

BASIC CONCEPTSTheory Questions

1. Objectives of Cost Accounting
2. Cost Control, Cost Reduction
3. Difference between Cost Reduction and Cost Control
4. Advantages of a cost accounting system
5. Limitations of Cost Accounting
6. Factors that must be considered before installing a costing system:
7. Essentials of a good Cost Accounting System
8. Cost unit, Cost Centre, Cost Objects
9. Important cost terms:

a. Controllable costs	g. Standard Cost	k. Capitalized costs	q. Absolute cost
b. Uncontrollable costs	h. Marginal Cost	l. Product costs	r. Discretionary costs
c. Normal cost	i. Estimated cost	m. Opportunity cost	s. Period costs
d. Abnormal cost	j. Differential cost -	n. Out-of-pocket cost	t. Engineered costs
e. Pre-determined Cost	(Incremental and	o. Shut down costs	u. Explicit Costs
f. Imputed costs	decremental costs)	p. Sunk costs	v. Implicit Costs
10. Advantages of a coding system
11. The requirements for an efficient coding system
12. Methods of costing
13. Techniques of costing

Cost sheet format:

Particulars	Rs.	Rs.
Raw material consumed	XXX	
Opening Raw material	XXX	
Add: Purchases(add - Freight, Carriage inwards: Less - Purchase Returns)	XXX	
Less: Closing Raw material	<u>XXX</u>	XXX
Direct Labour		XXX
Direct Expenses		<u>XXX</u>
Prime cost		XXX
Add: Factory O.H (or) Works OH (or) Factory on cost		<u>XXX</u>
Gross Work cost		XXX
Add: Opening work in progress		<u>XXX</u>
		XXX
Less: Closing work in progress		<u>XXX</u>
Work cost		XXX
Add: Office and Administration O.H		<u>XXX</u>
Cost of production		XXX
Add: Opening Finished goods		<u>XXX</u>
Cost of goods available for sale		XXX
Less: closing Finished Goods		<u>XXX</u>
Cost of goods sold		XXX
Add: Selling and distribution O.H		<u>XXX</u>
Cost of Sales/Total cost		XXX
Profit/loss		<u>XXX</u>
Sales		<u>XXX</u>

MATERIALTheory Questions

1. Purchase requisition
2. Purchase orders
3. Goods received note
4. Bill of material and advantages
5. Bill of material Vs Material requisition
6. Transfer of material/ Material transfer note
7. Bin Cards and Stock Control Cards and advantages and disadvantages
8. Stores Ledger
9. Bin Card Vs Stores ledger
10. Types of stores or organization of the stores department:
 - a. Central Store, b. Sub-Store , c. Departmental Store
11. ABC Analysis
12. Advantages of ABC analysis
13. Two bin system:
14. Establishment of system of budgets:
15. Perpetual Inventory System and advantages
16. Continuous stock verification and advantages

Practical:

1. **Valuation of material receipts:** We need to determine at what price received material need to be entered in the stores ledger

Stores ledger price=Cost of purchase/Net QTY

Where cost of purchase=Any normal expenditure incurred till the point of store (Deduct benefits received like trade discount and Add expenditure incurred like cost containers tec...)

Net Qty=Gross QTY-Normal loss QTY

2. **Valuation of Material Issues:**

- a. **Stores ledger format**

Date	Receipts				Issues				Balance		
	GRN	Qty	Rate	Amount	MRN	Qty	Rate	Amount	Qty	Rate	Amount

- b. **Methods:-** FIFO, LIFO

Note: IMP points to be considered before preparing stores ledger

- a. **Valuation of Materials Returned to the Vendor-**

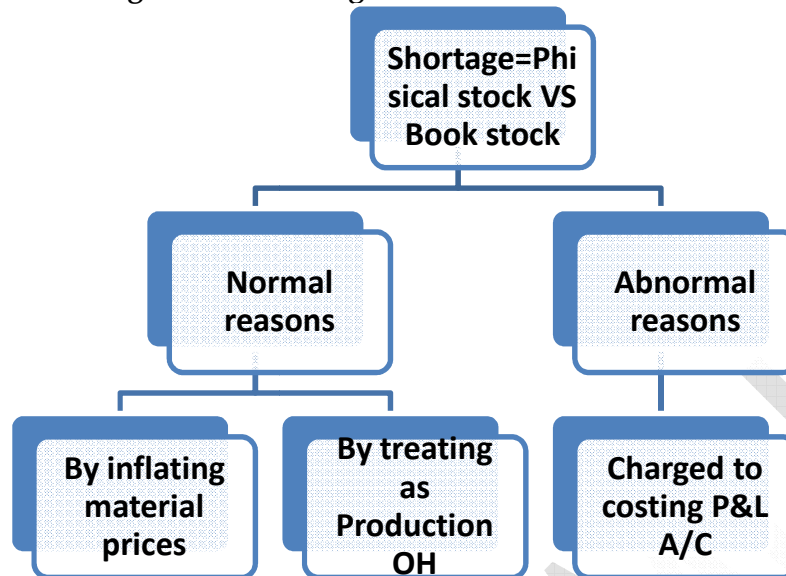
- Invoice price plus freight, receiving and handling charges etc.
- Strictly speaking, the materials returned to vendor should be returned at the stores ledger price and not at invoice price.
- But in practice invoice price is only considered, the gap between the invoice price and stores ledger price is charged as overhead.

- b. **Valuation of Materials Returned to Stores:**

- Such returns are entered in the receipt column at the price at which they were originally issued, and the materials are kept in suspense, to be issued at the same price against the next requisition.

- Include the materials in stock as if they were fresh purchases at the original issue price.
- c. **Material transferred to one Job to another job-** No copy is required for the Store as no entry in the stores records would be called for.

3. Treating of Shortage in stock taking



4. ABC Analysis: Classification of each material item in to A, B and C category

5. Economic Order QTY:

a. By using formula:

- Ordering cost per order and carrying cost per unit per annum are known and they are fixed.
- Anticipated usage of material in units is known.
- Cost per unit of the material is constant and is known as well.

The formula is as follows:

$$EOQ = \sqrt{\frac{2AS}{C}}$$

Where, A = Annual usage units, S = Ordering cost per order

C = Annual carrying cost of one unit, i.e., carrying cost percentage × cost of one unit.

