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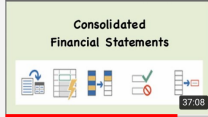
Fiscal Policy



Liquidation of company



Reconstruction of companies



Consolidation of

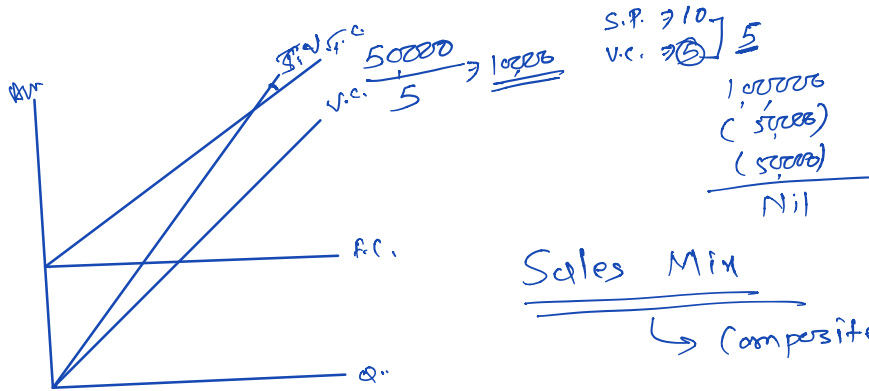
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 costing in 2 hours and 8 minutes

Marginal Costing

Cost $\begin{cases} \text{Fixed Cost} \Rightarrow \text{Firm in total} \Rightarrow \text{Vary in per unit} \Rightarrow \text{eg.} \Rightarrow \text{Rent} \\ \text{Variable Cost} \Rightarrow \text{Vary in total} \Rightarrow \text{Firm in per unit} \Rightarrow \text{eg.} \Rightarrow \text{Plastic for pen} \end{cases}$

	Break even point	Margin of safety	Total Sales
Sales Value	A 1) $C - B$ (iv) $J \div \text{PV Ratio}$ ii) $D \div 4$ iii) $G \div \text{PV Ratio}$	B i) $C - A$ ii) $H \div \text{PV Ratio}$ iii) $N \div \text{PV Ratio}$	C i) $A + B$ ii) $I \div \text{PV Ratio}$ iii) $L \div \text{PV Ratio}$
less: Variable Cost	D	E	F
Contribution	G ** 50000	H **	I 100000
less: Fixed Cost	J **	K Nil	L (50000)
Profit/loss	M Nil	N **	O 50000
	BEP in unit $\Rightarrow \frac{F.C.}{\text{Cont. per unit}}$	MDS in unit $\Rightarrow \frac{\text{Profit}}{\text{Contribution}}$	



Sales Mix

Composite P.V. Rat.

	A	B	
	2	1	
S.P.	10	12	32
V.C.	5	8	18
	$5 \times 2 = 10$	$8 \times 1 = 8$	
	$5 \times 2 = 10$	4	14
			$\frac{14}{32} \times 100$
			Composite P.V. R.

Material

Valuation of material receipt

$$\text{Cost per unit} = \frac{\text{Total cost of material (A)}}{\text{No. of units (B)}}$$

- A
- ⇒ Discount and Subsidy $\left\{ \begin{array}{l} \text{Cash discount} \Rightarrow \text{Subtract } \times \\ \text{Other discount} \Rightarrow \text{Subtract} \end{array} \right.$
 - ⇒ Duties and taxes $\left\{ \begin{array}{l} \text{Credit available} \Rightarrow \text{Not to be Added} \\ \text{Credit not available} \Rightarrow \text{Added} \end{array} \right.$
 - ⇒ Penalty and charges $\Rightarrow$ Abnormal cost - ignore $\Rightarrow$ Not to be Added
 - ⇒ Other expenditure $\left\{ \begin{array}{l} \text{Due to Normal reason} \Rightarrow \text{Add} \\ \text{Due to abnormal reason} \Rightarrow \text{Add } \times \end{array} \right.$
 $\hookrightarrow$ costing P&L

- B
- $\left\{ \begin{array}{l} \text{Normal loss} \Rightarrow \text{Subtract} \\ \text{Abnormal loss} \Rightarrow \text{Costing P\&L} \Rightarrow \text{Not to subtract.} \end{array} \right.$

