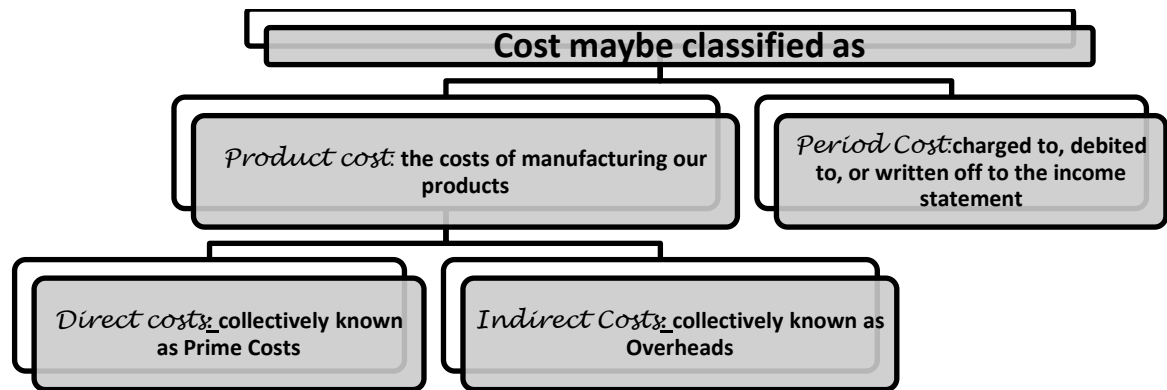
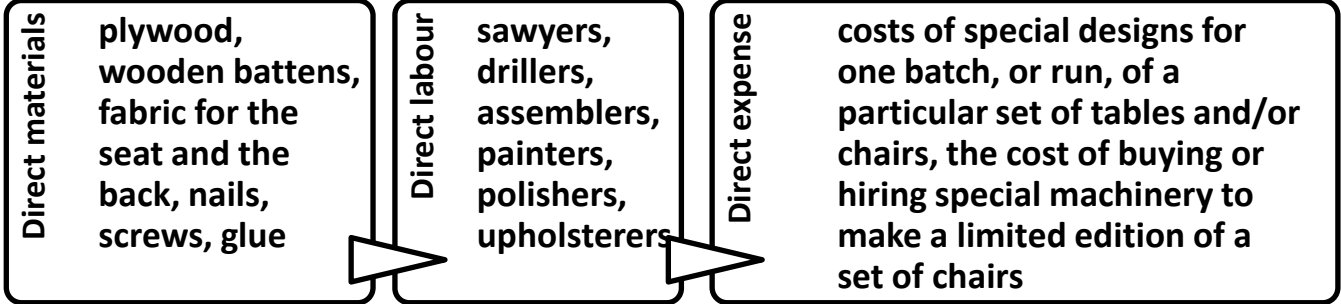


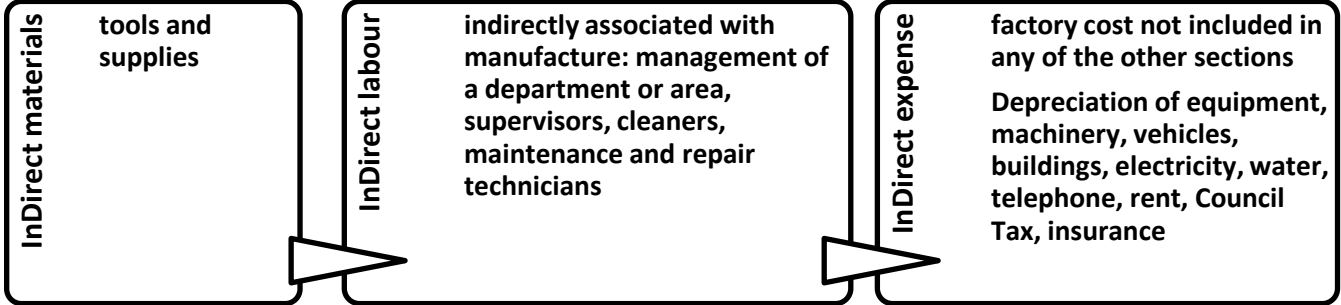


Conversion Costs: these are the costs incurred in the factory that are incurred in the conversion of materials into finished goods

Direct Costs:



Indirect Costs



Period Costs		
1. <i>Administration Costs</i> : include salaries, rent, Council Tax, electricity, water, telephone, depreciation, a potentially infinitely long list	2. <i>Selling Costs</i> : incurred to create and stimulate the demand and to secure the demand 3. <i>Distribution Costs</i> : incurred on dispatch of the finished goods to customer including transportation	4. <i>Research Costs</i> 5. <i>Finance Costs</i> : associated with providing the permanent, long term and short term finance

Material

- 1) *Reorder level*= Maximum usage * Maximum lead time
(Or) Minimum level + (Average usage * Average Lead time)
- 2) *Minimum level*= Reorder level - (Average usage * Average lead time)
- 3) *Maximum level*= ROL + ROQ - (Minimum usage * Minimum lead time)
- 4) *Average level*= $\frac{\text{Minimum level} + \text{Maximum level}}{2}$ (or)
Minimum level + ½ Reorder quantity
- 5) *Danger level* (or) safety stock level
= Minimum usage * Minimum lead time (preferred)
(or) Average usage * Average lead time
(or) Average usage * Lead time for emergency purposes
- 6) *EOQ (Economic Order Quantity - Wilson's Formula)* = $\sqrt{2AO/C}$
Where A = Annual usage units
O = Ordering cost per unit
C = Annual carrying cost of one unit
i.e. Carrying cost % * Carrying cost of unit
- 7) *Associated cost* = Buying cost pa + Carrying cost pa
- 8) *Under EOQ Buying cost* = Carrying cost

- 9) *Carrying Cost* = Average inventory * Carrying cost per unit pa * Carrying cost %
(Or) Average Inventory * Carrying cost per order pa
- 10) *Average inventory* = EOQ/2
- 11) *Buying cost* = Number of Orders * ordering cost
- 12) *Number of Orders* = Annual Demand / EOQ

- 13) *Inventory Turnover (T.O) Ratio* = $\frac{\text{Material consumed}}{\text{Average Inventory}}$
- 14) *Inventory T.O Period* = $\frac{365}{\text{Inventory Turn over Ratio}}$