Total relevant cost=Ordering cost p.a + carrying cost p.a

Where **Ordering cost** =No of Order*Cost per order

Total Carrying cost p.a=Average Inventory*carrying cost per unit p.a

b. By using Trail & Error method:

Any change in purchase price due to change in Qty ordered then carrying cost will also change, So in this case we can't use EOQ formula, we need to calculate EOQ by using trial and Error method only

It involves two approaches

i. Purchase price approach:

- Purchase at various order size may be given-
- Calculate Total relevant cost at each order size
- EOQ is least cost of given order size

Total relevant cost=Purchase Price+Ordering cost+Carrying cost

ii. Discount Approach:

- Discount amount may be given at various order size
- Calculate Total relevant cost at each order size
- EOQ is least cost of given order size

Total relevant cost= Ordering cost + Carrying cost-Discout received

6. Setting of Stock Levels

Re-order level = Maximum re-order period × Maximum Usage
(or)

= Minimum level + (Average rate of consumption × Average time to obtain fresh supplies).
(or)

Safety stock + Lead time consumption

Maximum level of inventory =

Re-order-level + Re-order quantity - (Minimum consumption X Minimum re-order period)

Minimum level of inventory =

Re-order level - (Average rate of consumption X average time of inventory delivery)

Average Inventory Level - This level of stock may be determined by using the following equal formula:

Average Inventory Level = Minimum Level + $\frac{1}{2}$ Re-order quantity (OR)

$$\frac{\text{Maximum Level} + \text{Minimum Level}}{2} \quad (\text{or}) \quad \frac{\text{Opening stock} + \text{Closing stock}}{2}$$

Danger level =

Average usage X minimum lead time / Lead time for emergency purchases
(or)

Minimum usage X minimum lead time / Lead time for emergency purchases
(or)

Average usage X Minimum lead time

Where Average usage = $\frac{\text{Maximum} + \text{minimum usage}}{2}$

Average lead time = $\frac{\text{Maximum} + \text{minimum lead time}}{2}$

7. Use of control ratios

Input-output Ratio: Input-output Ratio is used in material control, which indicates the relation between the quantity of material used in the production and the quantity of final output

$$\text{Input-Output ratio} = \frac{\text{Input units}}{\text{Output units}} \times 100$$

Stock Turnover Ratio/ Inventory turnover ratio:

Formula: Raw Material Inventory Turnover Ratio (expressed in times) is computed as under-

a. Cost based computation

$$\text{RM Turnover ratio} = \frac{\text{Cost of raw materials consumed}}{\text{Average stock of raw materials}}$$

b. Quantity based computation

$$\text{RM Turnover ratio} = \frac{\text{Quantity of raw materials issued/consumed}}{\text{Average quantity of raw materials in store}}$$

Note: Cost of Raw Materials Consumed = Opening Stock + Purchases - Closing Stock

Average Stock of Raw Materials = $\frac{1}{2} \times [\text{Opening Stock} + \text{Closing Stock}]$ [or]
 $\frac{1}{2} \times [\text{Max. Level} + \text{Min. Level}]$

Number of Days average inventory is held = $\frac{365}{\text{Material Turnover Ratio}}$

Significance/Interpretation:

Material Turnover Ratio	No. of days average inventory held	Nature of Material
High (≥ 4 times)	Less (≤ 90 days)	Fast moving, i.e. regularly used
Low (< 4 times)	Higher (> 90 days)	Slow moving, i.e. rarely used

8. Stock out Analysis

Stock out situation is where we are losing customer due to no stock in our stores.

It involves two types of cost (**Stock out cost**)

Carrying cost -Due to excess stock maintain to avoid stock out situation

Opportunity cost -Profit forgone due to stock out situation

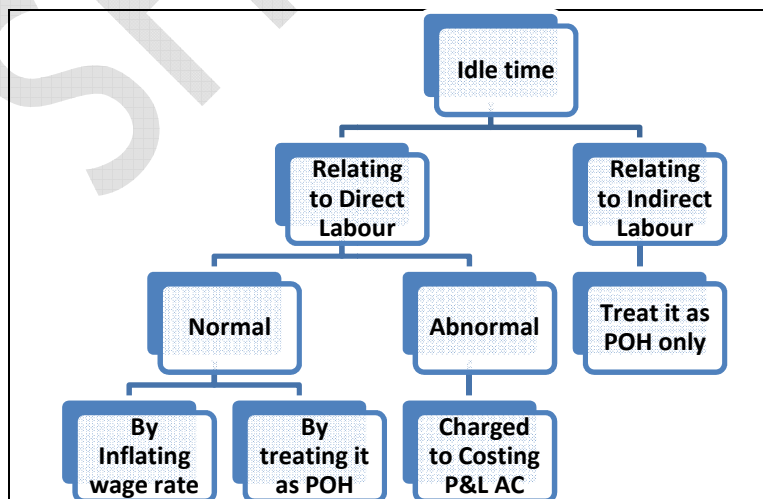
Based on stock out analysis we need to determine Re order level

Re order level =safety stock +Lead time consumption

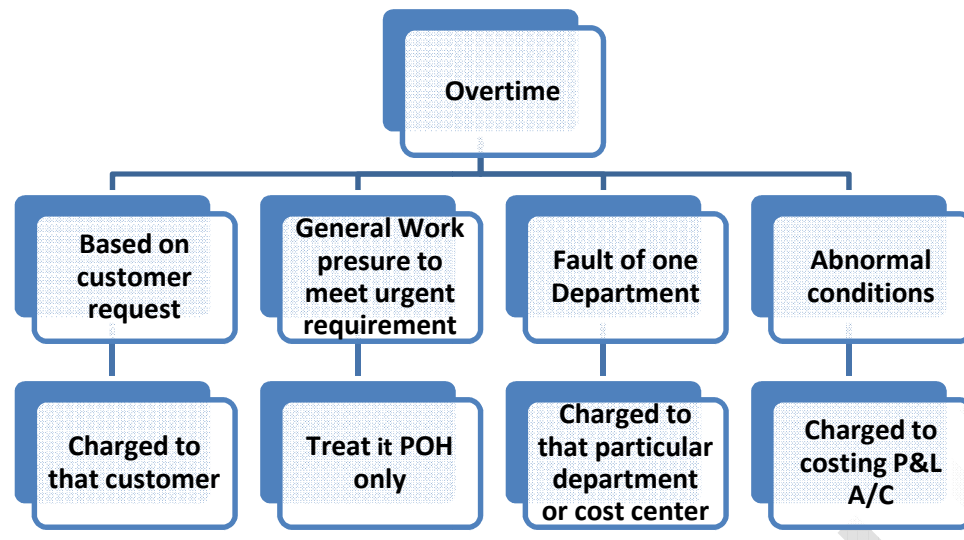
Safety stock will be determined based on least **stock out cost**.