Economic order quantity $\Rightarrow$ Total cost $\downarrow$

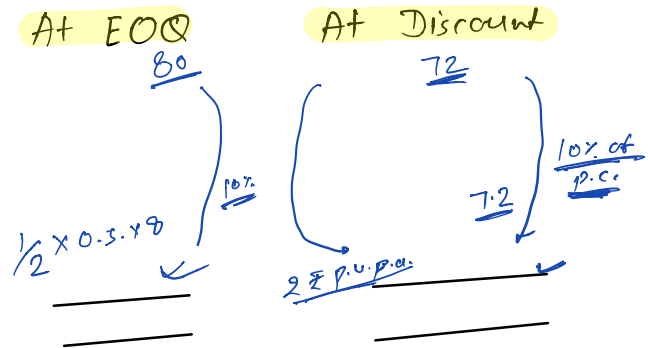
$\rightarrow$ Stable price

$$\text{EOQ} \Rightarrow \sqrt{\frac{2AO}{C}}$$

- A $\Rightarrow$ Annual usage of material
- O $\Rightarrow$ Order cost per order
- C $\Rightarrow$ Carrying cost per unit p.a.

→ EOC with discount

Purchase cost
Ordering cost
Carrying cost



→ Dif. price at dif. level

	p.c.	O.C.	C.C.	Total
0 - <u>1000</u>	10			✓
1000 - <u>5000</u>	9			✓
5000 - <u>10000</u>	8			✓
10000 - <u>20000</u>	7			✓

Various Stock level

⇒ Re-order level
⇒ Max X Max

⇒ Safety Stock + Avg. X Avg.

⇒ Minimum stock level

⇒ Re-order level - Avg. X Avg.

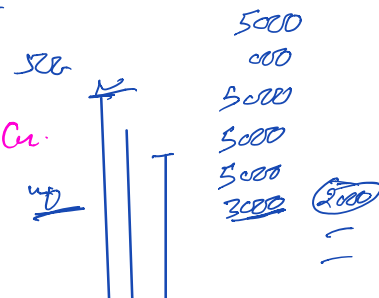
⇒ Safety Stock ⇒ (Max - Avg) X Per day Cu.

Consumption per day
⇒ 150 Units
Avg. lead time ⇒ 6 days

D.T.	6	7	8	9	10
Prob	15	10	5	5	5

100%	75	25
75%	85	15
50%	90	10
25%	95	5
0%	100	0

150 X 9 ⇒ 1350
③
⑥



⇒ Maximum stock level
 Re-order level - Min × Min + R.O.

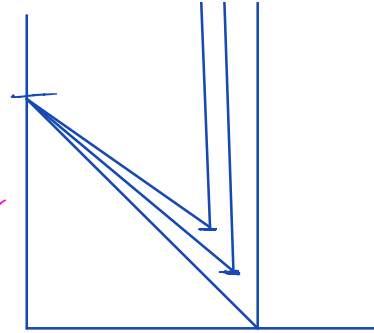
⇒ Safety stock + R.O.

⇒ Avg. inventory level

$$= \frac{\text{Max} + \text{Min}}{2}$$

⇒ Danger level

⇒ Buffer level



Stock out cost and safety stock

Safety level	Stock Out	Prob.	Stock out Cost	Invent. Carrying cost	Total cost
<u>1000</u> 2000 3000	200 ✓	10% ✓	200 × 50 = 1000	** 1000 × 17 = 17000	— — — —

⇒ ABC Inventory Control system

5m → C.A.
1 hour → Sr. Article
2 hr → Jr. Article

⇒ Inventory turnover ratio ⇒ higher ⇒ favourable

$$\text{I.T.R.} \Rightarrow \frac{\text{Cost of material consumed during the period}}{\text{Cost of average stock held during the per.}}$$

$\frac{50000}{10000} \Rightarrow \underline{5}$

Annualised I.T.R. ⇒

$$\frac{5}{3} \times 12 \Rightarrow \underline{20}$$

$$\text{Avg. No. of days of i.h.} \Rightarrow \frac{90}{5} \Rightarrow \underline{18 \text{ days}}$$

