

Employee Cost & Direct Exp (labour costing)

Concept ①

Calculation of wages under Bonus Plan.

$$\textcircled{1} \text{ Time wage} = \text{Time taken} \times \text{wage rate}$$

(actually worked)

$$\textcircled{2} \text{ Piece wage} = \text{Number of units produced} \times \text{piece rate.}$$

Bonus Plan.

Time allowed = TA = 100 hrs (standard Time)

- Time taken = TT = 80 hrs

Time saved = TS = 20 hrs.

$$\text{i) Halsey Plan} = \underbrace{TT \times WR}_{\text{Base wage of Time taken}} + 50\% \times \underbrace{(TS \times WR)}_{50\% \times \text{Time saved wages}}$$

$$\text{Halsey wage plan} = TT \times WR + 30\% (TS \times WR)$$

(ii) Rowan Plan

$$\text{wages} = \text{TT} \times \text{WOR} + \frac{\text{TT}}{\text{TA}} (\text{TS} \times \text{WOR})$$

Concept 2

$$\begin{array}{l} \text{Effective Earning} \\ \text{per hour} \\ \text{(Effective wage rate)} \end{array} = \frac{\text{Total wages}}{\text{Time taken (Actual hours used)}}$$

Extra Note 8

material
labour \rightarrow conversion cost
OH
factory cost

\rightarrow doesn't include material cost.

Concept (3) Labour Turnover Rates.

Labour ki utthai - Puthai Kitni hai,
labour ka aana - Jaana Kitna hai.

- Govt Jobs \rightarrow low labour turnover.
- BPO Jobs (Call Centre Jobs) \rightarrow High labour turnover.

Labour Turnover Rates. (left side discharged)

$$\text{① Separation Rate} = \frac{\text{Number of Separations} \times 100}{\text{Average number of workers}} = \frac{S}{AV} \times 100$$

$$\text{② Replacement Rate} = \frac{\text{Number of Replacements} \times 100}{\text{Average number of workers}} = \frac{R}{AV} \times 100$$

$$\text{③ New Joining Rate} = \frac{\text{New Joining workers} \times 100}{\text{Average number of workers}} = \frac{NJ}{AV} \times 100$$

Note ① Replacement \rightarrow Pehle Job Karite the Vo challe gaye aur unki jagah par new employee aye.

② New Joining \rightarrow Jo job positions pehle thi hi nahi lekin ab expansion ki wajah se bani hai.



$$\textcircled{\text{IV}} \text{ Accession rate} = \frac{R + NJ}{AV} \times 100$$

↓
Total of Replacement + New Joining

$$\textcircled{\text{V}} \text{ Flux rate} = \frac{S + R + NJ}{AV \text{ weeks}} \times 100$$

↙
If Not Expanding

$$\text{Flux rate} = \frac{S + R}{AV \text{ weeks}} \times 100$$

↘
If Expanding Business

$$\text{Flux rate} = \frac{S + R + NJ}{AV \text{ weeks}} \times 100$$

VI Equivalent Labour Turnover rate.

→ If question provides information for non annual data.
(see example 3m/6m/9m/15m/18m)

Step 0 Calculate labour turnover for given period.

Step 1 Now convert labour turnover rate into Annual %.

ex: @ If data provided was monthly.
 $\frac{\text{labour rate} \times 12}{1} = \text{labour rate Annual.}$

ex: ⑥ If data provided was quarterly

$$\frac{\text{labour rate}}{3m} \times 12m = \text{labour rate Annual}$$

Note: $\text{Average cost per unit} = \frac{\text{opening cost per unit} + \text{closing cost per unit}}{2}$

(refer Q5)

Concept 4

Overtime

Types of overtime

Normal Nature

• If labour is in short supply (unavailable)

⇒ The average rate is calculated (yani hum normal wages or overtime wages dono ki combined average nikal lete hai.)

For ussi average rate ko sabhi hours par charge karte hai.

Abnormal Nature

ex: Machine breakdown
Raw material delay (Avoidable)

→ we cannot charge overtime premium from customer.

Ab, overtime premium will be debit to
• Costing P/L A/c &c
• Factory O/H. A/c

(yani customer se hum Total Hours ka sirf normal rate se over charge krsktte hai.)

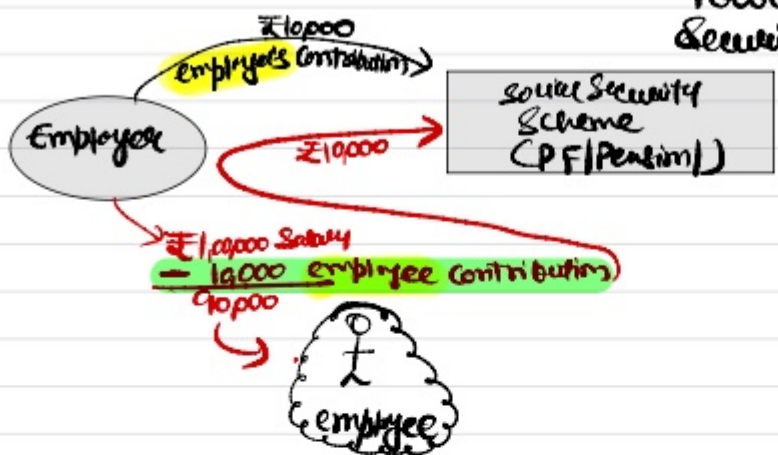
on Request of customer

Then overtime premium can be charged from customer.

$$\text{Effective hourly rate} = \frac{\text{Normal Time cost} + \text{overtime wages}}{\text{Normal + Overtime hours}}$$

$$\text{overtime wages} = \text{Basic (Normal) wage } 100\% + \text{overtime premium } 50\% \text{ (extra)}$$

Concept 5 Employee's Contribution VS Employer's Contribution toward Social Security Schemes.



Cost to employer

$$\begin{aligned} \text{Wage/Salary} &= ₹ 1,00,000 \\ + \text{Employer's Contribution} &= ₹ 10,000 \end{aligned}$$

₹ 1,10,000

wages received

$$\begin{aligned} \text{Wage/Salary} &= ₹ 1,00,000 \\ - \text{employee's Contribution} &= ₹ 10,000 \end{aligned}$$

₹ 90,000

(refer Q26, Q27)

Concept @

Direct Exp

vs Indirect Exp.

• These expenses which can be calculated/ascertained per unit.

→ These expenses which cannot be ascertained per unit.

They vary proportionately with units.
ex: Royalty

ex: Salary of Guard in a factory

Direct Material

Direct Labour

Direct Expenses

Prime Cost

+ OH

← Direct exp

← Indirect Exp

Factory OH

(Study list of Direct expenses from chapter Cost Sheet)

Concept 7

Idle Time

Hours lost which could have been used for production.