LABOUR**Theory Questions**

- Objectives of Time-keeping:
- Requisites of a Good Time-keeping System
- Time booking - Meaning and Objectives
- Time card and job card
 - Idle time: - a. Normal, b. Abnormal
- Causes for Abnormal Idle Time are as follows:
- Overtime, Circumstances to arise Overtime work
- Overtime premium
- Effect of overtime payment on productivity:
- Treatment of overtime premium in Cost Accounting:
- Steps for Controlling Overtime:
- Causes of labour turnover:
- Effect of 'Labour Turnover' on a manufacturing organizations working:
- Types of cost associated with labour turnover.
- Remedial steps to minimize labour turnover:
- Cases where Equal wages under Halsey & Rowan systems
- Cases where Equal wages under Halsey-weir & Rowan systems
- Objectives of Group Bonus Schemes & Advantages of Group Bonus Schemes

Practical**1. Idle time treatment**

2. Overtime premium treatment



3. Labour turnover

Terms: the terms associated with computation of labour turnover are a) separation) replacement, c) New recruitment d) Accession and e) Average Labour force

Term	a) Separation	b) Replacement	c) New recruitment
Explanation	Left and discharged	Substitutions	New additions due to expansion etc...
OLD worker	Goes out	Goes out	-
New worker	-	Comes in	Comes in

d) **Accessions** represent the total number of new worker joining the firm, whether by way of replacement or otherwise

So, Accessions = Replacements + New Recruitments.

e) **Average Labour Force** = $\frac{\text{Number of workers at the beginning} + \text{Number of workers at the end}}{2}$

The methods for measuring labour turnover are:

The methods of computing Labour Turnover are classified as under-(Note: Labour Turnover is expressed in percentage)

Labour Turnover without Expansion	Labour Turnover with Expansion
Separation Method = $\frac{S}{L}$	Separation Method = $\frac{S}{L}$
Replacement Method = $\frac{R}{L}$	Accession Method = $\frac{A}{L}$ Or $\frac{R+N}{L}$
Mixed Method = $\frac{S+R}{L}$	Flux Method = $\frac{S+A}{L}$ Or $\frac{S+R+N}{L}$

Notes:

- S=Number of separations=Number of Replacements, N=Number of New Recruitments, A=Number of Accessions, L=Average Labour force.
- If data is given for a period other than a year, Labour Turnover Rate is converted in to the annual rate as under-Equivalent Annual Turnover Rate

$$= \frac{\text{Turnover Rate for the period}}{\text{Number of days in the period}} \times 365$$

4. Efficiency rating procedures

a. Based on time

$$\text{Efficiency in \%} = \frac{\text{Standard Time allowed for actual output}}{\text{Actual Time taken for actual output}} \times 100$$

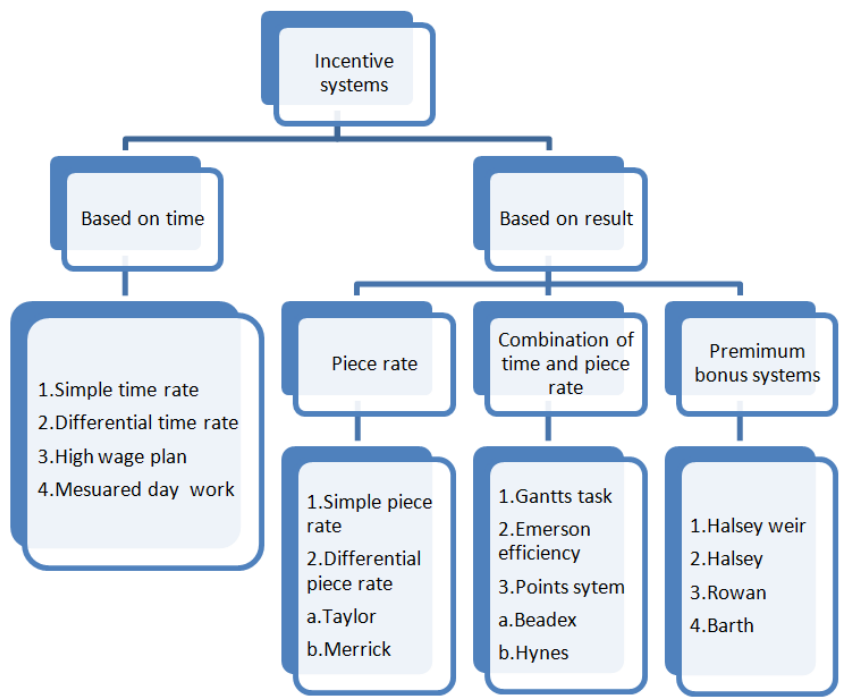
Where, Standard Time allowed for actual output = Actual output X Standard time allowed per one unit

b. Based on output

$$\text{Efficiency in \%} = \frac{\text{Actual output}}{\text{Standard output}} \times 100$$

Where, Standard output = Actual hours worked / Standard hours allowed per one unit

5. Incentive systems



A. Based on time

a. Simple rate and differential rate system:

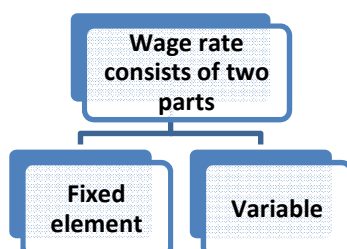
Total Wages = Actual Hours Worked x Rate per hour.

b. High wage plan

Total Wages = Actual Hours Worked x Rate per hour.

c. Measured day work

Total Wages = Actual Hours Worked x Rate per hour



B. Based on result**1. Piece rate systems****a. Simple piecework system**

Total Wages = Number of Pieces produced x Piece Rate per unit.

b. Differential piece rate systems**i. Taylor's Differential piece rate system**

Percentage of Efficiency	Piece Rate
Less than 100%	83% of Normal Piece Rate
Equal to or more than 100%	125% of Normal Piece Rate

ii. Merrick's Differential piece rate system

Percentage of Efficiency	Piece Rate
Up to 83%	Normal Piece Rate
Above 83% but up to 100%	110% of Normal Piece Rate
Above 100%	120% of Normal Piece Rate

2. Combination of time and piece rate**a. Gantt's task and bonus system**

Percentage of Efficiency	Payment under Gantt's System
Less than 100%, i.e. output below standard	Guaranteed Time Rate i.e. (Hours worked x Rate per hour)
Equal to 100%, i.e. output at standard	Time Rate + 20% Bonus on Time Rate i.e. (Hours worked x Rate per hour) + 20% thereon
Above 100%, i.e. output above standard	High Piece Rate, which includes 20% Bonus of Time Rate i.e. (Actual Output x 120% of Piece Rate per unit)

b. Emerson's efficiency system

% of Efficiency	Piece Rate
Less than 66.67 %	Guaranteed Time Rate, i.e. (Hours worked x Rate per hour)
Above 66.67% up to 100%	Time Rate + Increasing Bonus based on actual efficiency, from 0.01% to a maximum bonus of 20% on Time Rate.
Above 100%	120% of Time Rate + 1% increase for every 1% increase in output beyond 100%

c. Points system of wage

System	Bedeaux	Haynes
Basic Wages	Hours Worked x Rate per hour	Hours Worked x Rate per hour
Bonus	75% x Points Earned x Rate per point	For repetitive work: 5/6th x Points Earned x Rate per point For non-repetitive work: 50% x Points Earned x Rate per point
Remarks	Points Earned represent time saved, expressed in B's (Bedeaux's)	Points Earned represent time saved, and are expressed in MANITS (Man-Minutes).