Valuation of material issue ⇒ FIFO
LIFO
Avg Cr

LABOUR

Basics		Labour turnover
a) Labour earning → Labour की वेतन से कितना आया	c) Overtime premium	Equivalent annual labour turnover Turnover rate for the period $\times \frac{365}{12}$ No. of days/months in the period
b) Labour cost → Employer की वेतन से कितना गया	d) How to charge the job	Statement showing profit foregone on account of labour turnover
		SYSTEM OF ABSORPTION OF WAGES
		(c) Flux method 1) Separated + Replaced Average n. of employees $\times 100$ 2) New joining (excluding Repl.) Average n. of employees $\times 100$ } Due to recruitment 3) Separated + Replacement + New recruitment Average n. of employees $\times 100$
		(a) Replacement method Number of employees replaced Average no. of employees $\times 100$ (b) Separation method Number of employees Separated Average No. of employees $\times 100$

SYSTEMS OF WAGE PAYMENT AND INCENTIVE

- 1) Time Rate system
Earning = Hours worked $\times$ Rate per hour
- 2) Straight piece rate system
Earning = No. of units $\times$ Piece rate per unit
- 3) Differential piece rate system
of F.W. Taylor's system $< 100\%, \geq 100\% \Rightarrow 83\%, 125\%$
- 4) Metrick D.P.R.S. $< 83\%, \geq 83\% \leq 100\%, > 100\%$
 $\Rightarrow$ Normal, 110%, 120%

Combination of time and piece rate

- 1) Gantt task and bonus system
Output Payment
 $< \text{Standard} = S, > S$ Guaranteed, 120% of ti. Rate, 120% of P.R.

- 2) Emerson efficiency system
Efficiency Payment
 $< 66.66\%$ (a) Guaranteed time wage
 $> 66.66\% < 100\%$ (a) + Bonus upto 20% in step
 $> 100\%$ (a) + (b) + 1% for 1% increase

- 3) Bedaux point system
Earning = H.W. $\times$ Rate p.h. + $\frac{75}{100} \times \frac{\text{Bedaux point earned}}{60} \times \text{Rate p.h.}$
- 4) Hynes merit system

- 5) Accelerated premium system
 $Y \Rightarrow .8 \times X^2$ where $Y = \text{Wages}$
 $X = \text{Efficiency}$

Premium bonus plan

- 1) Halsey premium plan
Earning = H.W. $\times$ Rate p.h. + T.S. $\times$ Rate p.h. $\times 50\%$
- 2) Halsey-wells premium plan
1) 40% to 50% 30% to 40%

- 3) Rowan system
Earning = H.W. $\times$ Rate p.h. + $\frac{T.S.}{T.A.} \times \text{H.W.} \times \text{Rate p.h.}$

- 4) Barth sharing plan
Earnings = Rate p.h. $\times \sqrt{\text{Standard hours} \times \text{H.W.}}$

- 5) Scanlon plan
Bonus % $\Rightarrow \frac{\text{Average annual salaries and wages}}{\text{Average annual sales revenue}}$

One should remember that P.F., E.S.I., S.P. and bonus are payable on the basic wages, day, and value of food concession

Standard time $\Rightarrow 10 \text{ hours} \rightarrow 10 \text{ ₹ p.h.} \rightarrow 100 \text{ ₹}$

A $\frac{8 \text{ hr}}{100 \text{ ₹}}$ B $\frac{10 \text{ hr}}{100 \text{ ₹}}$ C $\frac{12 \text{ hr}}{120 \text{ ₹}}$

T.T. $\times$ Rate + T.S. $\times$ Rate $\times 50\%$
T.T. $\times$ Rate + $\frac{T.T.}{S.H.} \times T.S. \times \text{Rate}$

$\frac{5}{10} \rightarrow 50\%$

Bonus
I
50%
after ↓

Efficiency Ratio		Unit Fix	
Time	Fix 10 hrs	Time	Fix 10 hrs
A	10h	A	10h
B	10h	B	10h
C	10h	C	10h
T.A.	10h	T.A.	10h
Stand	10 Unit	Stand	10 Unit
Actual	5 Unit	Actual	5 Unit
Actual prod	5	Actual prod	5
Standard prod	10	Standard prod	10