- 15) *Safety stock* = $\frac{\text{Annual Demand}}{365} * (\text{Maximum lead time} - \text{Average lead time})$
- 16) *Total Inventory cost* = Ordering cost + Carrying cost of inventory + Purchase cost
- 17) *Input Output Ratio* = $\frac{\text{Quantity of input of material to production}}{\text{Standard material content of actual output}}$

Remarks :-

- 1) High Inventory T.O Ratio indicates that the material in the question is fast moving
- 2) Low Inventory T.O Ratio indicates over investment and locking up of working Capital in inventories

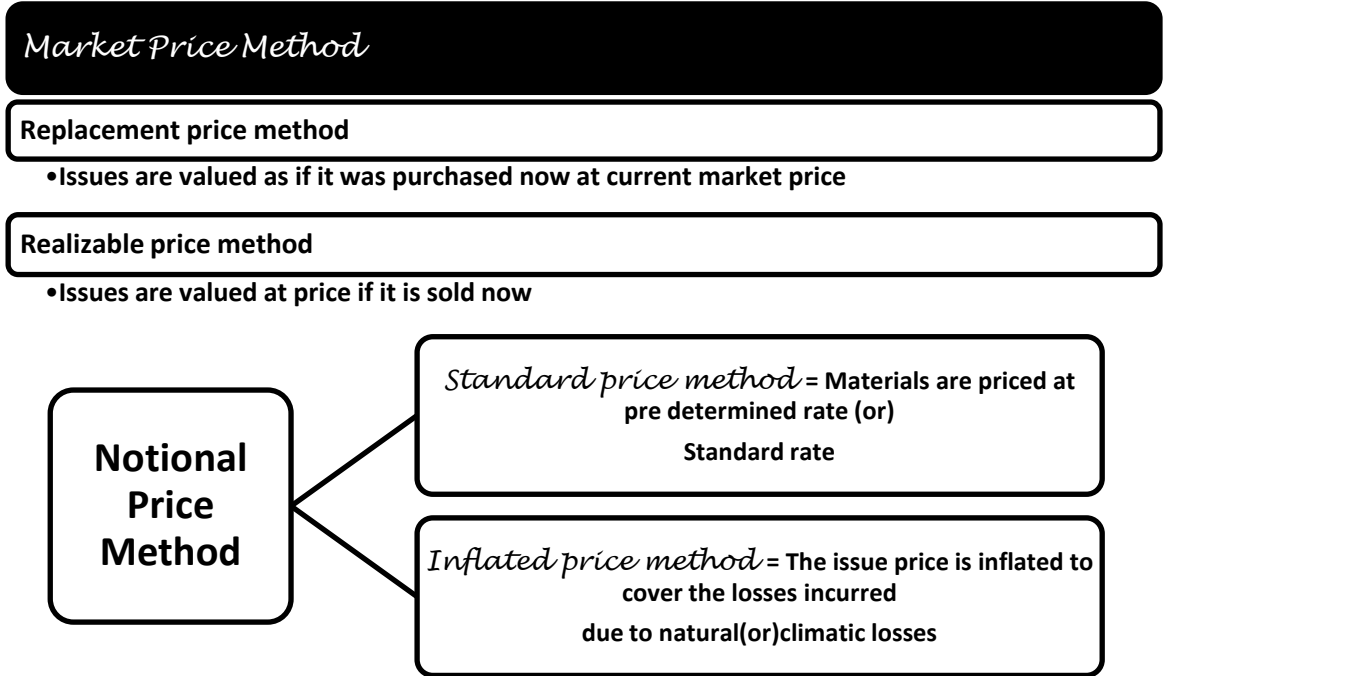
Pricing of material Issues

- 1) Cost price method:-
 - a) Specific price method
 - b) First in First Out method (FIFO)
 - c) Last in First Out method (LIFO)
 - d) Base stock method
- 2) Average price method:-
 - a) *Simple average price method* = $\frac{\text{Total unit price}}{\text{Total No. of purchases}}$

- b) *Weighted average price method* = $\frac{\text{Total cost}}{\text{Total No. of units}}$

- c) *Periodic simple average price method* = $\frac{\text{Total unit price of certain period}}{\text{Total Number of purchases of that period}}$
(This rate is used for all issues for that period. Period means a month (or) week (or) year)

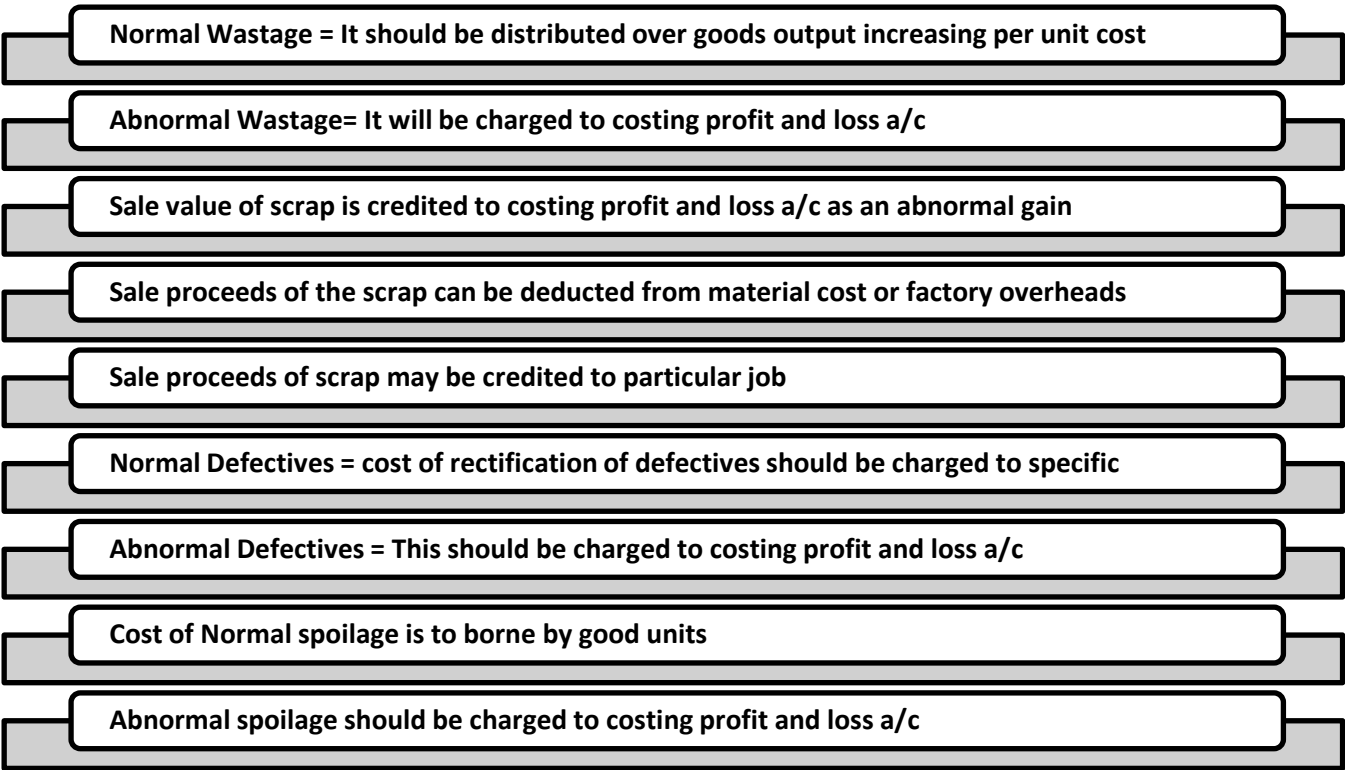
- d) *Periodic weighted average price method* = $\frac{\text{Total cost of certain period}}{\text{Total Number of units of that period}}$