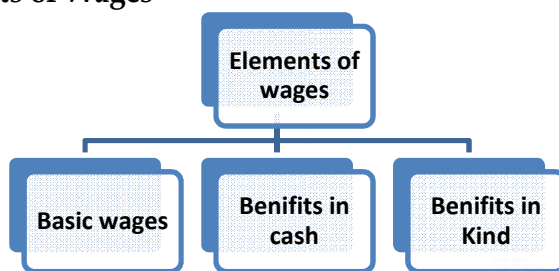
3. Premium Bonus system

System	Basic Component	Bonus Component
Halsey-Weir	Hours Worked x Rate per hour	30% x Time Saved x Rate per hour
Halsey	Hours Worked x Rate per hour	50% x Time Saved x Rate per hour
Rowan	Hours Worked x Rate per hour	$\frac{\text{Actual Hour}}{\text{Standard Hours}} \times \text{time saved} \times \text{Rate PH}$

Bharat system:

$$\text{Total wages} = \text{Rate per hour} \times \sqrt{\text{Standard hours} \times \text{Actual hours}}$$

6. Elements of Wages

**Notes:**

- (i) Provident Fund, Employees' State Insurance Corporation Premium and bonus are payable on the basic wages, dearness allowance and value of food concession.
- (ii) Following items are considered while computing labour cost and not Gross Wages earned by worker.
 - (a) Employer's contribution to P.F., ESI, Family Pension Fund
 - (b) Expenditure on amenities
 - (c) Leave Salary
- (iii) Overtime wages are considered while computing Gross Wages and not labour cost.

7. Pay slip format -Gross wages and Net Wages

Particulars	Rs.
A Normal Wages.	-
B Overtime Wages	-
C Dearness Allowance	-
D Bonus	-
E Any other allowance payable in cash (e.g. House Rent Allowance, City Compensatory Allowance)	-
F Gross Wages earned by a worker [A + B + C + D + E]	-
G Less: Deductions from wages (for example)	
(a) Employee's contribution to P.F.	-
(b) Employee's contribution to ESI	-
H Net Wages payable to a worker [F - G]	-

8. Statement showing the labor cost per hour and per output

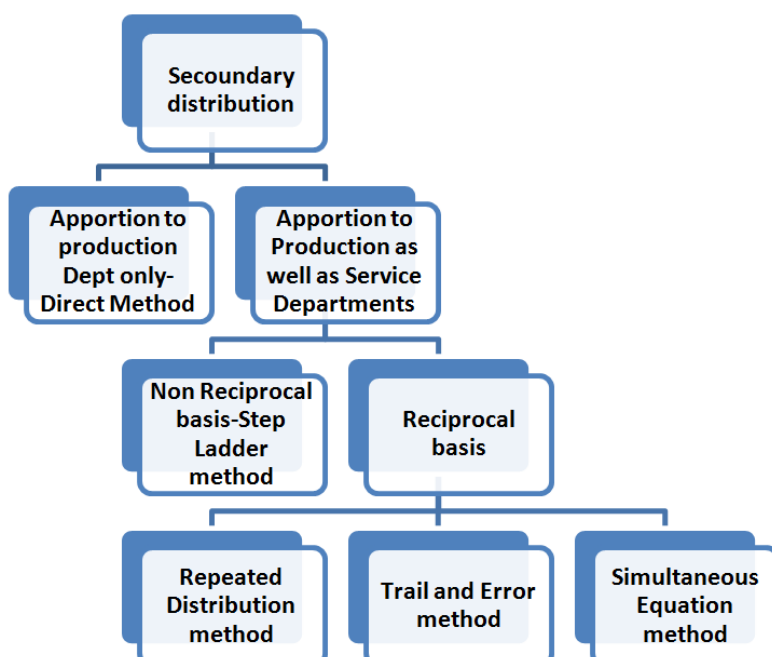
Particulars	Rs.
A Normal Wages.	-
B Dearness Allowance	-
C Bonus	
D Any other allowance payable in cash (e.g. House Rent Allowance, City Compensatory Allowance)	
E Employer's contribution to P.F.	
F Employer's contribution to ESI	-
G Leave salary [Based on Normal Wages & D/A]	-
H Expenditure on amenities	-
I Total Labour Cost	-
J Working Hours	
K Output	-
L Labour Cost per hour [I/J]	
M Labour Cost per unit of output [I/K]	-

OVERHEADSTheory Questions

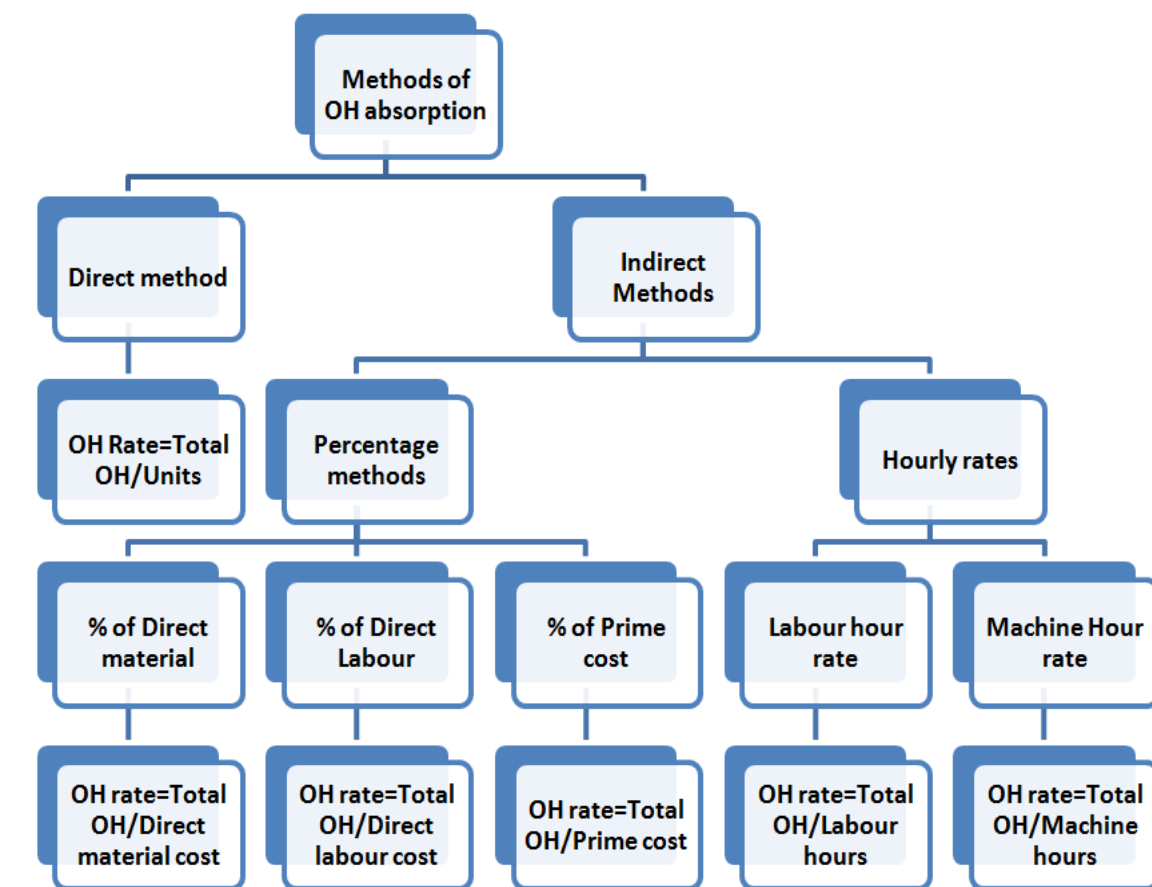
1. Allocation, Apportionment, Re-apportionment and absorption
2. Distinction between Cost allocation and Cost absorption:
3. Idle Capacity, Idle Capacity Cost
4. Treatment of Idle capacity in cost accounts:
5. Idle facility
6. Blanket Overhead Rate or Single overhead rate:
7. Multiple Overhead Rates or Departmental overhead rate