Normal Idle Time

ex: lunch break / tea break

It is unavoidable

So, charged from customers by increasing overall rate.

Abnormal Idle Time

ex: Power failure, shortage of raw material.

It occurs because of our fault (avoidable)

$$\text{Effective Hourly Rate} = \frac{\text{Total wages Paid}}{\text{Total - Normal Hours Idle Time}}$$

$$= \frac{₹100 \times 8 \text{ hrs}}{(8 \text{ hr} - 1 \text{ hr})}$$

$$= \frac{₹800}{7 \text{ hrs}}$$

The wages of these hours will be debited to Costing P/L.

(Not charged from customer.)

Cost sheet

Concept ① Form of Cost sheet (long format)

Particulars	Amount (₹)	
Raw material purchased		Purchase value
(Freight paid, + expenses paid by you + GST (if no credit))	-	- Trade discount
- Raw material sold		* Packing material for material.
+ opening stock of RM	+	
- closing stock of RM	-	
RM consumed	*	
+ Direct labour	+	
+ Direct Expenses	+	→ Concept ②
Prime cost	*	
+ factory O/H (Production O/H)		→ Concept ③
(Manufacturing O/H)		
(Works O/H)		
Gross works cost (Gross factory cost)		
+ opening WIP		
- closing WIP		
works cost/factory cost/net factory cost		→ on Basis of Units Produced
+ Quality control cost		
+ Research & Development cost		→ [It is for product not material]
+ Packing (Prime cost)		
+ Admin O/H (Production nature)		→ Concept ④
- Recovery from Scrap Sale (Sale of By Product)	(-)	
- Miscellaneous Income	(-)	→ These are considered cost reduction.
Cost of Production	XXX	

+ Opening Stock of FG	+	→ Cost of goods available for sale
- Closing Stock of FG	-	
Cost of goods sold	✓	} Concept ① } on Basis of <u>units sold</u>
+ Admin OH (General Nature)	✓	
+ Selling OH	✓	
+ Distribution OH	✓	
Cost of Sales	*	
+ Profit Sales	**	



Concept ② Direct Expenses.

Direct Expenses: Expenses other than direct material cost and direct employee cost, which are incurred to manufacture a product or for provision of service and can be directly traced in an economically feasible manner to a cost object. The following costs are examples for direct expenses:

- Cost of utilities such as power & fuel, steam etc.;
- Royalty paid/ payable for production or provision of service;
- Hire charges paid for hiring specific equipment;
- Fee for technical assistance and know-how;
- Amortised cost of moulds, patterns, patents etc.;
- Cost for product/ service specific design or drawing;
- Cost of product/ service specific software;
- Other expenses which are directly related with the production of goods or provision of service.

Job charges

Concept ③ Factory o/h

Factory Overheads: It is also known as **works/production/ manufacturing** overheads. It includes the following indirect costs:

- Consumable stores and spares;
- Depreciation of plant and machinery, factory building etc.
- Lease rent of production assets;
- Repair and maintenance of plant and machinery, factory building etc.
- Indirect employees cost related with production activities;
- Drawing and Designing department cost;
- Insurance of plant and machinery, factory building, stock of raw material & WIP etc.
- Amortized cost of jigs, fixtures, tooling etc.
- Service department cost such as Tool Room, Engineering & Maintenance, Pollution Control etc.

Concept ④

Admin o/h

Production nature

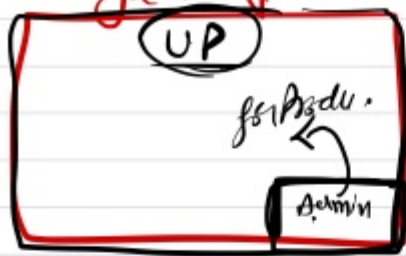
- Salary of factory foreman
- Salary of Supervisor

General Nature

Administrative Overheads: It is the cost related with general administration of the entity. It includes the followings:

- Depreciation and maintenance of, building, furniture etc. of corporate or general management.
- Salary of administrative employees, accountants, directors, secretaries etc.
- Rent, rates & taxes, insurance, lighting, office expenses etc.
- Indirect materials- printing and stationery, office supplies etc.
- Legal charges, audit fees, corporate office expenses like directors' sitting fees, remuneration and commission, meeting expenses etc.

Reliance Petroleum
Refinery
Factory site



Reliance
H.O
Mumbai



$$\text{op stock of } F_4 + \text{Production} - \text{cl stock of } F_4 = \text{Sold units}$$

$$\underset{\text{@18}}{5000} + \underset{\text{@20}}{20000} - 19000 = 15000$$

Concept 5

Concept of Stock Valuation in Cost Sheet.

Method ① FIFO

Method ② LIFO

Method ③ Weighted average Method (WAM)

(Follow this if question is silent)

Example. • Current Production = 20,000 units @ ₹20 P.u.

• opening FG = 5,000 units @ ₹18 P.u.
Cost of Production
Cost of Previous year.

• closing FG = 10,000 units @ ?

• units sold = 15,000 units.

Solution

Method I (FIFO)		Method II (LIFO)		Method III (WAM)	
Particulars	Amt	Particulars	Amt	Particulars	Amt
Cost of Production (20,000 × 20)	4,00,000	Cost of Production (20,000 × 20)	4,00,000	Cost of Production (20,000 × 20)	4,00,000
+ opening stock (5,000 × 18)	+ 90,000	+ opening stock (5,000 × 18)	+ 90,000	+ opening stock (5,000 × 18)	90,000
- closing stock (10,000 × 20) (B/S)	- 2,00,000	- closing stock (10,000 × 18) (B/S)	- 1,80,000	- closing stock (10,000 × 19.6)	- 1,96,000
COGS (15,000 ×)	2,90,000	COGS (15,000 ×)	3,10,000	COGS (15,000 × 19.6)	2,94,000

FIFO

Issues

$$\begin{aligned}
 5000 \times 18 &= 90000 \\
 10000 \times 20 &= 2,10,000 \\
 \hline
 &2,19,000
 \end{aligned}$$

LIFO

Issues

$$15000 \times 20 = 3,00,000$$

WAM

Totality	Value
20000	$\times 20 = 4,00,000$
<u>15000</u>	$\times 18 = 90,000$
<u>25000</u>	<u>4,90,000</u>
	$\frac{4,90,000}{25,000} = 19.6$

Concept (6) Concept of Efficiency and Increase in wage rate.

example (1)

Past year wage rate = ₹26.