5.4
Star 3 4 hrs
4 $\frac{0}{4} \times 4 \times 10 \rightarrow 0$
3 $\frac{3}{4} \times 1 \times 10 \rightarrow 7.5$
2 $\frac{2}{4} \times 2 \times 10 \rightarrow 10$
1 $\frac{1}{4} \times 3 \times 10 \rightarrow 7.5$

Labour earning $\rightarrow$ Labourer को कितना मिलेगा
Labour cost $\rightarrow$ Employer को जे से कितना मिला

a) Labour earning Labour को जे से कितना मिला	c) Overtime premium Factories Act 1948 $\rightarrow$ T.D. 2 hours P.W. 9.45 hr	e) Effective labour rate $\frac{5000}{7-2.75} = 915.48$
b) Labour cost Employer को जे से कितना मिला	d) How to charge the job $2 \times 1000 = 2000$	f) Efficiency ratio a) In respect of time with common units b) In respect of units with common units
g) Replacement method $\frac{\text{Number of employees replaced}}{\text{Average no. of employees}} \times 100$ h) Separation method $\frac{\text{Number of employees separated}}{\text{Average No. of employees}} \times 100$ i) Flux method 1) Separated + Replaced $\frac{\text{Average n. of employees}}{\text{Average n. of employees}} \times 100$ 2) New joining (excluding Repl.) $\frac{\text{Average n. of employees}}{\text{Average n. of employees}} \times 100$ 3) Separated + Replacement + New recruited $\frac{\text{Average n. of employees}}{\text{Average n. of employees}} \times 100$		

Equivalent annual labour turnover
Turnover rate for the period $\times 365/12$
No. of days/months in the period

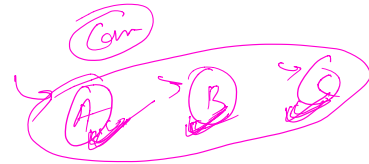
Statement showing profit foregone on account of labour turnover
Contribution foregone
Recruitment

Material $\rightarrow$ higher $\rightarrow$ favourable
labour $\rightarrow$ higher $\rightarrow$ unfavourable

OVERHEADS

Apportioning overhead ex. over various departments

Overhead Cost	Bases of app.
1) Rent and other building exp. 2) Lighting and heating (conditioning) 3) Fire precaution service 4) Air-conditioning	Floor area or volume of department
1) Perquisites (ii) Labour welfare ex. iii) Time keeping (iv) Personnel office v) Supervision	No. of workers
1) Compensation to workers 2) Holiday pay 3) ESI and PF contribution 4) Perquisites	Direct wages
1) General overhead	Direct l.h. or m.h. or direct wages
1) Dep., Repairs & maintenance of P.M. 2) Insurance of stock	Capital values
1) Power/Steam consumption 2) Internal transport 3) Managerial salaries	Technical estimates
1) Lighting expenses	Light points, Area, metered
1) Electric power (Machine operation)	H.P., M.H., Value of Mach, unit units
1) Material handling 2) Stores overhead	Weight, volume, value or unit of material



Re-apportioning service dep. overheads over Production department

→ Direct re-distribution method: Service department costs apportioned over the production department only, ignoring inter-service

→ Step method / Non-reciprocal method: Approaches

1) Rank wise (S.d. having highest inter-service apportioned first...)

a) Total wise (S.d. having largest amount of overhead first...)

Ex

	A	B	X	Y	Z
Rank	1	2	3	4	5
Overhead	20%	20%	30%	30%	20%
Allocation	20%	40%	20%	20%	20%
Balance	0%	0%	10%	10%	0%

Back-kick calculation:

	A	B	X	Y	Z
Total overhead	xx	xx	xx	xx	xx
Allocation	xx	xx	()	xx	xx
Balance	xx	xx	(xx)	(xx)	xx

→ Reciprocal service method: Buck-kick → %

- (a) Simultaneous equation method
- (b) Trial and error method
- (c) Repeated distribution method