Practical

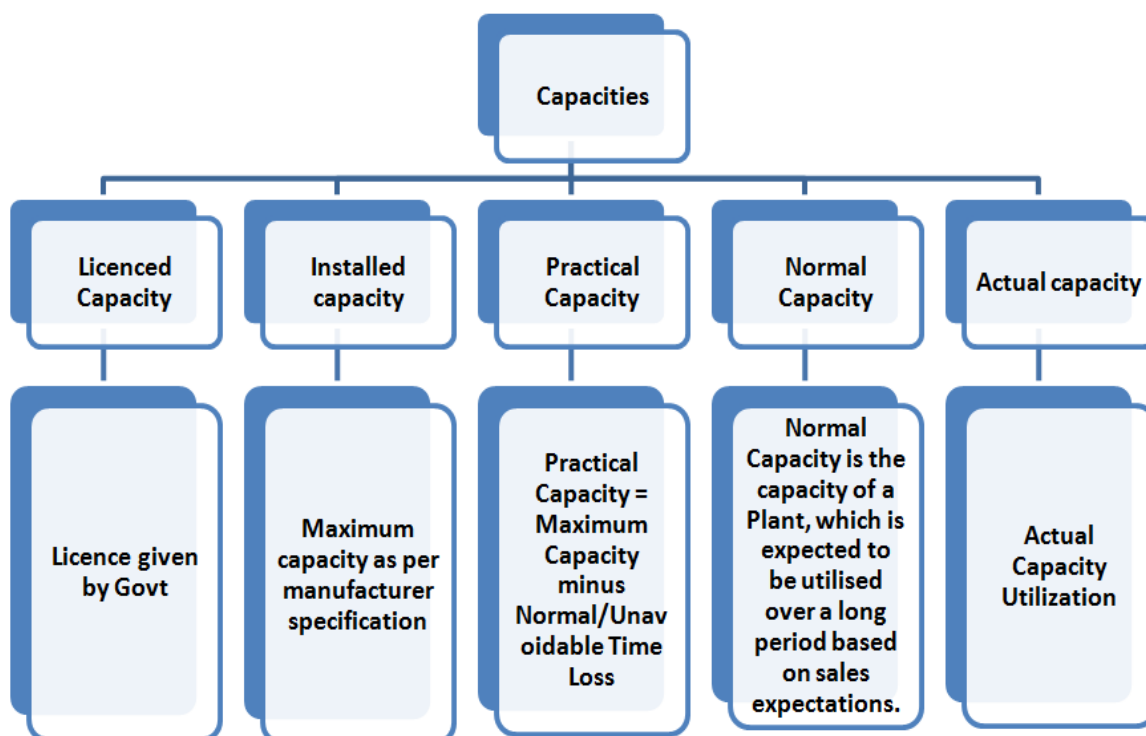
1. Secondary distribution



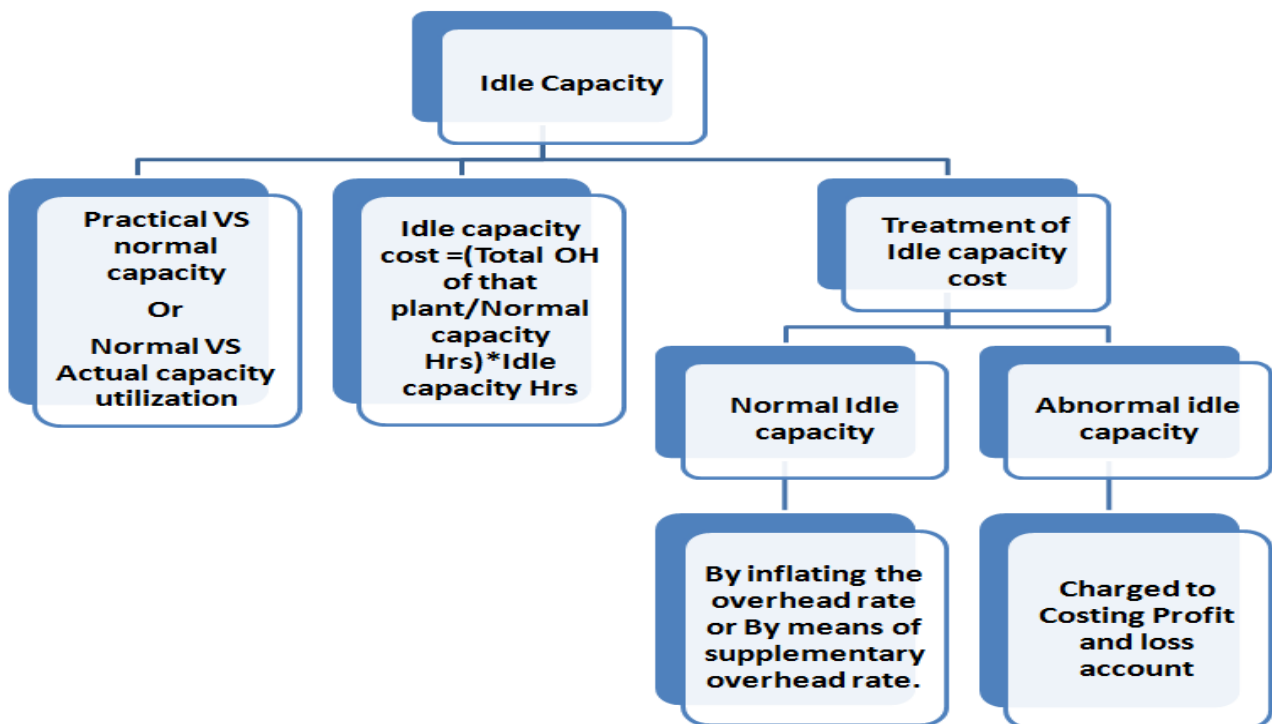
2. Methods of cost absorption



