process B A/C	140	700	By Cash / Debtors A/C	140	700
			By Abnormal Gain A/C	100	200
	440	1300		440	1300

Dr. Abnormal Loss Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Process B A/C	60	1380	By Cash / Debtors (60 x Rs. 5)	60	300
			By Costing Profit & Loss A/C		1080
	60	1380		60	1380

Dr. Abnormal Gain Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Normal Loss A/C	100	200	By Process A/C	100	1200
To Costing Profit & Loss A/C		1000			
	100	1200		100	1200

Q2) Finding out percentage of normal loss

In Process D, Rs. 9000 units of a product was transferred from Process C at a cost of Rs. 54000. The additional expenses incurred for Process D were- Sundry materials Rs. 2500, Labour Rs. 6000, Direct Expenses Rs. 3350 and Overhead Charged @ 200% of labour. Wastage of Process D was sold at Rs. @

2/ unit. The fnal price of the product from process D was sold at Rs. 10 fetching a profit of 10% on sale. Calculate the rate of normal loss of aprocess D on the basis of input.

Solution:

Total Process Cost= Rs. 54000+Rs.2500+Rs.6000+Rs.3350+200% of Rs.6000= Rs. 77850

Cost of final product= 10- 10% of 10= Rs. 9 per unit.

Let the Normal Loss be X units.

Cost per unit= $\frac{\text{Total Process Cost- Scrap Realised}}{\text{Units introduced-Units lost due to normal loss}}$

Or, $9 = \frac{77850 - 2X}{9000 - X}$

Or, 81000-9X= 77850-2X

Or, 7X = 3150

Or, X = 450 units

Thus, Percebtage of Normal Loss= $\frac{450}{9000} \times 100$

= 5 %

Q3) Normal loss quantity is unknown

XYZ ltd. manufacturers a product which passes through two processes- Process A and Process B and then it is transferred to Finished Stock Account. From the following particulars, prepare Process Accounts:

	Process A	Process B
Input(units)	30000	26000
Material Cost(Rs.)	60000	8000
Labour Cost(Rs.)	36000	30550
Overheads(Rs.)	18000	21900
Normal Loss	10%	?
Scrap Value per unit(Rs.)	2	3

There was no opening or closing work-in-progress. The final output from Process B transferred to Finished Stock was 25000 units. These finished goods were sold at Rs. 7.5 per unit with a profit of Rs. 1 per unit. What was the normal loss rate in Process B?

Solution:

In the books of XYZ Ltd.

Dr. Process A Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To units introduced	30000	60000	By Normal Loss (10% of 30000 units @ Rs. 2 each)	3000	6000
To Labour Cost		36000	By Abnormal Loss A/C(balance of qty.)	1000	4000
To Overhead		18000	By finished goods	26000	104000
	30000	114000		30000	114000

Cost per unit = Rs. 114000- Rs. 6000

30000units- 3000units

= Rs. 4

Abnormal Loss = 1000 X Rs.4= Rs. 4000

Transfer to next process = 26000 X Rs. 4 = Rs. 104000

Dr. Process B Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To process A A/C	26000	104000	By Normal Loss A/C (@ Rs. 3 each)	1300	3900
To Material Cost		8000	By Finished Stock A/C (@ Rs. 6.5 each)	25000	162500
To Labour Cost		30550			
To Overhead		21900			
To Abnormal Gain A/C(bal.of qty.)	300	1950			
	26300	166400		26300	166400

WORKING NOTES:

1) Quantity (units) of Normal loss in Process B
   Selling price of finished goods = Rs. 7.50 per unit
   Less: Profit = Rs. 1.00 per unit
   Cost Rs.6.50 per unit

Again,

Cost price per unit = Net Cost before abnormal gain

Net Units before abnormal gain

Now, net units before abnormal gain = Total units introduced in the process – Units of Normal Loss.