- labour efficiency reduce 4%
- wage rate increase 5%

Sol's

original wage rate = ₹26. per unit

$$\text{After impact of efficiency} = \frac{26}{(100\% - 4\%)} \times 100\% = ₹27.083$$

$$\begin{aligned}
 \text{After impact of wage rate increase} &= 27.083 + 5\% \\
 &= ₹28.44 \text{ per unit}
 \end{aligned}$$

Example ② original wage rate = ₹26 per unit

• If efficiency increases = 8%

• If wage rate increases = 5%

Calculate New wage rate per unit

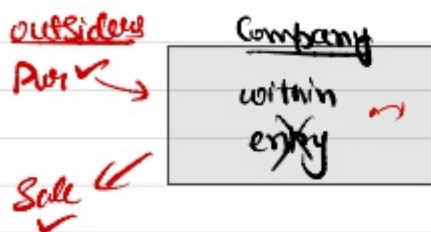
Sol: original wage rate = ₹26 per unit

After impact of efficiency = $\frac{26}{(100\% + 8\%)} \times 100\% = ₹24.07$

After impact of wage rate = $24.07 + 5\% = ₹25.28$

Cost Accounting System.

Accounting



→ we write entries Transactions which occur with third party

Cost Accounting System



→ we write entries even for internal transactions like if of RM from Store to factory.

Cost Accounting System

Non Integrated

- we maintain separate books of accounts for -
 - * For Cost Accounts
 - * For Financial Accounts.

→ Reconciliation of Profits at end because both books provide different profits.

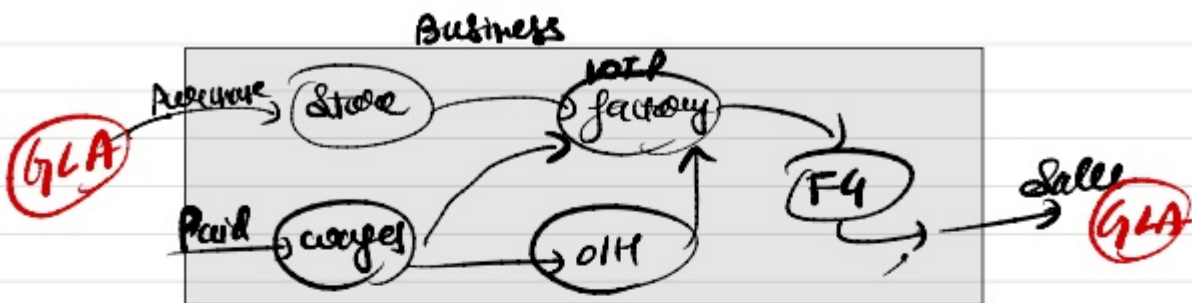
Integrated.

- we maintain a single set of books for Cost Accounts + financial Accounts

→ No Reconciliation will be required because a single set of books is present.

Concept

Non Integrated Cost Accounts.



Bahan untuk accounts ka name nahi ayega

- Cash/Bank/supplier etc
 - Debtor/creditors/BIR/EP/Receivables/Payables
 - O/S/Prepaid
- } G/LA

yani outside accounts are ignored and called **G/LA**

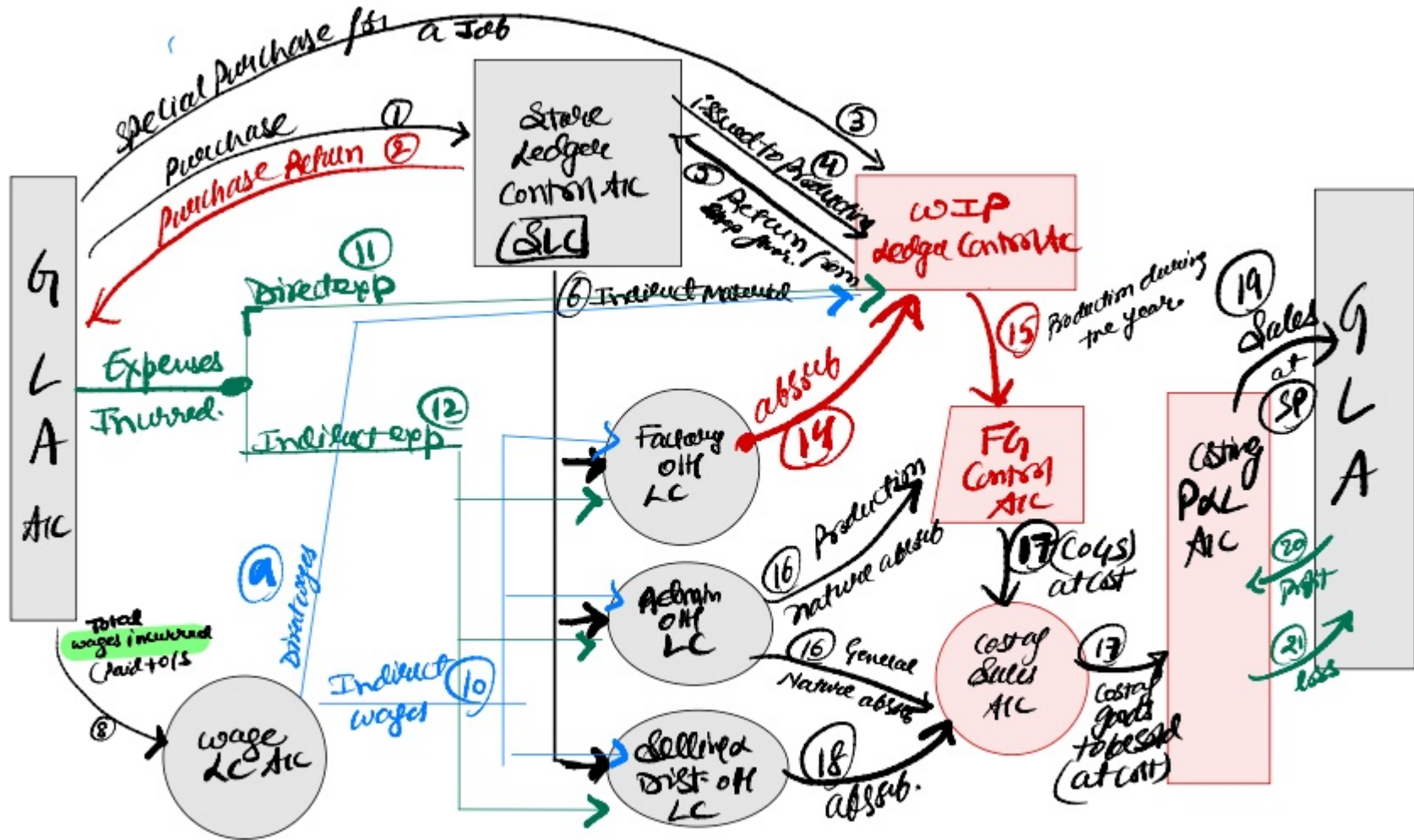
Note:

G/LA → General ledger Account also known as

CLC → Cost ledger Control A/c

NLC → Nominal ledger Control A/c

etc.