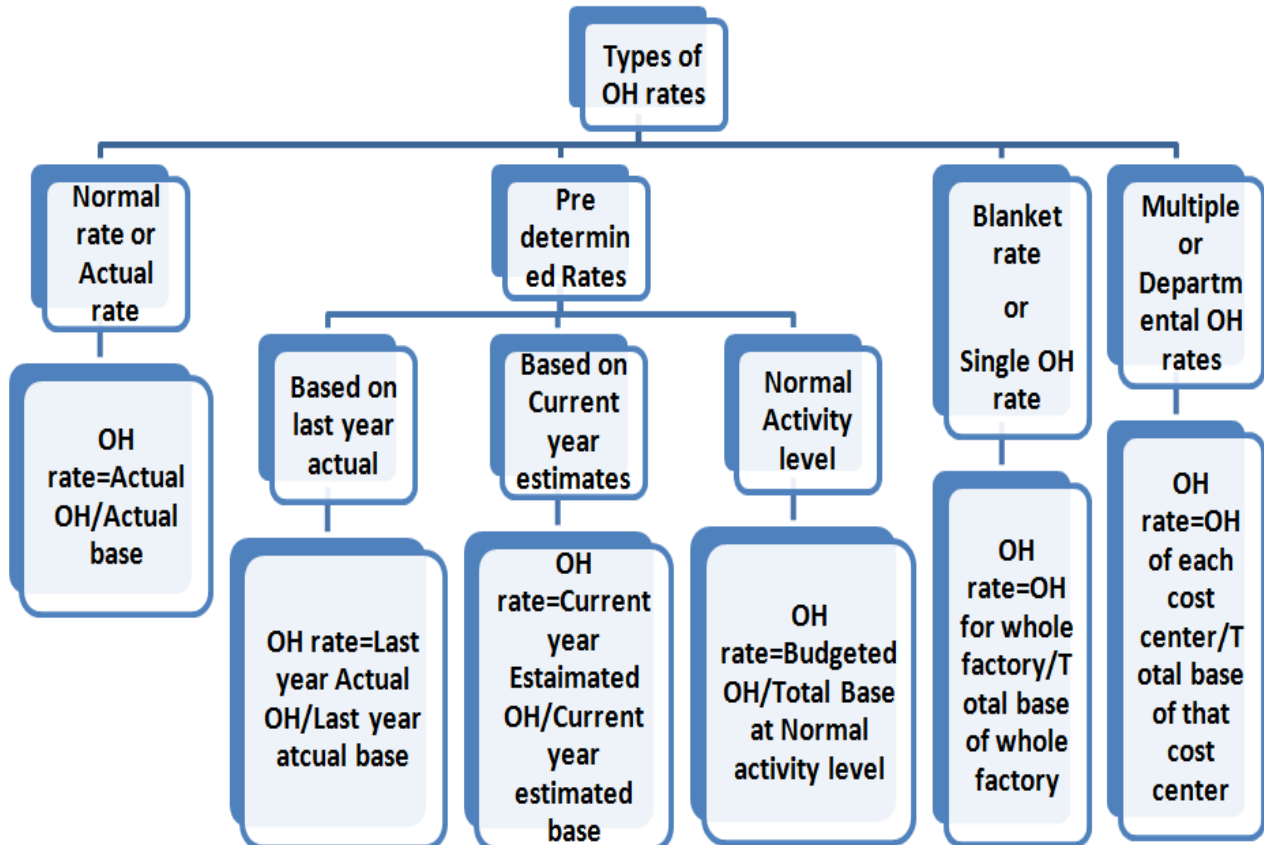
3. Capacities



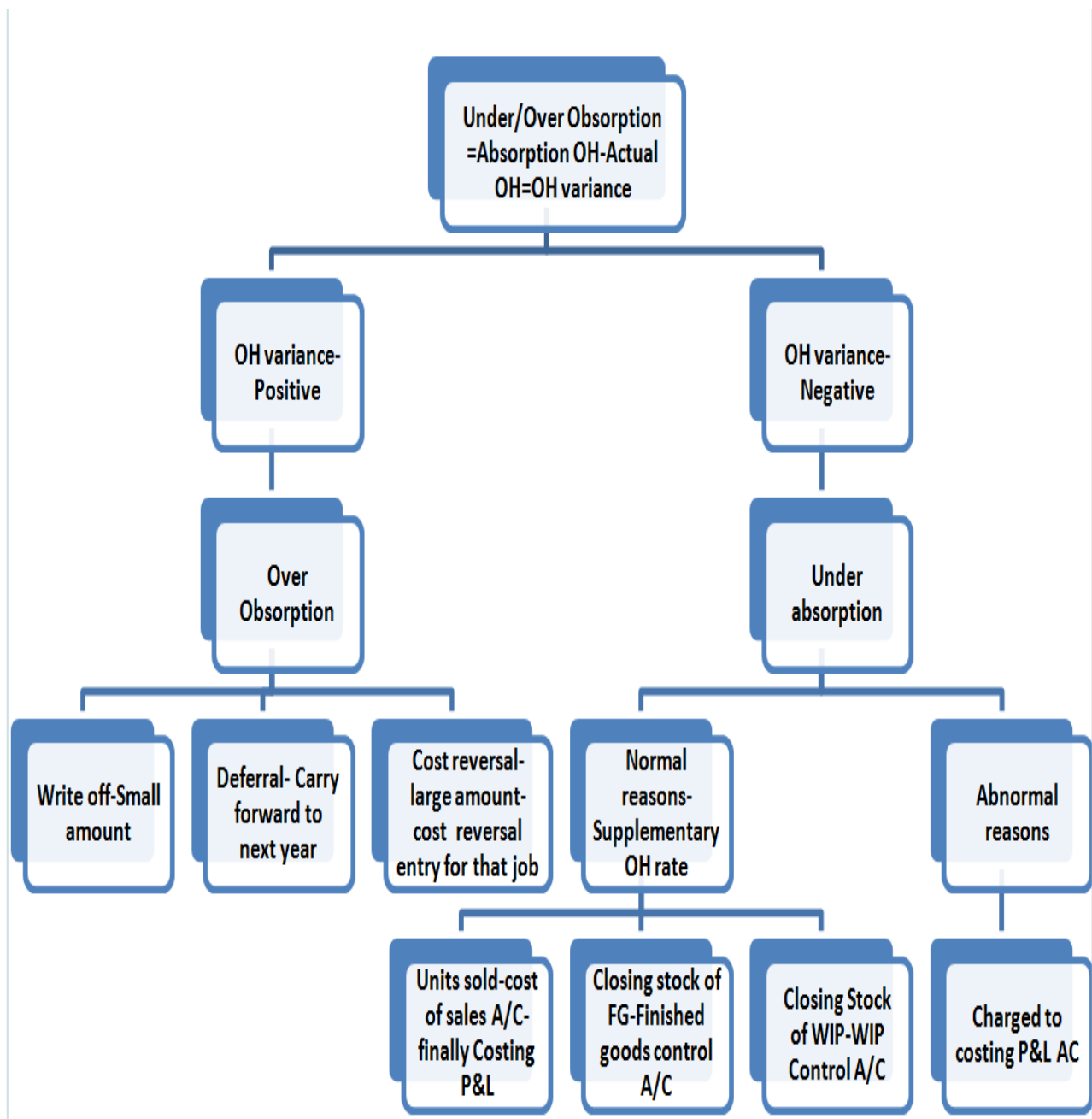
4. Idle Capacity and treatment in cost accounts