If units of normal loss = X, Realisable Value = 3X,

Cost Price per unit = Rs. 164450- Rs. 3X

26000- X

Or, 6.50= Rs. 164450- Rs. 3X

26000- X

Or, X = 1300

Normal Loss Rate = Normal Loss Units X 100

Input Units

= 1300 units X 100

26000units

= 5%

2) Abnormal Gain (units)

Normal Loss (units) + Finished Goods (units)- Units introduced in Process B

= 1300+25000-26000= 300 units

Abormal Gain Value = 300 X Rs. 6.50= Rs. 1950

Transfer to Finished Goods = 25000 X Rs. 6.50 = Rs. 162500

Q4) Three processes- part of processed goods sold and part transferred to next process: Statement of Profit

ZICON Ltd. produces Product F through three processes P1, P2 and P3. On Jan 1, Raw materials 1000 units were introduced in Process – P1 at Rs. 50 per unit. The details of expenses incurred on three processes during the year 2019 were as under:

	P1	P2	P3
Sundry other Material Cost	Rs.1600	3315	3320
Labour Cost	Rs. 2600	8000	6392
Normal Loss (% of input)	5%	10%	5%
Scrap Value per unit	Rs.1	Rs. 3	Rs. 6
Actual Output (units)	940	846	410
Sale price of Output per unit	Rs.70	Rs.100	Rs.200

Entire output of P1 passed to the next process while half of the output of P2 passes to the next process and balance was sold. The entire output of P3 was sold. Management expenses and selling expenses were Rs. 6000 and Rs. 9000 respectively. These are not allocable to the processes.

You are required to prepare Process Accounts and Statement of Profit.

Solution:

Books of ZICON Ltd.

Dr. Process P1 Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Raw Materials Cost (1000X Rs. 50)	1000	50000	By Normal Loss(5% of 1000 units @ Rs. 1 each)	50	50
To Sundry other Materials Cost		1600	By Process P2 A/C(output transferred) (@ Rs. 57 each)	940	53580
To Labour Cost		2600	By Abnormal Loss (Bal. of Qty @ Rs. 57 each)	10	570
	1000	54200		1000	54200

Cost per unit = Rs. 54200- Rs.50

1000 units-50 units

= Rs. 57

Abnormal Loss (units) = 1000-50-940= 10 units

Dr. Process P2 Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Process P1 A/C	940	53580	By Normal Loss(10% of 940 units @ Rs. 3 each)	94	282
To Sundry Materials Cost		3315	By Process P3 A/C (output transfered)	432	32307
To Labour Cost		8000	By Finished Goods A/C (transfer for sale)	432	32306
	940	64895		940	64895

Cost per unit = Rs. 64895- Rs.282

940 units-94 units

= Rs. 76.3747

Output of Process P2 = 846 units

	Units	Rate(Rs.)	Amount(Rs.)
Transferred to further processing			
(1/2 of 846 units)	423	76.3747	32307
Transferred to sale	423	76.3747	32306

Dr. Process P3 Account Cr.

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Process P2 A/C	423	32307	By Normal Loss (5% of 423 units @ Rs. 6 each)	21	126
To Sundry Materials Cost		3220	By Finished Goods (output transferred)	410	42625
To Labour Cost		6392			
To Abnormal Gain	8	832			
	431	42751		431	42751

Cost per unit = Rs. 41919- Rs.126

423 units-21 units

= Rs. 103.96 each

Abnormal gain and finished goods are valued @ Rs. 103.96 each

Statement of Profit for the year ended 31st December, 2019

Particulars			Units	Rate(Rs.)	Amount(Rs.)	Amount(Rs.)
A)	Sale Proceeds realized:					
	(i)	From output of P2	423	100	42300	
	(ii)	From output of P3	410	200	82000	
						124300
B)	Production Costs					
	(i)	Output of P2	423		32306	
	(ii)	Output of P3	410		42625	
						74931
	TOTAL PROFIT(A – B)					49369
Less : Indirect Expenses						
	(i)	Management Expenses			6000	
	(ii)	Selling Expenses			9000	15000
						34369
Add : Net Abnormal Gain from P3*						784
						35153
Less : Net Abnormal Loss in P1**						560
	NET PROFIT					34593

1) * Rs. 832 – Normal Loss adjusted for 8 units @ Rs. 6 each
2) ** Gross Loss – Scrap Value;
   (Rs. 570 – 10 X Rs. 1)