Factory OH Control A/c

To SLC	50,000
To wages (Indirect)	1,00,000
To GLA (overhead)	2,00,000
	<u>3,50,000</u>

By WIP

2,70,000 (given)

By Costing Dept
(overhead)

80,000 (B/S)?

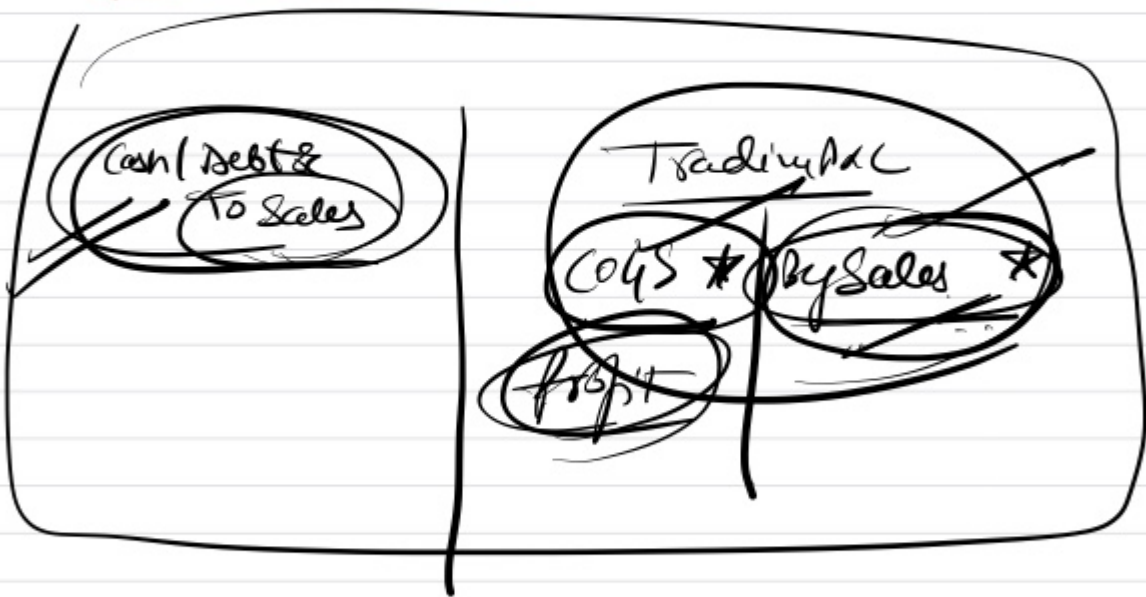
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Direct material ✓
Direct labour ✓
Direct exp. ✓

Prime cost ✗

+ factory o/h → +

WORKS COST



Concept 2 Integrated Cost Accounts

when we draw Cost Accounts and financial Accounts in same set of books.

- ① Then we write all financial entries ✓
and all Cost Accounting entries ✓
- ② we don't use G/A/CLC/NLC 'A/c whereas we use name of account
↳ Cash/Bank/Debtors/Creditors
O/S/Prepaid..
- ③ No need of reconciliation, because you will get only single profit,
(not two profits)

Concept ③ Depreciation of current year

entry → Factory OH A/c ✓
To Provision for Dep ✓

Concept ④ How to calculate opening balance of GLA A/c if it's missing in trial balance.

→ we know that both sides of Trial balance should match.

→ so, we should draw opening Trial balance.

opening Trial balance		
Particulars	Debit	Credit
Share ledger Control	x	
WIP A/c	y	
FG A/c	z	
Admin OH	a	
Selling OH		b
GLA (B/S)		***
	<u>✓</u>	<u>✓</u>

opening balance of GLA (B/S)

yani agar apko GLA ka opening balance chahiye toh aap opening Trial balance banayie aur usme se derive karlijie.

Concept 2

underabsorbed O/H vs overabsorbed O/H

	O/H	A/c
To S/LC (Manufact)	50	By Costing P/L (absorbed) 70
To wages (debit)	40	(absorbed)
To Cr/LA incurred (Bank) exp	10	
	<u>100</u>	<u>100</u>

By Costing P/L Underabsorbed (B/D) 30

	O/H	A/c
To S/LC (Manufact)	50	By Cr/LA 120
To wages (debit)	40	By Cr/LA
To Cr/LA incurred (Bank) exp	10	By Cr/LA
To Costing P/L (B/S)	20	
	<u>120</u>	<u>120</u>

Costing P/L A/c Dr 30
 To O/H Control 30

O/H Control A/c Dr 20
 To Costing P/L 20

100kg → 90kg

or deficiently
Concept 6 For Shortage of Material
 (When stock is less actually, compared to Qty in books)

<p>↓ <u>Normal Nature</u></p>	<p>↓ <u>Abnormal Nature</u></p>	<p>↓ <u>If shortage is due to a wrong entry.</u></p>
<p>Factory OH A/c Dr To & LC</p> <p>(Charged to overhead)</p>	<p>Costing PA A/c Dr To & LC ✓</p> <p>(Charged to Costing PA)</p>	<p>(Yani humne goods Production par use kiye hai lekin amount pehe kam likh diya tha)</p> <p>WIP A/c Dr ✓ To & LC ✓</p> <p>(Now charged to Production)</p>

For surplus of stock

<p>& LC A/c Dr To factory OH</p>	<p>& LC To Costing PA</p>	<p>& LC To WIP</p>
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Service Sector Costing - Operating Costing.

Costing of Service Providers

Concept

Type 1 Transport sector question \rightarrow Bus in public service (not private service)

Statement for estimation of Particulars

Amount (₹)

A Standing charges (fixed)

Salary of driver / cleaners	xxx
Salary of supervisor	xxx
Tax / Insurance	xxx
Depreciation (if time based)	xxx

Total Standing charges * *

B Running charges (variable)

oil & lubrication exp	xxx
Diesel cost / Petrol cost	xxx
Depreciation (if activity based)	xxx
wages (if activity based)	xxx

Total Running charges * *

C Maintenance charges / Semi-variable charges

• Repair & maintenance	xxx
• Spares / consumable stores	xxx
• Tyres	xxx

Total Maintenance charges	*
Total cost	** *
+ Profit	*
Gross Taking (Revenue from Customer)	** **

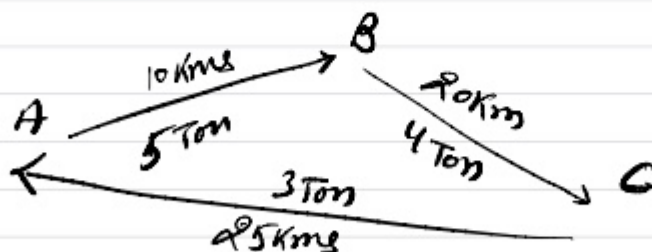
Gross Taking \rightarrow Revenue \rightarrow Sales