5. Types of Overhead rates



6. Treatment of under or over absorption

Non Integrated accountsTheory Questions

1. Cost ledger control accounts
2. Integrated accounting system and its advantages
3. Essential pre-requisites for Integrated Accounts
4. Reconciliation of cost and financial accounts
5. Reasons for the difference between cost and financial records

Practical:**Non-Integrated accounts**

Cost general ledger A/c		Material control A/c		Cost Sheet	
To Material Ctrl A/c	By Balnce b/d	To Balance B/d	By WIP Ctrl A/c	D. Material	Rs
To Costing P&L A/c	By Material Ctrl A/c	To Cost General Ledger A/c	By FOH Ctrl A/c	D. wages	xxx
To Balance C/d	By Wages Ctrl A/c	To WIP Ctrl A/c	By AOH Ctrl A/c	D. Expenses	XXX
	By WIP Ctrl A/c		By S&DOH Ctrl A/c	Prime cost	xxx
	By FOH Ctrl A/c		By Cost General Ledger A/c	Add: FOH	xxx
	By AOH Ctrl A/c		By Balnce c/d	Gross works cost	xxx
	By S&DOH Ctrl A/c			Add: Opening WIP	xxx
	By Costing P&L A/c			Less: Closing WIP	xxx
Total	Total	Total	Total	Works cost	xxx
				Add: AOH	xxx
Costing P&L A/c		Wages Ctrl A/c		Cost of Production	xxx
To Cost of Sales Ctrl A/c	By Cost General Ledger A/c	To Cost General Ledger A/c	By WIP Ctrl A/c	Add: Opening FG	xxx
To Cost General Ledger A/c			By FOH Ctrl A/c	Cost of goods available for sale	xxx
Total	Total	Total	Total	Less: closing FG	xxx
				Cost of good sold	xxx
FOH Ctrl A/c		WIP Ctrl A/c		Add: S&DOH	xxx
To Material Ctrl A/c	By WIP Ctrl A/c	To Balance B/d	By Material Ctrl A/c	Cost of sales	xxx
To Wages Ctrl A/c	By Balnce c/d	To Material Ctrl A/c	By FG Ctrl A/c	Profit	xxx
To Cost General Ledger A/c	(Under absorption)	To Wages Ctrl A/c	By Balnce c/d	Sales	xxx
To Balance c/d		To Cost General Ledger A/c			
(over absorption)		To FOH Ctrl A/c			
Total	Total	Total	Total		
AOH Ctrl A/c		Finished Goods Ctrl A/c			
To Material Ctrl A/c	By FG Ctrl A/c	To Balance B/d	By Cost of Sales Ctrl A/c		
To Cost General Ledger A/c	By Balance c/d	To WIP Ctrl A/c	By Balnce c/d		
To Balance c/d	(Under absorption)	To AOH Ctrl A/c			
(over absorption)					
Total	Total	Total	Total		
S&D OH Ctrl A/c		Cost of Sales Ctrl A/c			
To Material Ctrl A/c	By Cost of sales A/c	To FG Ctrl A/c	By Costing P&L A/c		
To Cost General Ledger A/c	By Balance c/d	To S&DOH Ctrl A/c			
To Balance c/d	(Under absorption)				
(over absorption)					
Total	Total	Total	Total		

Reconciliation of cost & financial accounts:

1. When the cost & financial accounts are kept separately it is imperative that these should be reconciled. Otherwise the cost accounts could not be reliable

2. Difference arises between two accounts because of the reasons

(i) Items included in financial accounts but not in cost accounts

(a) Expenses: Eg: Loss on sale of asset etc

(b) Incomes: Eg: Interest received, dividend received etc

(ii) Items included in cost accounts only (notional expenses)

(a) Notional rent, (b) Interest on own capital, (c) Proprietary salary etc

(iii) Different treatment

Items those treatments are different in two set of accounts.

Example:

- LIFO method is not allowed in finance a/c's where as it is suitable in cost a/c's
- Stock valuation differences: In financial a/c's closing stock is valued at cost (or) NRV whichever is lower whereas in cost a/c's closing stock is valued at cost only.

Procedure for reconciliation:

Step:1 Ascertainment of profit as per financial a/c's

Step: 2 Ascertainment of profit as per cost a/c's

Step: 3 Reconciliation of both profits by using below 2 methods

(a) Reconciliation statement

(b) Memorandum reconciliation a/c

a. Reconciliation Statement Format

Particulars	Amt	Amt
Profit as per cost accounts	xxx	
Add:		
i) OH over absorption in cost accounts	xxx	
ii) Non-operating income included in financial a/c's only	xxx	
iii) Notional expenses included in cost a/c's only	xxx	
iv) Opening stock under valuation in financial a/c's	xxx	
v) closing stock over valuation in financial a/c's	xxx	xxx
Less:		
i) Over head under absorption in cost a/c's	xxx	
ii) Non-Operating expenses included in financial a/c's	xxx	
iii) Opening stock over valuation in financial a/c's	xxx	
iv) Closing stock under valuation in financial a/c's	xxx	(xxx)
Profit as per Financial a/c's		Xxx

b. Reconciliation by using Memorandum Reconciliation A/c

Particulars	Amt	Particulars	Amt
To Loss as per cost records	xxx	By Profit as per cost records	xxx
To OH under absorption	xxx	By OH over absorption	xxx
To Non- Operating expenses	xxx	By Non-operating income	xxx
To Op.Stock over valuation in Financial records	xxx	By Notional Rent	xxx
To Closing stock under valuation in financial records	xxx	By Opening stock under Valuation in financial records	xxx
To Profit as per financial records	xxx	By Closing stock over valuation in financial records	xxx
	xxx	By Loss as per financial records	xxx
			xxx

c. Working Note Format

Particular	Costing Records	Financial Records	Add/Less	Com ment
Over absorption	↑	↓	Add	
Closing stock	More 100	Less 80	Less:20	

Opening stock	100	80	Add:50	
Non-Operating income	-	50	Add:50	
Non-Operating Exp	-	50	Less:50	
Notional Rent	100	-	Add:100	

CONTRACT COSTING

Theory Questions

1. Contract costing
2. Contract costing VS Job costing
3. Cost plus contract & Advantages and disadvantages
4. Fixed price contract & Advantages and disadvantages
5. Escalation clause