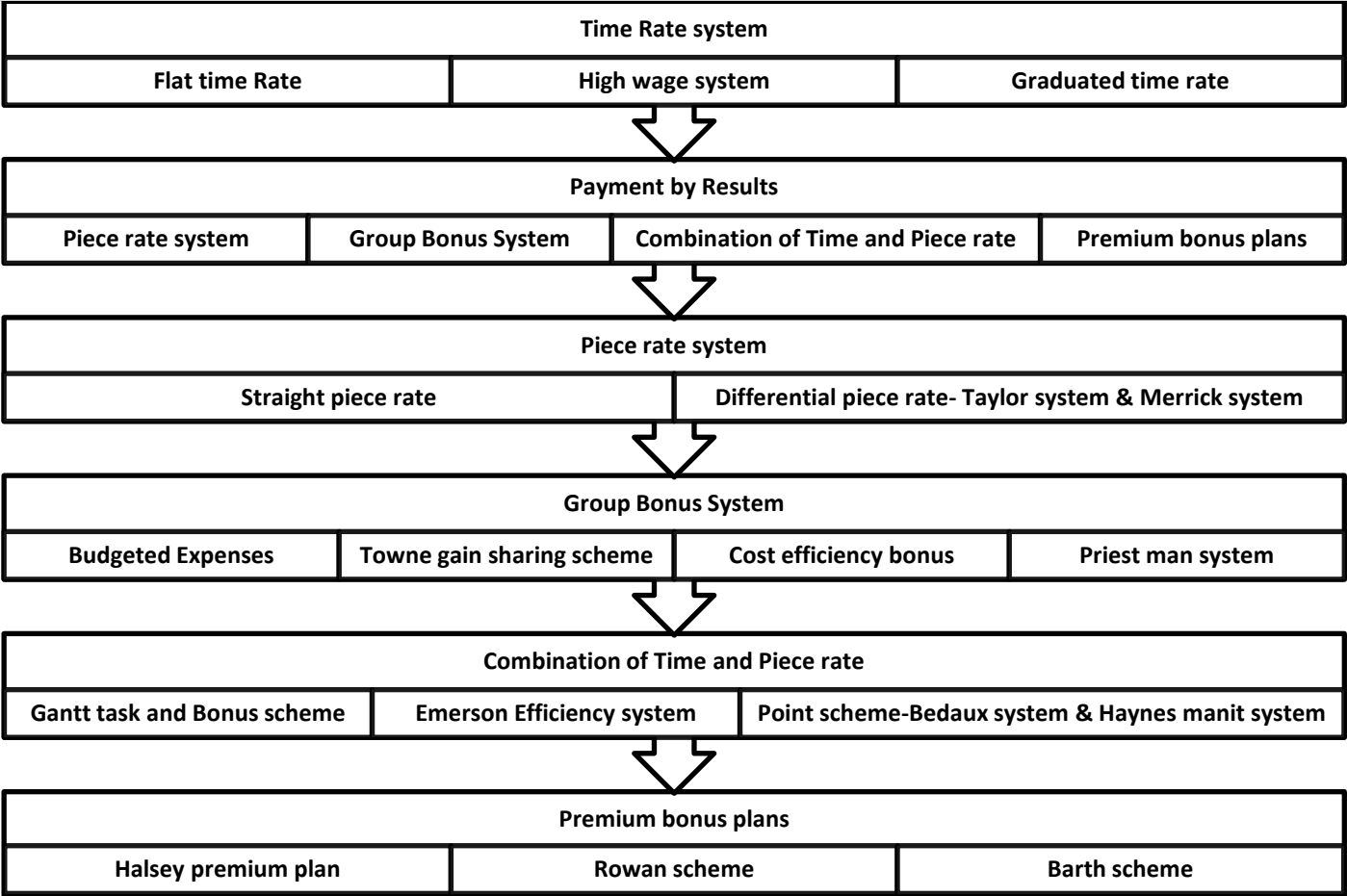
ABC Analysis (or) Pareto Analysis		
Particulars	Quantity	Value
"A" - Important material	10%	70%
"B" - Neither important nor unimportant	20%	20%
"C" - UN Important	70%	10%

Note
•Material received as replacement from supplier is treated as fresh supply •If any material is returned from Department after issue, it has to be first disposed in the next issue of material •loss in the book balance of stock and actual is to be transferred to Inventory adjustment a/c and from there if the loss is normal it is transferred to Over Head control a/c. If it is abnormal it is transferred to costing profit and loss a/c. •CIF = Cost Insurance and Freight (This consignment is inclusive of prepaid insurance and freight) •FOB = Free on Board (Materials moving by sea – insurance premium is not paid) •FOR = Free on Rail (Insurance and freight is not borne by the supplier but paid by the company or purchase) •For each receipt of goods = Goods Receipt note •For each issue of goods = Materials Requisition note (or) Material Issue note