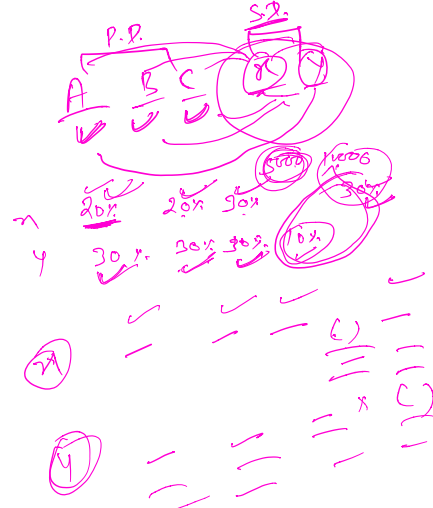
→ Simultaneous equation method

Service department exp. $x \rightarrow 3000$ $y \rightarrow 600$

Allocation

	A	B	X	Y	Z
Allocation	60%	35%	-	5%	-
	10%	40%	50%	-	-

Suppose total exp $x \rightarrow 3000 + .5y$
 $y \rightarrow 600 + .05x$



Ans: Suppose total overhead of dept. x = X & of y = Y
 $X = 3000 + .5Y$
 $Y = 600 + .05X$
 After solving equation we get $X = 3385$
 $Y = 769$

	A	B	X	Y
			3000	600
			(3000)	
Dept. x	3385	3385	3385	
Dept. y		3385 x 0.05	3385 x 0.05	
		769 x 0.05	769 x 0.05	(769)
			Nil	Nil

→ Trial and error method

Last question's ans by this method

	X	Y
Overheads as per primary distr.	3000	600
Apportionment of dept. x overhead	(3000)	190
	Nil	750
Apportionment of dept. y overhead	375	(750)
	375	Nil
Apportionment of dept. x overhead	(375)	19
	Nil	79

Apportioned Nil. it comes to minimal amount, then total overhead of dept. x = 3000 + 375 + ... , y = 600 + 190 + 19 + ... and thereafter as per simultaneous equation (Bill)

→ Repeated distribution method: Under this method s.d. costs are distributed to other service and production depart. on agreed % and process continue till it come to small amount

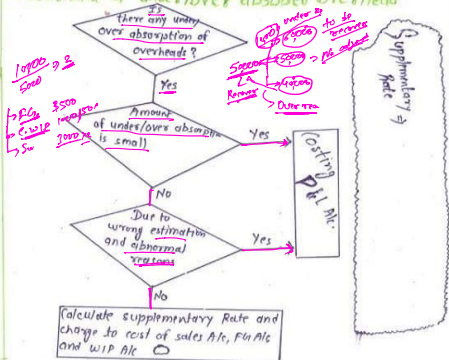
→ Method of absorbing overheads in various product/job

- % of direct material cost
- % of prime cost method
- % of direct labour cost
- labour hour rate
- Machine hour rate
- Rate per unit of output

→ Types of overhead rates

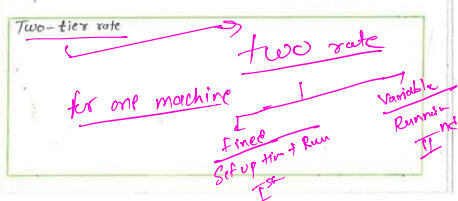
- Normal Rate → $\frac{\text{Budgeted overheads}}{\text{Budgeted base}}$
- Pre-determined overhead rate → $\frac{\text{Total factory overheads}}{\text{Total quantity of base}}$
- Blanket overhead rate → $\frac{\text{Total factory overheads}}{\text{Total quantity of base}}$
- Departmental overhead rate → $\frac{\text{Departmental overheads}}{\text{Departmental quantity of base}}$