Concept 2

Profit 20% of Gross Taking

$$\Rightarrow \frac{20}{100} \text{ of sales} = \frac{1}{5} \text{ of sales} = \frac{1}{4} \text{ of cost} = 25\% \text{ of cost}$$

Concept 3 Fare Truck question



① Absolute Ton Km = Actual Distance \times Actual weight

$$\Rightarrow D_1 \times W_1 + D_2 \times W_2 + D_3 \times W_3$$

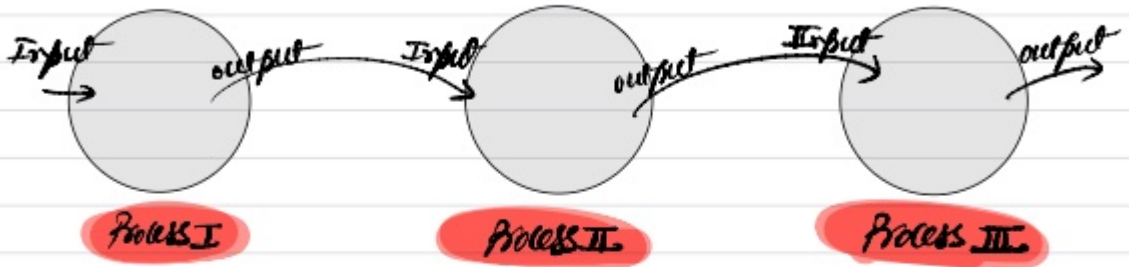
$$\Rightarrow 10 \times 5 + 20 \times 4 + 25 \times 3$$

$$= \boxed{205} \text{ TonKms}$$

$$\begin{aligned}\text{② Commercial Ton Kms} &= \text{Total Distance} \times \text{Average weight} \\ &= (D_1 + D_2 + D_3) \times \left(\frac{W_1 + W_2 + W_3}{3} \right) \\ &= (10 + 20 + 25) \times \left(\frac{5 + 4 + 3}{3} \right) \\ &= \boxed{220 \text{ Ton Kms}}\end{aligned}$$

If question is silent, we can use Commercial Ton Kms.

Process - Costing.



output of one process becomes input for other process.

Concept ① Process A/c

Process I A/c

Particulars	units	@	amt	Particulars	units	@	amt.
To Material	1000	₹20	₹20,000	By Normal loss	50		Scrap Value
To labour			₹40,000	(5% x 1000)			
To overhead			₹60,000	By Abnormal loss	150*		*
To Expenses			₹10,000	(8%)			
	<u>1000</u>		<u>1,30,000</u>	By Process II A/c	800		*
				(8% Process I stock A/c)			
				<u>1000</u>			<u>1,30,000</u>

$$C.P.U = \text{cost per unit} = * = \frac{\text{Total cost} - \text{Normal loss Scrap Sale}}{\text{Total units} - \text{Normal loss units}}$$

Abnormal loss A/c

To Abnormal loss	500	2	1000	By Abnormal gain (2)	100	2	<u>200</u>
				By Bank (Sale)	400	2	<u>800</u>

Abnormal gain A/c

To Normal loss	100	(2)	<u>200</u>	By Process B	100	* 2	<input type="text"/>
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Abnormal loss A/c



Normal loss \rightarrow Jaisi jitna loss hum mean kar chel sake hai ki hoga-hi-hoga. aur ispe cost insaan nah karde, Sirf Normal loss is Scrap sale ko minus karde hai, (cost me se)

Concept Normal loss / Abnormal loss / Abnormal gain A/c

• Step 1 Take cross entries from Process A/c to these A/c's.

• Step 2 Start selling Normal loss and Abnormal ^{loss} units at Scrap rates.

Note: Abnormal gain actually mei reduction in Normal loss hota hai.

(Jitne unit abnormal gain hoga, maano utne units Normal loss kam hue hoga, So, utne units kam sell honge as Scrap.)

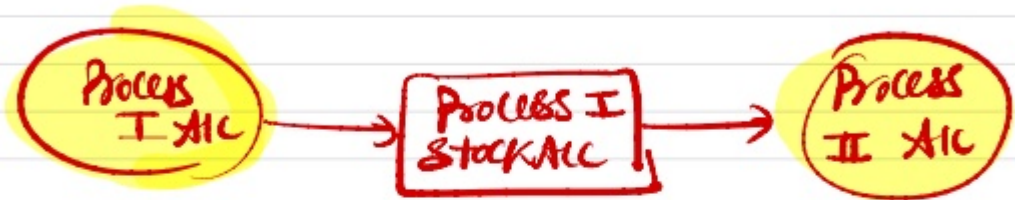
(look at Q1) & Q4

Step 3 Balancing figure

- In abnormal loss A/c goes to P/L as loss.
- In abnormal gain A/c goes to P/L as Profit.

Concept ③

Process Stack AIC



Yani agar hume Stack AIC bhi banana hai
toh Process AIC se Process Stack AIC mei
Jayega aur fir waha se Process II AIC
mei Jayega.

Different type of Process Stack AIC.

- Ⓐ • FIFO
- Ⓑ • LIFO
- Ⓒ • WAM

(a) Process Stock A/c using FIFO

Process I Stock A/c							
To Bal b/d	1000	20	20,000	By Process II A/c	3000		70,000
To Process I A/c	4000	25	1,00,000	By Bal b/d	2000	25 (New)	50,000
	<u>5000</u>		<u>1,20,000</u>		<u>5000</u>		<u>1,20,000</u>

Issue $\rightarrow 1000 \times 20 = 20,000$
 $2000 \times 25 = 50,000$
 $= 70,000$

(b) Process Stock A/c using LIFO

Process I Stock A/c							
To Bal b/d	1000	20	20,000	By Process II A/c	3000	25	75,000
To Process I A/c	4000	25	1,00,000	By Bal b/d	2000		45,000
	<u>5000</u>		<u>1,20,000</u>		<u>5000</u>		<u>1,20,000</u>

Issue $\rightarrow 3000 \times 25 = 75,000$ / Cl Stock: 1000 @ 20 = 20,000
 1000 @ 25 = 25,000