Accounting Treatment



Labour



- 1) *Time rate system* = Hours worked * Rate per hour (Basic wages)
- 2) *Piece rate system*:
 - i) *Straight piece rate earnings* = Number of units produced * Rate per unit
 - ii) *Differential Piece rate*
 - a) *F.W.Taylor's differential rate system*
 - » 83% of piece rate when below standard
 - » 125% of piece rate when above or at standard

b) Merrick differential or multiple piece rate system

Efficiency level	Piece rate
» up to 83%	»Normal piece rate
» 83% to 100%	» 110% of Normal rate
» Above 100%	» 120% of Normal rate

iii) Gantt Task and Bonus system

Output	Payment
» Below standard	» Time rate (guaranteed)
» At standard	» 20% Bonus of Time rate
» Above standard	» 120% of ordinary piece rate

iv) Emerson's Efficiency system

Efficiency	Payment
» Below 66.7%	» Hourly Rate
» from 66.7%	»Hourly rate (+) increasing bonus according to degree to 100% of efficiency on the basis of step bonus rates
» Above 100%	» Hourly rate (+) 20% Bonus (+) additional bonus of 1% of hourly rate for every 1% increase in efficiency

v) Halsey Premium Plan

= Basic wages + 50% of time saved * Hourly Rate

vi) Halsey Weir Premium Plan

= Basic wages + 30% of time saved * Hourly rate

vii) Rowan Plan

= Basic wages + $\frac{\text{Time saved}}{\text{Time allowed}}$ * Basic Wages

viii) Bedaus Point system

= Basic wages + 75% * Bedaus point/60 * Rate/hr

ix) Barth's System

= Hourly rate * $\frac{1}{\text{Std time}}$ *Time taken

Labour Turnover:-

1) Separation rate method

= $\frac{\text{Separation during the period}}{\text{Average No. of worker's during the period}}$

2) Net labour T.O rate (or) Replacement method

= $\frac{\text{Number of replacements}}{\text{Average No. of worker's during the period}}$

3) Labour flux rate

= $\frac{\text{No. of separation} + \text{No. of replacement}}{\text{Average No. of worker's during the period}}$

Accounting Treatment
Normal Idle time = Charged to factory overheads
Normal but un-controllable = It should be charged to job by inflating wage rate
Abnormal = It should be charged to costing P & L a/c

Overheads		
Direct redistribution method - Service department costs are divided over production department - Ignore service rended by one dept. to another	Step method of secondary distribution (or) Non reciprocal method Service department which serves largest number of service department is divided first and go on	Reciprocal service method) Simultaneous equation method (or) Algebraic method - Repeated distribution method - Trial and Error method
Simultaneous equation method	Equation is formed between service departments and is solved to find the amount due	
Repeated distribution method	Service department cost separated repeatedly till figure of service dept. is exhausted or too small	
Trial and Error method	Cost of service department is apportioned among them repeatedly till the amount is negligible and the total is divided among production department	

Treatment of Over/under Absorption
absorbed and over absorbed overheads -small value transferred to costing profit and loss a/c
under and over absorption occurs due to wrong estimates cost of product manufactured should be adjusted
accrued due to same abnormal reasons transferred to costing profit & loss a/c

Apportionment of OH Exp.	
Stores service expenses	Value of materials consumed
Factory rent	Floor area
Municipal rent, rates and taxes	floor area
Insurance on Building and machinery	Insurable value
Welfare department expenses	Number of employees
Supervision	
Amenities to employee's	
Employees liability for insurance	
Lighting power	Plug point
Stores over heads	Direct Material
General over heads	Direct Wages

Apportionment of Departmental cost	
Maintenance dept	Hours worked for each dept
Pay roll and time keeping	Total labour (or) machine hours (or) Number of employees in each department
Employment (or) Personnel department	Rate of labour T.O (or) No. of employees of each department
Stores Keeping department	No. of requisitions (or) value of materials of each department
Purchase department	No. of purchase orders value of materials of each department
Welfare, ambulance, canteen, service, recreation room expenses	No. of employees in each department
Building service department	Relative area each dept
Internal transport service (or) overhead crane service	weight, value graded product handled, weight and distance traveled
Transport department	Crane hours, truck hours, truck mileage, Number of packages
Power house (electric power cost)	Housing power, horse power machine hours, No. of electric points etc.

Reconciliation

Causes of difference

Purely financial items

- Appropriation of profits Transferred to reserves, goodwill, preliminary expenses, dividend paid etc
- Loss on sale of investment, penalties and fines
- Income Interest received on Bank deposits, profit on sale of investments, fixed assets, transfer fees

Valuation of stock

- Raw - material-In financial a/c's stock is valued at cost or market value Whichever is less, while in cost a/c's it is valued at LIFO, FIFO etc
- Work in progress-In financial a/c's administrative expenses are also considered while valuing stock, but in cost a/c's it may be valued at prime (or) factory cost (or) cost of production
- Finished Goods-In financial a/c's it is valued at cost or market price whichever is less, in cost a/c's it is valued at total cost of production

Overheads

- In financial = Actual expenses are taken
- In cost = Expenses are taken at predetermined rate

Depreciation

- In financial = Charged in diminishing or fixed balance method
- In cost = Charged in machine hour rate

Abnormal Gains

- In financial = Taken to profit & Loss a/c
- In cost = Excluded to cost a/c's or charged in costing profit & Loss a/c

Job & Batch Costing

Organizations that carry out functions and services on a one at a time basis

A job is “A customer order or task of relatively short duration”

Job costing is “A form of specific order costing; the attribution of cost to jobs”

A batch is group of similar articles which maintains its identity throughout one or more stages of production and is treated as a cost unit

Batch costing is a form of specific order costing; the attribution of costs to batches.