→ Treatment of under/over absorbed overhead



→ Accounting and control of administrative overhead

→ Accounting and control of S&D overheads



MARGINAL COSTING

Absorption to MC

W.C.
Marginal
P.O.
Ir-relev

Income statement		
Absorption costing		Marginal costing
Sales	(A) XXX	Sales (C) XXX
Production cost		Variable manufacturing cost:
Direct material consumed	✓ XXX	Direct material consumed ✓ XXX
Direct labour cost	✓ XXX	Direct labour ✓ XXX
Variable manufacturing overhead	✓ XXX	Variable manufacturing overhead ✓ XXX
Fixed manufacturing overhead	XXX	
Cost of production	XXX	Cost of production
Add: Opening stock of f.gr.	XXX	Add: Opening stock of f.gr.
(Value at cost of p.y. as per absorption)		(Value at cost of p.y. as per marginal)
Less: Closing stock of f.gr.	(XXX)	Less: Closing stock of f.gr.
(c.y.)		(c.y.)
Cost of goods sold.	XXX	Cost of goods sold.
Under/(over) absorption of fixed manufacturing overhead.	XXX/ (XXX)	
Add: Selling and dist. cost	XXX	Add: Variable Admini., s & d. overhead XXX
Administration cost	XXX	Total variable cost (2) XXX
Total cost	(B) XXX	Contribution (1-2) XXX
Profit	(A-B)	Less: Fixed cost (Total) (P.A. std) XXX
		Net profit XXX

Absorption to Marginal

Reconciliation

Marginal to absorption

Absorp	Opn ch	10000	10000	Marginal	50000
		40000	20000		
		+ 5000			
		+ 5000			
		50000			

PRODUCTS AND BY PRODUCTS

APPORTIONING METHOD OF JOINT COST

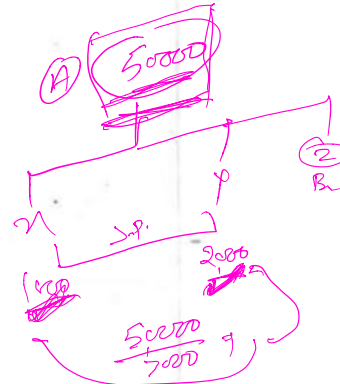
→ Physical unit method

→ Average unit cost method

→ Survey method →

→ Contribution margin method

→ V.C. → Physical unit
 → F.C. → Contribution → Sales
 → ratio → Cont



→ Market value method

→ At the point of separation =

50,000

→ After further processing

A	B
10,000	20,000
10	15
→ 100,000	→ 300,000
15	20
→ 150,000	→ 400,000

→ Net realisable value

+ F.P.C. + S.D. ov. + Margin → S.V.

Sales Value

— Profit

— S & D ov.

— F. Proc. cost

N.R.V.

→ J.C. → NAV → ratio → ratio

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PROCESS AND OPERATION COSTING

WITH JOINT

Meaning
Process costing is a method of costing used in industries where the material has to pass through two or more process for being converted into a final product.

How to prepare

Step 1

Particulars	Unit	Amo	Particulars	Unit	Amo
To material	xxx	xxx	By Normal loss	xx	xx
To labour		xxx			
To other exp.		xxx			

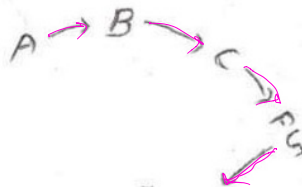
Step 2

$$\text{Cost per unit} \Rightarrow \frac{A+B+C-E}{P-Q}$$

Step 3

Particulars	Unit	Amo	Particulars	Unit	Amo
To Material	xxx		By Normal loss	xx	
To labour			By abnormal loss	B.f.	100
To other exp.			By transfer to next process	20	500
To abnormal gain	B.f.				

CRUX



INCOME STATEMENT

A = finished goods stock at

B = cost of abnormal loss - Realisable/scrap value

C = cost of abnormal gain - Realisable/scrap value of normal loss

D = Given in Q.

E = B.F.

Particulars	Amount	Particulars	Amount
To cost of goods sold	A	By abnormal gain	C
To abnormal loss	B	By sales	D
To Net profit	E		

Equivalent production units



INTER-PROCESS profit :- In some process industries the output of one process is transferred to next process not at cost but at market value or cost plus a % of profit.

OPERATING COSTING

→ UNITS of cost in operating costing

→ Transport services

Passenger transp - Passenger - km.

(Goods carriage) Quintal - km, tonne - km.

→ Supply service

→ Power - kilowatt - hour

→ Water - Kubic - feet, per lt, per kg.

→ Hospital - patient per day, room per day, per bed, per operation etc.

→ Canteen - per item, per meal etc.