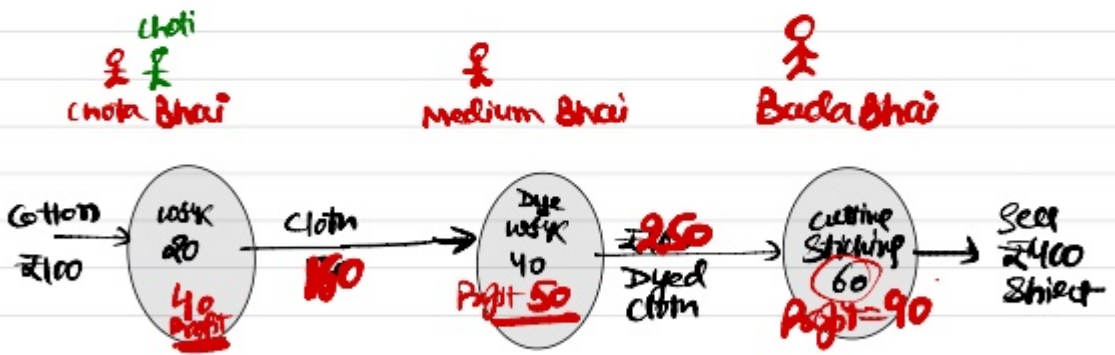
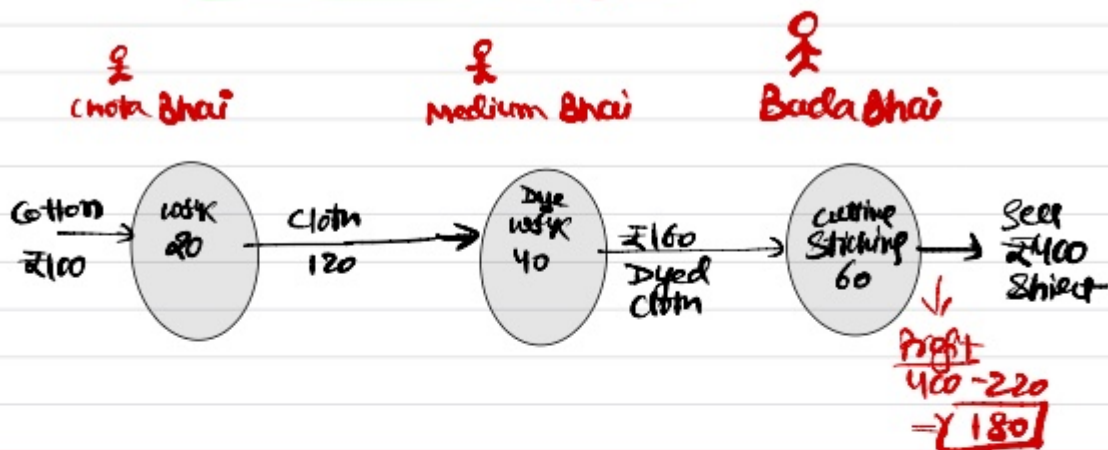
(c) Process Stock A/c using Weighted Average Method.

Process I Stock A/c							
To Bal b/d	1000	20	20,000	By Process II A/c	3000	24*	72,000
To Process I A/c	4000	25	1,00,000	By Bal b/d	2000	24*	48,000
	<u>5000</u>		<u>1,20,000</u>		<u>5000</u>		<u>1,20,000</u>

WAM $\rightarrow \frac{1,20,000}{5000} = 24$

Concept (4)

Intel Process Profit

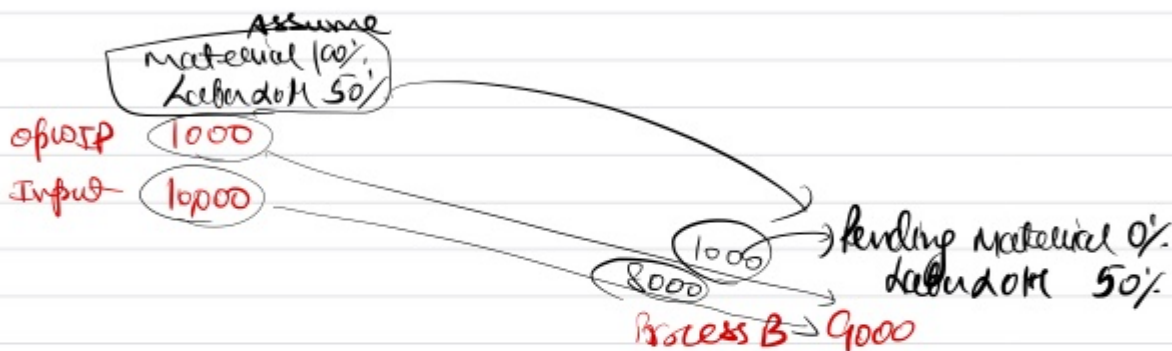


Profit ₹40 ₹50 ₹90 ~~Profit 180~~

When each department (or Process) supplies to next department not just at cost, but cost + profit

Note 1 25% on cost = $\frac{25}{100}$ on cost = $\frac{1}{4}$ on cost = $\frac{1}{5}$ on sales

20% on sales = $\frac{20}{100}$ on sales = $\frac{1}{5}$ on sales = $\frac{1}{4}$ on cost



Concept 5

(Q10, 11, Q12)

Question with **WIP + FIFO + First Process**.

Step	Process I AC			Step Value
To op WIP 1000	₹ 20,000	By Normal loss	550	
To Input 10,000	₹ 1,00,000	5% x (11,000)		
To Labour	₹ 80,000	By Abnormal loss	150	
To MK	₹ 70,000		(20)	
		By Process II AC	900	
		By WIP	1300	
<u>11000</u>	<u>Total</u>		<u>11000</u>	<u>Total</u>

Yeh concept with WIP tough isliye hai kyunki WIP par full expenses nahi lage hai isliye C.P.U. WIP pura ni lag skta.

(FIFO)

Step Statement of Equivalent units.

Inputs	Particulars	Output	Material		Labour MK		Pending% (if given) (nil material, 50% labour)
			%	units	%	units	
1000	op WIP	1000	-	-	50%	500	
10000	First Process	8000	100%	8000	100%	8000	Always 100%
	Normal loss	550	-	-	-	-	Always nil
	Abnormal loss	150	100%	150	100%	150	Given% of 100%
	WIP	1300	100%	1300	50%	650	Given% of (M=100%, 100% 50%)
	Abnormal gain	(20)	100%	(20)	100%	(20)	Always 100%
	Equivalent units			(M)		(L)	

is year mei jo expenses hui hai vo ishe units par apply hui hai.