Economic Batch Quantity = $EBQ = \sqrt{2AS/C}$

Where A = Annual Demand

S = Setting up cost per batch

C= Carrying cost / unit of production

Process Costing																								
Format of Abnormal loss																								
<table><tr><th>Particulars</th><th>Unit</th><th>Rs.</th><th>Particulars</th><th>Unit</th><th>Rs.</th></tr><tr><td>To Process a/c</td><td></td><td></td><td>By Sale of wasted units</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td>By costing P & L a/c</td><td></td><td></td></tr><tr><td>Total</td><td></td><td></td><td>Total</td><td></td><td></td></tr></table>	Particulars	Unit	Rs.	Particulars	Unit	Rs.	To Process a/c			By Sale of wasted units						By costing P & L a/c			Total			Total		
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<table><tr><th>Particulars</th><th>Units</th><th>Rs.</th><th>Particulars</th><th>Units</th><th>Rs.</th></tr><tr><td>To Normal Loss a/c</td><td></td><td></td><td>By Process a/c (names of different process)</td><td></td><td></td></tr><tr><td>To costing P&la/c</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Total</td><td></td><td></td><td>Total</td><td></td><td></td></tr></table>	Particulars	Units	Rs.	Particulars	Units	Rs.	To Normal Loss a/c			By Process a/c (names of different process)			To costing P&la/c						Total			Total		
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To Normal Loss a/c			By Process a/c (names of different process)																					
To costing P&la/c																								
Total			Total																					

1. Cost per unit for valuation of units to be trans. to next process and also for abnormal, loss or gain

= $\frac{\text{Total process cost} - \text{Salvage value of normal spoilage}}{\text{Total units introduced} - \text{Normal loss in units}}$

2. Abnormal loss (or) gain (all in units):

= Units from previous process + fresh units introduced - Normal loss - units transferred to next process

(If the result is positive then abnormal loss. If negative then abnormal gain)

3. Statements to be prepared while WIP is given:

i) Statement of equivalent production

ii) Statement of cost

iii) Statement of apportionment of cost

iv) Process cost a/c

4. In case of opening WIP and closing WIP are given then there are different methods of valuation of closing WIP

FIFO Method	LIFO Method	Average Method
- units transferred to next process includes full opening stock units - <i>First to complete the units already in process</i> - closing stock includes the RM introduced during the process	- Cost incurred in process first to complete newly introduced units - Then to complete units already in process in this method - closing stock is divided into two-Units which represent opening stock but lie at the end of the period & Newly introduced units in closing stock	- No distinction is made between opening stock and newly introduced material. - cost incurred for opening stock is also to be added with current cost

Points of vital importance in case of Abnormal Gain / Loss:

a) Calculate cost per unit by assuming there is no abnormal loss / gain

b) Cost per unit arrived above should be applied for valuation of both abnormal Loss/gain units and output of the process.

c) Separate a/c for both abnormal loss/gain is to be prepared

JOINT PRODUCT AND BY PRODUCT COSTING

Methods of apportioning joint cost over joint products

Physical unit method

- Separated on the basis of ratio of output quantity

Standard cost method

- Separated on the basis of standard cost set for respective joint products

Contribution margin method

- divided into two categories (i.e.) variable and fixed. Variable costs are separated on unit produced. Fixed on the basis of contribution ratios made by different products

Market value at the point of separation

- Joint cost *100/ Sales Revenue
- Joint cost for each product is apportioned by applying this % on sales revenue of each product
- Sales revenue = Sales Revenue at the point of separation

Market value after processing

- apportioned on the basis of total sales Value of each product after further processing

Net Realizable value method

- From sales value following items are deducted
 - i) Estimated profit margin
 - ii) Selling and distribution expenses if any included.
 - iii) Post split off cost

Operating Costing

The Differences Between Product Costing and Service Costing

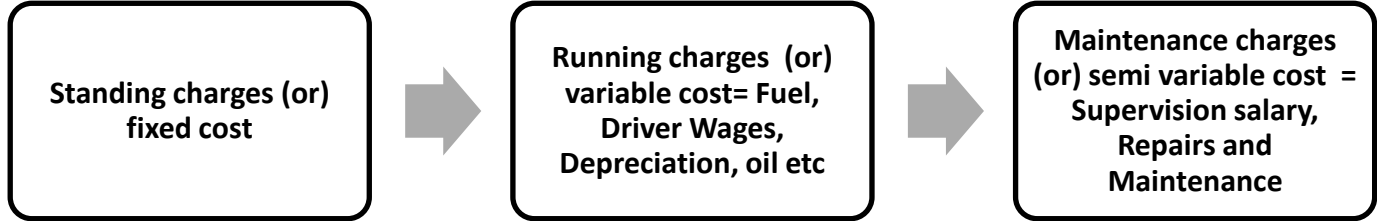
- There may be very few, if any, materials to worry about
- Overheads will comprise the most significant portion of any costs of which, labour costs may well comprise as much as 70%

No.	Enterprise	Cost per unit
1.	Railways or bus companies	Per passenger-kilometer
2.	Hospital	Per patient/day, per bed/day
3.	Canteen	Meals served , cups of tea
4.	Water supply service	Per 1000 gallons
5.	Boiler House	1000 kg of steam
6.	Goods Transport	Per tonne km, quintal km
7.	Electricity Boards	Per kilowatt - hours
8.	Road maintenance department	Per mile or road maintenance
9.	Bricks	One thousand
10.	Hotel	Per room/day

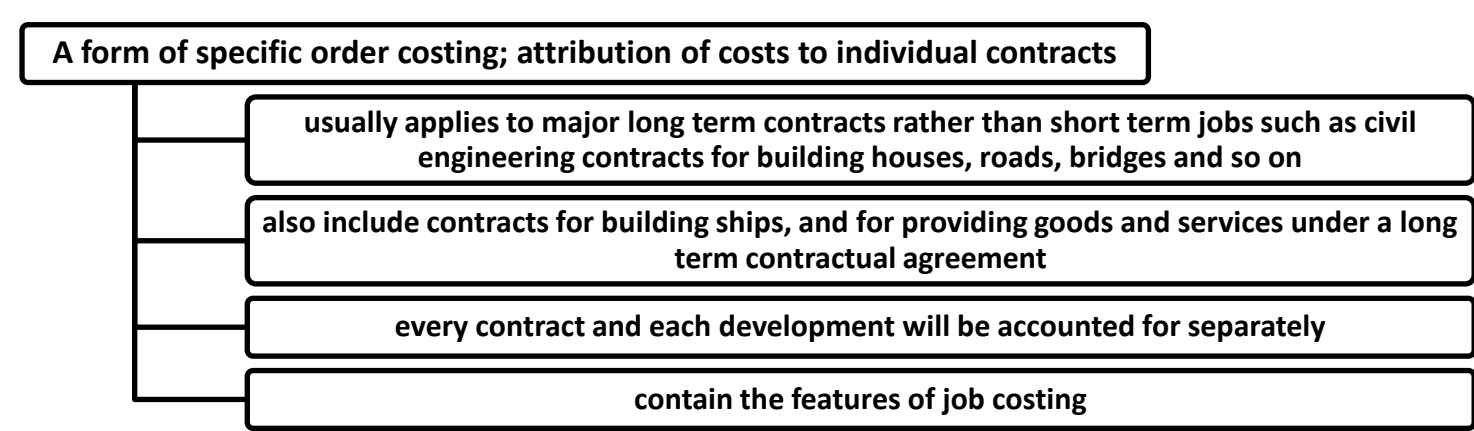
Passenger km, quintal km, tonne km, known as composite units computed in 2 ways:

- a) *Absolute (weighted average)*: (e.g.) tones km - Multiplying total distance by respective load quantity.
- b) *Commercial (simple average)*: (e.g.) tonne Km-Multiplying total distance by average load quantity

All accumulated cost is classified into 3 categories:



Contract Costing



Profit of Incomplete contract :-

- 1) When % of completion is less than or equal to 25% then *full Notional profit is transferred to reserve.*
- 2) When % of completion is above 25% but less than 50% following amount should be credited to profit & loss a/c = $\frac{1}{3} \times \text{Notional Profit} \times \{\text{Cash received} / \text{Work certified}\}$
- 3) When % of completion is more than or equal to 50% then the amount transferred to profit is = $\frac{2}{3} \times \text{Notional Profit} \times \{\text{Cash received} / \text{Work certified}\}$
[Balance is transferred to reserve a/c]

% of completion = {Work certified/Contract price} * 100

- 4) When the contract is almost complete the amount credited to profit & loss a/c is
- a) Estimated total profit * {Work certified / Contract price}
- b) Estimated total profit * {Cash received / Contract price}
- c) Estimated total profit * {Cost of work done / Estimated total profit}
- d) Estimated total profit*{Cost of work done*Cash received / Estimated total cost * Work certified}

5) Work-In-Progress is shown in Balance Sheet as follows:-

Skeleton Balance sheet

Liabilities	(RS)	Asset	(Rs)
Profit & loss a/c (will include)		Work-in-progress	
Profit on contract (Specify the contract number)		Value or work certified	
Less : Loss on contract (Specify the contract number)		Cost of work uncertified	
Sundry creditors (will include)		Less :- Reserve for unrealized profit	
Wages accrued		Less :- Amount received from contractee	
Direct expenses accrued			
Any other expenses (Specify)			

6) Escalation Clause = This is to safeguard against likely change in price of cost elements rise by and certain % over the prices prevailing at the time tendering the contractee has to bear the cost.

Marginal Costing

Sales = Total cost + Profit = Variable cost + Fixed cost + Profit

Total Cost = Variable cost + Fixed cost

Variable cost = It changes directly in proportion with volume

Variable cost Ratio = {Variable cost / Sales} * 100

Sales – Variable cost = Fixed cost + Profit

Profit Volume Ratio [P/V Ratio]:-

- {Contribution / Sales} * 100
- {Contribution per unit / Sales per unit} * 100
- {Change in profit / Change in sales} * 100
- {Change in contribution / Change in sales} * 100

Break Even Point [BEP]:-

- Fixed cost / Contribution per unit [in units]
- Fixed cost / P/V Ratio [in value] (or) Fixed Cost * Sales value per unit/(Sales – Variable cost per unit)

Margin of safety [MOP]

Actual sales – Break even sales

Net profit / P/V Ratio

Profit / Contribution per unit [In units]

Sales unit at Desired profit = {Fixed cost + Desired profit} / Cont. per unit

Sales value for Desired Profit = {Fixed cost + Desired profit} / P/V Ratio

Contribution = Sales * P/V Ratio

At BEP Contribution = Fixed cost

Variable cost Ratio = Change in total cost * 100/Change in total sales

Indifference Point

- Point at which two Product sales result in same amount of profit
- = Change in fixed cost (in units)
- Change in variable cost per unit

= Change in fixed cost (in units)

- Change in contribution per unit

= Change in Fixed cost (in Rs.)

- Change in P/Ratio

= Change in Fixed cost (in Rs.)

- Change in Variable cost ratio

Shut down point

- Point at which each of division or product can be closed

= Maximum (or) Specific (or) Available fixed cost

- P/V Ratio (or) Contribution per unit

- If sales are less than shut down point then that product is to shut down

Note :-

- 1) When comparison of profitability of two products if P/V Ratio of one product is greater than P/V Ratio of other Product then it is more profitable.
- 2) In case of Indifference point if Sales > Indifference point --- Select option with higher fixed cost (or) select option with lower fixed cost.

Standard Costing

Method one of reading:-

Material			
1	2	3	4
<u>SP * SQ</u>	<u>SP * AQ</u>	<u>SP * RSQ</u>	<u>AP * AQ</u>

Material cost variance = (1) – (4)

Material price variance = (2)–(4)

Material usage variance = (1) – (2)

Material mix variance = (3) – (2)

Material yield variance = (1) –(3)

Labour			
1	2	3	4
<u>SR*ST</u>	<u>SR*AT</u>	<u>SR * RST</u>	<u>AR * AT</u>

Labour cost variance = (1) – (4)

Labour Rate variance = (2)–(4)

Labour Efficiency variance = (1) – (2)

Labour mix variance = (3) – (2)

Labour Yield variance = (2) –(3)

Variable OH		
1	2	3
<u>SR*ST</u>	<u>SR*AT</u>	<u>AR * AT</u>

Variable OH cost variance = (1) – (3)

Variable OH Exp. variance = (2)–(4)

Variable OH Efficiency variance = (1) – (2)

[Where: SR =Standard rate/hour = Budgeted variable OH / Budgeted Hours]

Fixed OH				
1	2	3	4	5
<u>SR*ST</u>	<u>SR*AT</u>	<u>SR * RBT</u>	<u>SR * BT</u>	<u>AR * AT</u>

Fixed Overheads Cost Variance = (1) – (5)

Fixed Overheads Budgeted Variance = (4) – (5)