→ Cinema - Per ticket

→ Composite cost unit

→ Absolute (Weighted average) Tonne - km ✓

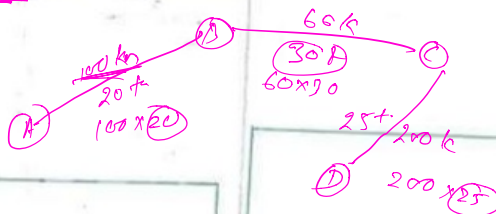
$$\sum (\text{Weight} \times \text{distance})_1 + \dots + (\text{Weight} \times \text{Distanc})_n$$

→ Commercial (Simple average) Tonne - km.

$$\sum (\text{Distance}_1) + (\text{Dist}_2) \dots (\text{Distanc})_n \times \frac{W_1 + W_2 \dots W_n}{n}$$

→ Standard load

→ Multiple costing



JOB COSTING AND BATCH COSTING

→ ENTRIES

As per non-integrated accounting

→ Job cost sheet, factory cost statement, invoice price for job

BATCH COSTING

→ Calculation of cost & profit

→ EBO

$$= \sqrt{\frac{R \cdot D \cdot S}{C}}$$

D =

S = Set-up Cost

C =

RAM → A-D in Standard ratio

A	60	10000 x 60	A	7000
D	40	10000 x 40	D	6000
				13000

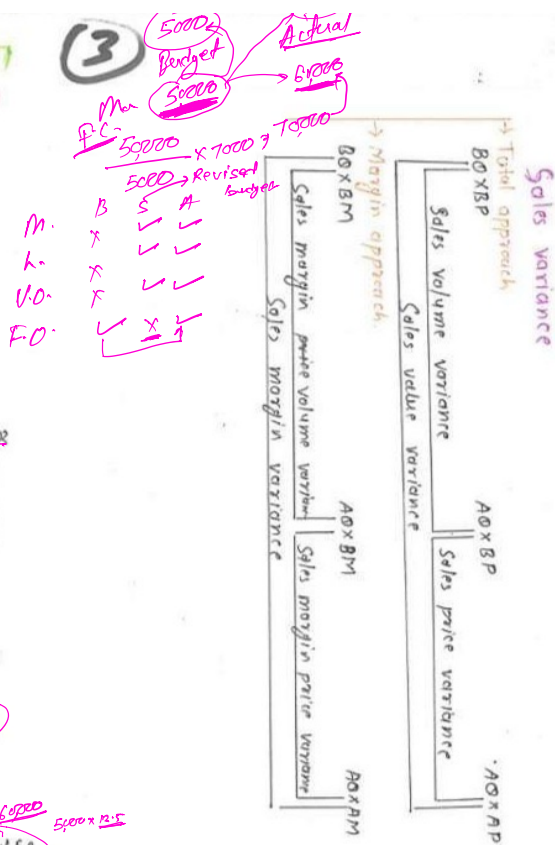
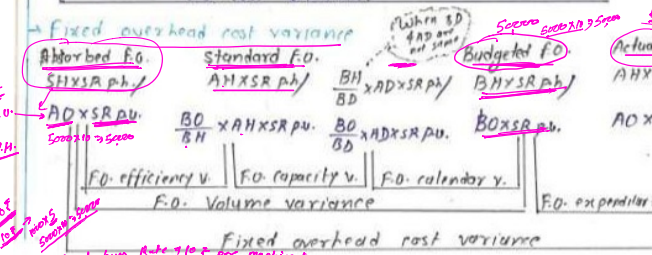
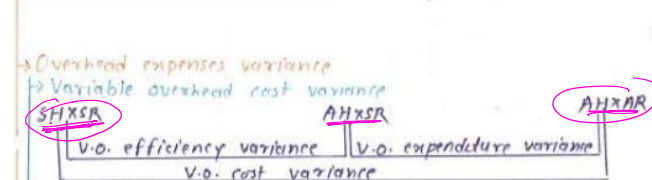
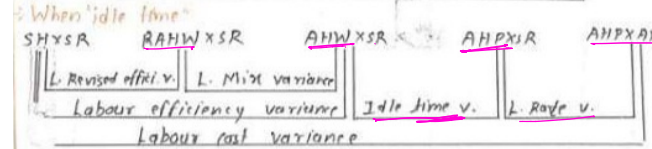
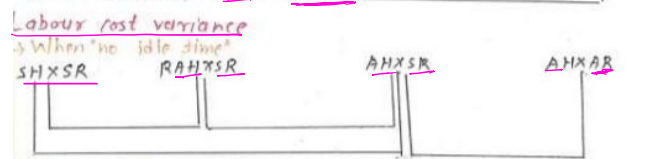
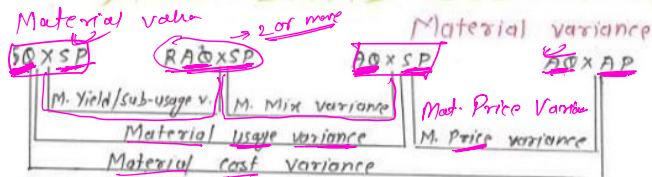
RAM