Step 3

Statement of Cost per unit

Particulars	Cost during year	÷ Equivalent units	= Cost per unit
Material	(Material cost this year - Normal loss sample) *	÷ M	= M*
labour & OH	labour & OH exp *	Ⓛ	= $\frac{L^*}{M+L}$

Step 4

Statement of Cost apportionment

opioIP = Prime cost + $M \times M^*$ + $L \times L^*$ = ✓ 1000

Cost Apportioned = $M \times M^*$ + $L \times L^*$ = ✓ ⓐ 8000
 Transfer to Process II

Abnormal loss =

$\frac{M \times M^*}{units} + \frac{L \times L^*}{units} =$ ✓ ⓑ

clwIP =

$\frac{M \times M^*}{units} + \frac{L \times L^*}{units} =$ ✓ ⓒ



Concept 6

→ weighted average method

Process A/C + WIP + **WAM** + First Process.
(14, 15, 16, 17)

Step 1 Prepare Process A/C

Step 1	Process I A/C			
To op WIP 1000	₹ 2000	By Normal loss	550	Scrap Value
To Input 10000	₹ 1,00,000	By Abnormal loss	150	
To Labour	₹ 80,000	By Normal loss	150	
To OH	₹ 70,000	By Process II A/C	900	
		By WIP	1300	
<u>11000</u>	<u>Total</u>		<u>11000</u>	<u>Total</u>

Step 2

Statement of Equivalent units (**WAM**) ~~FIFO~~

Inputs	Particulars	Output	Material		Labour & OH		
			%	units	%	units	
1000	op WIP	1000	100%	9000	100%	9000	(op WIP + Part d) Processed Combined (100%)
10000	Part d Processed	8000					
	Normal loss	550	—	—	—	—	Always Nil
	Abnormal loss	150	100%	150	100%	150	Given % of 100%
	WIP	1300	100%	1300	50%	650	Given % of (M=100%, Lab 50%)
	Abnormal gain	(20)	100%	(20)	100%	(20)	Always 100%
	Equivalent units			<u>(M)</u>		<u>(L)</u>	

its year mei jo expenses hui hai usi the units sale apply hui hai.

Step 3
Particulars

Statement of Cost Per unit

C.P.U

Material

$$\left(\begin{array}{l} \text{Material of current year} \\ - \text{Normal loss scrapable} \\ + \text{Material of opWIP} \end{array} \right) \div \text{Equivalent units (M)}$$

M*

labour
& OH

$$\left(\begin{array}{l} \text{labour & OH of current year} \\ + \text{labour & OH of opWIP} \end{array} \right) \div \text{Equivalent units (L)}$$

L*

Cost Per unit

WAM \rightarrow Isse method mei hum jeh maante hai ki opening WIP bhi current year mei hi produce hua hai.

\rightarrow (opening WIP + put & processed) dono ko mila kar 100% apply karate hai,

due opWIP ke material cost, labour & OH cost ko current year ki cost mei add karidete hai.

Step ① Statement of cost apportionment.

of WIP 1000
Act & Processed 800

~~By cost~~

$$9000 \times M^* + 9000 \times L^* = \checkmark A$$

Abnormal loss

$$M \times M^* + L \times L^* = \checkmark B$$

of WIP

$$M \times M^* + L \times L^* = \checkmark C$$

Notes: If question does not specify the method, we prefer using WAM.

* But WAM can only be used if



Total cost of WIP is divided into Material & labour & OH separately.

Concept ⑦ Sale of Goods from process to outsiders
at Profit.

If Process is a Responsibility Centre.

Agar ek Process directly sales kar sakta hai aur apne account mei Profit dikha sakta hai.

Process I AC

	By Process Acc II	Cost/ Transfer Price
To Profit <u>★</u> (CBS)	By Bank (sale)	✓

If Process is not a responsibility centre.

Agar ek Process seedhe Kund sales nahi karata jabki pehle PdL AC mei CoGS ko Transfer karoleba hai.

Process I AC

	By PdL (CoGS)	at cost
=====	=====	=====

PdL AC

To Process I AC	at cost	By Bank	at SP.
To Profit <u>★</u>	=====	=====	=====

Concept ⑧ WIP + FIFO & LIFO + Subsequent Process
(not 1st Process)

Subsequent Process will have two types of Raw Materials

Material I

which is from previous department. (Process)

Isse kamaisha 100% manage

- except
- Normal loss
 - opening WIP in FIFO

nil (otherwise always 100%)

Material II

Introduced in same process (Subsequent)

Isse given rules ke according kerge.

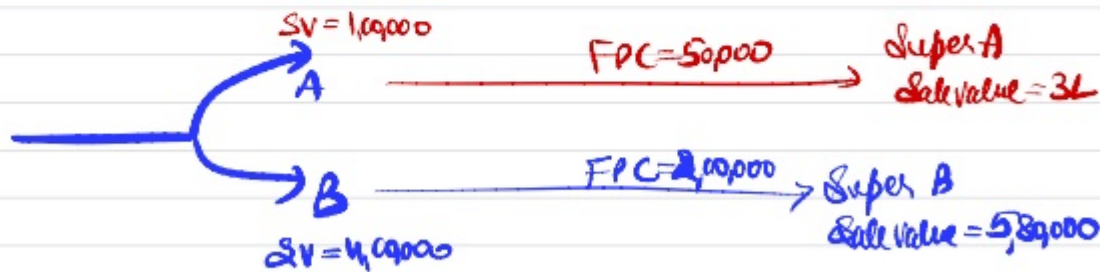
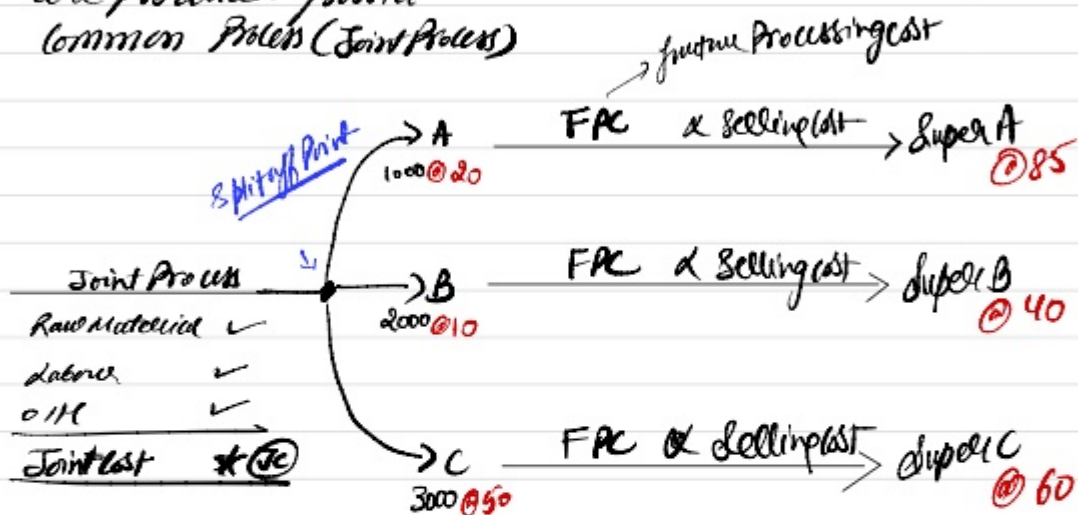
(Given % of material hoti hai to kamaisha material II ke liye given information hoti hai.)

Joint & By Product

Joint Product
↓

By Product
↓

when multiple products are produced from a common process (Joint Process)



(A)	SV at split-off	1,00,000	(vs) NRV	2,50,000 ✓	Decision	Further Process ✓
(B)		4,00,000 ✓		3,80,000		No further processing

Distribution of Joint Cost on Joint Products

Method ① on Physical output basis.