Fixed Overheads Efficiency Variance = (1) – (2)

Fixed Overheads Volume Variance = (1) – (4)

Fixed Overheads Capacity Variance = (2) – (3)

Fixed Overheads Capacity Variance = (2) – (3)

Fixed Overheads Calendar Variance = (3) – (4)

Sales Value Variance			
1	2	3	5
<u>Budgeted Price*BQ</u>	<u>BP*AQ</u>	<u>BP*Budgeted mix</u>	<u>AP * AQ</u>

Sales value variance = (4)–(1)

Sales price variance = (4) – (2)

Sales volume variance = (2) – (1)

Sales mix variance = (2) – (3)

Sales quantity variance = (3) – (1)

Note :-

- i) Actual margin per unit (AMPU) = Actual sale price - selling cost per unit
- ii) Budgeted margin per unit (BMPU) = Budgeted sale price - selling price per unit

Sales Margin Variance			
1	2	3	5
<u>BMPU*BQ</u>	<u>BMPU*AQ</u>	<u>BMPU*Budgeted mix</u>	<u>AMPU * AQ</u>

Sales margin variance = (4)–(1)

Sales margin price variance = (4) – (2)

Sales margin volume variance = (2) – (1)

Sales margin mix variance = (2) – (3)

Sales margin quantity variance = (3) – (1)

Control Ratio :-

- 1) Efficiency Ratio = Standard hours for actual output * 100 / Actual hours worked

- 2) Capacity Ratio = Actual Hours Worked * 100 / Budgeted Hours

3) Activity Ratio = $\frac{\text{Actual hours worked}}{\text{Budgeted Hours}} \times 100$

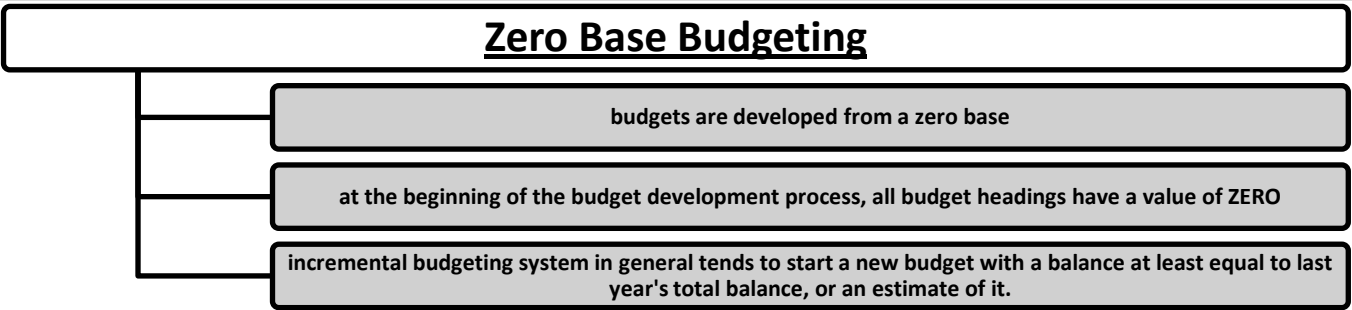
Verification: Activity Ratio = Efficiency * Capacity Ratio

NON-INTEGRATED ACCOUNTS

Scheme of journal entries:-

<u>Material:</u>	For material purchases (cash or credit)	Material control a/c Dr To Cost ledger control a/c
	Purchases for a special job	Work-in-progress ledger control a/c Dr To Cost ledger control a/c
	Material returned to vender	Cost ledger control a/c Dr To Stores ledger control a/c
	Material (direct) issued to production	Work-in-progress control a/c Dr To Stores ledger control a/c
	Material (indirect) issued to production	Manufacturing overheads a/c Dr To Stores ledger control a/c
	Material returned from shop to stores	Stores ledger control a/c Dr To Work-in-progress control a/c
	Material transferred from Job 1 to Job 2	No entry
	Material issued from stores for repairs	Manufacturing overhead a/c Dr To Stores ledger control a/c
<u>Labour:</u>	Direct wages paid	Wage control a/c Dr To Cost ledger control a/c
		Work-in-progress a/cDr To Wage control a/c
	Indirect wages paid to workers in Production, Administration, Selling & Distribution departments	Wage control a/c Dr To Cost ledger control a/c
		Production Overhead a/c Dr Administrative Overhead a/c Dr Selling & Distribution Overhead a/c Dr To Wage control a/c
	Direct Expenses on a particular job	Job a/c Dr To Cost ledger control a/c
<u>Overheads</u>	Overhead expenses incurred	Production overhead a/c Dr Administrative Overhead a/c Dr Selling & Distribution Overhead a/c Dr To cost ledger control a/c
	Carriage inward	Manufacturing Overhead a/c Dr To Cost ledger control a/c
	Production Overheads recovered	Work-in-progress control a/c Dr To Production Overhead a/c
	Administrative Overhead recovered from finished goods	Finished goods ledger control a/c Dr To Administrative Overhead a/c
	Selling and Distribution Overhead recovered from sales	Cost of sales a/c Dr To Selling & Distribution a/c
<i>Special cases</i>		
If over/under absorbed amounts are carried forward to subsequent year, the balance of each Overhead account will have to be transferred to respective Overhead suspense (or reserve) Accounts as follows:	For over recovery :	
	Production Overhead a/c Dr To Production overhead suspense a/c	
	For under recovery :	
	Administrative Overhead Suspense a/c Dr To Administrative Overhead a/c	
	Selling & Distribution Overhead Suspense a/c Dr	
	To Selling & Distribution Overhead a/c	
In case the Under/Over absorbed overheads are transferred to costing profit & loss a/c then the relevant entries are:	For Over recovery:	
	Production Overhead a/c Dr To Costing Profit & Loss a/c	
	For Under recovery:	
	Costing Profit & Loss a/c Dr To Administration Overhead a/c	
<u>Sales:</u>	For sales effected	Cost ledger control a/c Dr To Costing Profit & Loss a/c
Profit / Loss:	In case of profit the entry is as follows	Costing Profit & Loss a/c Dr To Cost ledger control a/c
	Reverse the entry in case of loss	

Budgetary Control



Definition of Zero Base Budgeting (ZBB)