Cost Control is Standard Cost

Cost Reduction

Cost

(3)



RF per Unit
 $1000 \times 10 = 10000$
Budget $5000 \text{ Unit} \times 10 = 50000$
Actual 10000
 $\frac{A.O}{B.H.} \times 100 = 200\%$
 $\frac{5000}{10000} \times 100 = 50\%$
 $5000 \times 10 = 50000$

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BUDGETS AND BUDGETARY CONTROL

Capacity wise

1) Fixed budget -

5000 unit

2) Flexible budget

5000 6000 7000

Types of cost

1) Fixed cost

10000 10000 10000

2) Variable cost

Change per unit

5000 6000 7000

3) Semi-variable cost

Change in unit

4) V.C. per unit

Change in cost

5) In total

Function wise

→ Sales budget

10000

→ Production budget

Sales 10000

→ Closing stock 2000

→ Opening stock (1000)

→ Production 11000

→ Plant utilisation budget

→ Direct material usage budget

11000 x 2 = 22000

→ Purchase budget

11000 x 2 = 22000

+ 4000

(2000)

→ Personnel budget

11000 x 3 = 33000

→ Production or factory overhead cost

→ Production cost budget

→ Ending inventory budget

→ Cost of goods sold budget

→ Selling & distribution cost budget

→ Administration expenses budget

→ Research and development exp. budget

→ Capital expenditure budget

Master budget

Period wise

Long term budgets

Short budgets

Current budget

Sales

- T.C.

Profit

For Marginal and budget

COST ACCOUNTING SYSTEM

	Non-integrated ^{only cost item}		Integrated ^{Costing Account}
	Account	Cost	
1) Purchase of materials	Purchase Acc To Cash	Material Control To G.L.A. Acc	Material Control Acc To Cash Acc
2) Payment for labour	Salary & Wages Acc To Cash	Wages Control Acc To G.L.A. Acc	Wages Control Acc To Cash Acc
3) Transfer of materials	—	WIP Control Acc → D.M. Production ov. Con → I.M. → F. Office & A.O. Con → Im → O. Selling & Dist. O. Con → I.M. → S&D. Costing P&L → I.M. → Abnorm To Material Cont.	WIP Cont. Pro O. Cont Off. & A.O.C. S&D. O.C. Costing P&L To Material Cont.
4) Labour	—	WIP Control → D.M. Pro Overh Con → Im → F. Off. & A.O. Con → Im → O. S&D. O. Con → Im → S&D. Costing P&L → Abnorm To Labour Cont.	→ Same
1) Production over incurred	Expenditure To Cash	Production Ov. Con To G.L.A. Acc	Production O. Con To Cash Acc
Production over absorbed	—	WIP Control To Prod. O.C.	WIP Cont To P.O.C.
<u>Off. & A.</u>	E. To Cash	A&O To G.L.A. Acc	A&O O.C. To Cash
	—	F. O. To A&O	F. O. To A&O
	E. To Cash	S&D. To G.L.A. Acc	S&D. To Cash
		Cost of Sales To S&D	Cost of Sales To S&D.

1B) WIP $\rightarrow$ F.C.
 $\hookrightarrow$ Cost of
F.C.

F.C. $\rightarrow$ ~~Sale~~
Cost of Se
 $\hookrightarrow$ Cost of
goods so

Se

Can
To Sale

F.C. Control
To WIP/m

Cost of Se
To F.C.

GLA
To Cost of Se

F.C. Control
To WIP Cost

Cost of Se
To F.C.

~~GLA~~
~~Cost~~
To Cost of Se