Joint Products	Physical output	Share of JC
A	1000	$\frac{1000}{6000} \times JC = JCA$
B	2000	$\frac{2000}{6000} \times JC = JCB$
C	3000	$\frac{3000}{6000} \times JC = JCC$
Total 6000		

Method ② on basis of Sales Value at Splitoff Point.

Joint Products	Sales Value at Splitoff	Share of JC
A	$1000 \times 20 = a$	$\frac{a}{\text{Total}} \times JC = JCA$
B	$2000 \times 10 = b$	$\frac{b}{\text{Total}} \times JC = JCB$
C	$3000 \times 50 = \frac{c}{\text{Total}}$	$\frac{c}{\text{Total}} \times JC = JCC$

Method ③ on Basis of Sales Value after further Processing

Joint Product	Sale Value after Further Processing.	Share of Joint Cost
A	$1000 \times 85 = M$	$\frac{M}{\text{Total}} \times JC = JCA$
B	$2000 \times 40 = N$	$\frac{N}{\text{Total}} \times JC = JCB$
C	$3000 \times 60 = P$	$\frac{P}{\text{Total}} \times JC = JCC$
<u>Total</u>		

Note: $\text{Sale price} \times \text{quantity} = \text{Sales Value}$

IV on Basis of Net Realisable value (NRV)

$$\text{NRV} = \text{Sale Value after final processing} - \text{Further Processing Cost} - \text{Selling Cost (if given)}$$

Final Product	$\text{NRV} = \text{SVAFP} - \text{FPC} - \text{SC}$	Share of JC
A	$1000 \times 85 - \text{FPCA} - \text{SCA} = \text{①}$	$\frac{\text{①}}{\text{Total}} \times \text{JC} = \text{JCA}$
B	$2000 \times 40 - \text{FPCB} - \text{SCB} = \text{②}$	$\frac{\text{②}}{\text{Total}} \times \text{JC} = \text{JCB}$
C	$3000 \times 60 - \text{FPCc} - \text{SCc} = \text{③}$	$\frac{\text{③}}{\text{Total}} \times \text{JC} = \text{JCC}$
	<u>Total</u>	

Agar kisi product ki sale after Further Processing sahi ho rahi, toh hum uske liye sale value at splitoff ko hi use karenge to distribute cost.

Concept 2

How to decide \rightarrow To further process or not?

Joint Product	Sale Value at Split off	NAV	Decision
A	₹10 ✓	₹12 ✓	Further Process.
B	₹18 ✓	₹16 ✓	Do Not Further Process
C	19	X	Do Not Further Process N.A.
D	20 ✓	30 ✓	Further Process.

make decision on basis of higher value between

- Sale Value at Split off.
- NAV.

Deep Note:

Be Careful,

Profit is only calculated for sold units not for all produced units

Profit Calculation Presentation

(I) (refer Q.23)

Sale Price = xxx

- Cost per unit = (-)

Profit per unit = *

x Sold Qty x ✓

(II)

(A)

Sales = 90,000 x SP = ✓
+ Cost per unit = 10,000 At Cost + *
- Cost

Profit = ****

- Joint Cost Share of A
- Fixed Joint Cost of A

(-) } 1,00,000 Units

Profit



Concept ① Continued

Type ② Contribution Margin method. \rightarrow (Q6, Q7)

This method is applicable only when Joint cost has two separate parts i.e. Fixed Joint Cost & Variable (Marginal) Joint Cost.

Step ① Distribute (Marginal) Variable Joint Cost on basis of Qty. (units)

Step ② Now calculate Contribution = Sales Value - Variable Cost.

Step ③ Now distribute Fixed Joint Cost on basis of Positive Contribution.

Concept ①

⑥ Given Gross Margin Method

In this method we assume that we can earn given rate of Profit on Products. So, we use Reverse Calculation.

So, we do reverse calculations and calculate Share of JC.

Statement for estimation of JC

Particulars	A	B	C	Total
Sales (of all units) (Sold units + cl stock)	✓	✓	✓	
- Gross Profit %	- Given %	- Given %	- Given %	
- Selling cost				
- Further Processing cost	-	-	-	
Share of Joint cost				

* Kyunki hum (Total) Joint cost ko distribute karna chahate hai, isliye hum (Total) units ki Sale value dikha rahi hai. (Actually sold + cl stock)

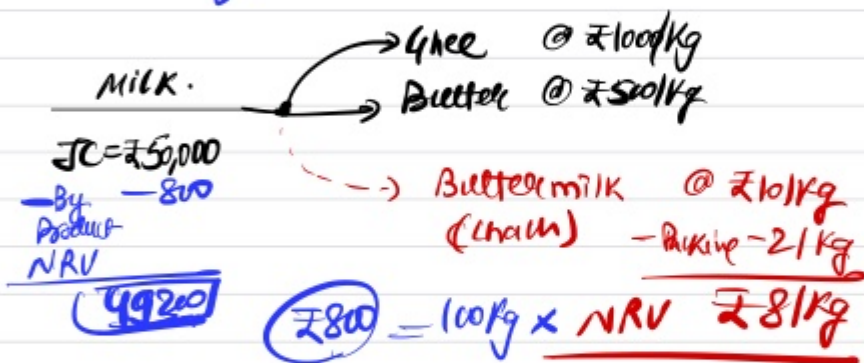
* Yani hum Sales umm units ki bhi dikha rahi hai Jo actually mei sale hui hi rahi hai. taaki hum joint cost of all units produced nikal sake.



Concept (3) By Product

By Product → These products which are produced along with main product but were not intended to be produced.

- They usually have lower value than main product.
- The NRV which we get from selling By product should be used to exclude Joint cost.



The remaining Joint cost is distributed to main products.

ICAI Questions on By Product

Type ① By Product question (Direct)

→ When Net of By-Product is reduced from Joint Cost
&
remaining Joint Cost is distributed to main Products.

Type ② Farzi By-Product question (114)

Jab question By-Product
ling kehne ke liye bol raha
hai.

lekin By-Product bilkul main
Product ki tarah hi treat
hota hai.

(Yaani hum By-Product par hi
cost apporition Karte hai.)

Concept (VII)

Another method of distributing Joint Cost

Constant Gross Margin method. (Q3 (b))

In this method, we assume all products have same Gross margin %.

Step 1 calculate gross margin of all products together
(assuming all units are sold)

↓
(Actual sold + closing stock)

Yaani, yeh assume kardo ki all units are sold.

× calculate gross margin kardo.

Step 2 calculate Constant gross margin %.

Step 3 follow reverse working to get share of Joint cost

↓
(what we used in concept (i) (VI))
Given margin