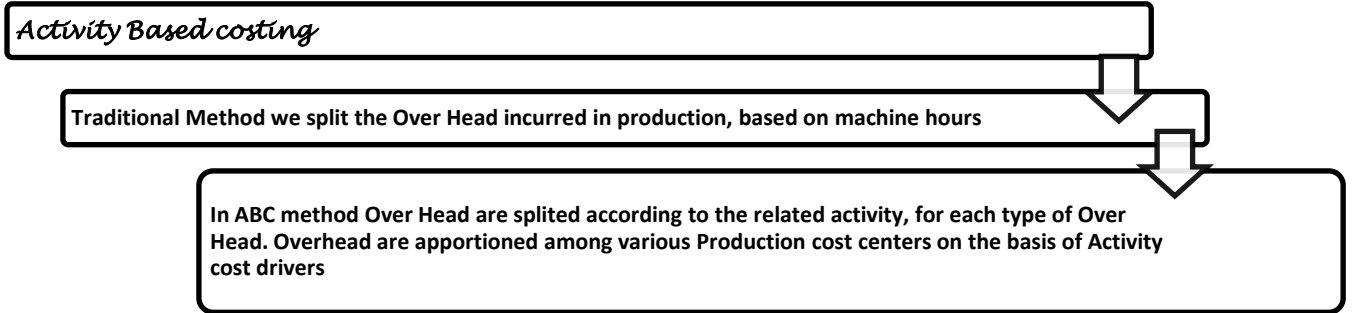
“A method of budgeting whereby all activities are reevaluated each time a budget is set. Discrete levels of each activity are valued and a combination chosen to match funds available”.

Objectives and Benefits of ZBB

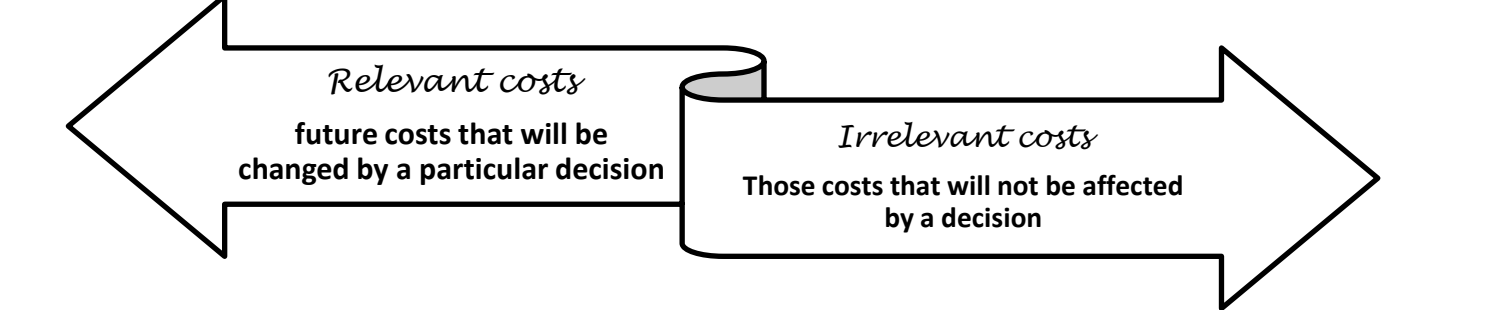
- zero base budgeting tries to achieve is an optimal allocation of resources
- starts by asking managers to identify and justify their area(s) of work in terms of decision packages

benefits of ZBB

- Focus the budget process on a comprehensive analysis of objectives and needs
- Combine planning and budgeting into a single process
- Cause managers to evaluate in detail the cost effectiveness of their operations
- Expand management participation in planning and budgeting at all levels of the organisation



Relevant Costing



1. If the relevant revenues exceed the relevant costs then it will be worthwhile accepting the decision.
2. A particular cost can be relevant in one situation but irrelevant in another.
3. The important point to note is that *relevant costs represent those future costs that will be changed by a particular decision*, while irrelevant costs are those costs that will not be affected by that decision.

Other Important Terminologies : -

To affect a decision a cost must be:

Future: Past costs are irrelevant as they are not affected them by future decisions & decisions should be made as to what is best now.

Incremental: This refers to additional revenue or expenditure, which may appear as a result of our decision-making.
(A cash flow - Such charges as depreciation may be future but do not represent cash flows and, as such, are not relevant.)

Sunk costs: Past costs, not relevant for decision making

Committed costs: This is future in nature but which arise from past decisions, perhaps as the result of a contract.

Relevant Costs: Problem areas:

1 Problems in determining the relevant costs of materials:

When considering various decisions, if the any materials required is not taken from existing stocks but would be purchased on a later date, then the estimated purchase price would be the relevant material cost. A more difficult problem arises when materials are taken from existing stock. In this situation the relevant cost of materials for a particular job (say job X) depends on

Material is in regular use of the company	Use Replacement Cost
Material is not in regular use of the company	Opportunity cost or Realisable value The net sales revenue if the materials were sold (or) The expense that would be avoided if the materials were used on some other job Whichever is greater

Material is in short supply

If the material is in short supply the only way material for the job under consideration can be obtained is by reducing production of some other product / job. *This would release material for the order. but the reduced production* will result in loss of contribution which should be taken in to account when ascertaining the relevant costs for the specific order. Therefore the relevant cost will be Contribution lost (before the material cost,since the material cost will be incurred in any case) will be the relevant cost.

2 Determining the direct labour that are relevant to short - term decision depends on the circumstances. Where a company has temporary sparse capacity and the labour force is to be maintained in the short - term, the direct labour cost incurred will remain same for all alternative decisions. The direct labour cost will therefore be irrelevant for short - term decision - making purposes. However where casual labour is used and where workers can be hired on a daily basis; a company may then adjust the employment of labour to exactly the amount required to meet the production requirements. The labour cost will increase if the company accepts additional work, and will decrease if production is reduced. In this situation the labour cost be a relevant cost for decision - making purposes.

In a situation where full capacity exists and additional labour supplies are unavailable in the short - term, and where no further overtime working is possible, the only way that labour resources could then be obtained for a specific order would be to reduce existing production. *This would release labour for the order. but the reduced production* will result in loss of contribution, which should be taken in to account when ascertaining the relevant costs for the specific' order. Therefore the relevant cost will be Contribution lost (before the labour cost) will be the relevant cost.

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