Practical

1. Value of work certified:

$$\text{Value of work certified} = \text{Contract price} \times \frac{\% \text{ of work certified on Cash received}}{\text{Cash received as a \% of work certified}} \quad (\text{or})$$

2. Cost of work uncertified:

$$\text{Cost of work uncertified} = \text{Total cost incurred till date} - \text{cost of work certified}$$

Cost of work uncertified

Total cost till date	XXX
Less: Cost of work certified	XXX
Material on hand	XXX
Plant of work uncertified	XXX
Cost of work uncertified	<u>XXX</u>

3. Income of the contract:

$$\text{Income of a contract in a year} = \text{Value of work certified} + \text{cost of work uncertified} \quad (\text{Or})$$

$$\% \text{ of completion} / \% \text{ of work certified} = \frac{\text{work completed}}{\text{contract price}}$$

4. Retention Money:

$$\begin{aligned} \text{Cash received} &= \text{Value of work certified} \times \text{cash received as a \% of work certified} \\ &(\text{or}) \\ &= \text{Value of work certified} - \text{Retention Money} \end{aligned}$$

$$\text{5. Cost of contract till date} = \text{Cost of work certified} + \text{cost of work uncertified}$$

6. Notional Profit:

$$\text{Notional profit} = \text{Value of work certified} - \text{cost of work certified.}$$

$$\text{Where, cost of work certified} = \text{cost of work to date cost of work uncertified.}$$

$$\text{7. \% of completion} = \frac{\text{Value of work certified}}{\text{contract price}}$$

8. Statement showing the amount of profit to be credited to P & L A/c:

% of Completion of contract	Amount to be credited to P&L A/c
1. < 25%	No profit is taken into account. The entire amt is treated as "reserve profit"
2. Equal to or More than 25% but less than 50% of contract	$1/3^{\text{rd}} \times \text{Notional profit} \times \frac{\text{Cash received}}{\text{Work certified}}$
3. Equal to (or) More than 50% but less than 90% of contract	$2/3 \times \text{Notional profit} \times \frac{\text{Cash received}}{\text{Work certified}}$
4. Equal to or More than 90%	In this case we need to take profit based on estimated profit by using different formulae.

Note: We need to take least profit if there is a situation we can calculate the amount to be credited to P&L A/c by using two or more methods.

9. Steps Involved in contract costing:

Contract A/c is generally prepared in 3 segments.

1st Segment: Initial comparison of income & expenditure for the period leading to National profit.

2nd Segment: Recognition & transfer of the portion of national profit to P&L A/c & balance carry forward as Reserve profit.

3rd Segment: Carry forward of balances from one financial year to another. Hence 3rd segment of previous period becomes opening balances of 1st segment of next period.

10. Format of Contract A/c: Cr.

Particulars	Amount	Particulars	Amount
To Balance b/d		By WIP	
➤ Value of work certified	xxx	➤ Value of work certified	xxx
➤ Cost of work certified	xxx	➤ Cost of work uncertified	xxx
➤ Material at site	xxx	By Balance c/d	
➤ Plant at site	xxx	➤ Material at site	xxx
To Material issued	xxx	➤ Plant at site	xxx
To Wages (paid+payable)	xxx	By Loss (B/f)	xxx
To Direct Exp (paid+payable)	xxx		
To Indirect wages	xxx		
To subcontract cost	xxx		
To Cost of extra work	xxx		
To Plant issued (New)	xxx		
To Notional Profit (B/f)	xxx		
	xxxx		xxxx
To Loss	xxx	By Notional Profit	xxx
To P&L A/c	xxx	By P&L A/c	xxx
To Reserve profit	xxx		
	xxxx		xxxx
To Bal b/d	xxx	By Reserve profit	xxx
WIP			
➤ Value of work certified	xxx		
➤ Cost of work uncertified	xxx		
To Material at site	xxx		
To Plant at site	xxx		
	xxxx		xxxx

9. Format of Balance Sheet Extract:

Liabilities	Amt	Assets	Amt
Current Liabilities: Accrued wages /Expenses	XXX	Fixed Assets: Plant & Machinery	xxx
		Current Assets:	
		Contract WIP	xxx
		Value of work certified	xxx
		Add: i) Cost of work uncertified	xxx
		ii) Material at site	xxx
		iii) Plant & Machinery at site	xxx
		Sub Total	xxx
		Less: Reserve profit	xxx
		Net Balance	xxx
		Less: Balance of contracts	xxx
		Net value of WIP	xxx

Note:

1. If P&M issued to contract and also debited to the contract A/c & credited the balance plant amount, then we need to include P&M also in contract WIP.
2. If depreciation amt on P&M charged to contract A/c then P&M need to take under fixed Assets head.

10. Format of Contractee A/c

Particulars	Amt	Particulars	Amt
To Balance c/d	xxx	By Balance b/d	xxx
		By Bank	xxx
	xxxx		xxxx

11. Escalation Clause:

1. In this fixed price contract, the contract price is fixed & predetermined. If there is any increase in the price of materials, rate of labour etc the contract cost may rise & profit may be reduced.
2. The increase of materials & labor rate may induce the contractor to use the materials of lower quality & price, in order to maintain the same profit.
3. To overcome such a situation the contract agreement generally contains an Escalation clause. If there is an increase in the material & labor cost over certain % the additional amount due to increase in material, labor will be borne by contractee

Entry: Contractee's A/c Dr,
To Contract A/c

12. Profit Recognition using Notional Profit & Estimated Total profit:**Estimated Profit:**

Estimated Total Profit = Contract price - Estimated total cost

Where, estimated total cost = cost of contract till date (actual cost) + estimated further cost for balance period.

13. Profit Recognition based on estimated on estimated total profit:

- a) Estimated total profit $\times \frac{\text{Work certified}}{\text{contract price}}$
- b) Estimated total profit $\times \frac{\text{Work certified}}{\text{contract price}} \times \frac{\text{Cash received}}{\text{Work Certified}}$

- c) Estimated total profit $\times \frac{\text{Cost of work to date}}{\text{Estimated total cost}}$
- d) Estimated profit $\times \frac{\text{Cost of work to date}}{\text{Estimated total cost}} \times \frac{\text{Cash received}}{\text{Work certified}}$
- e) Notional profit $\times \frac{\text{Work certified}}{\text{Contract price}}$

Note: Profit Recognition based on estimated profit will be considered only if details relating to estimated further cost are available.

MARGINAL COSTING

Theory Questions

1. Marginal costing
2. Direct costing
3. Differential costing
4. Incremental costing
5. Marginal costing Vs Absorption costing
6. Advantages of marginal costing
7. Important decision making areas where marginal costing technique is used
8. Instance which permit to fix a price, which is less than the marginal cost the product
9. Cost - Volume - Profit Analysis
10. Limitations of marginal costing

Practical

1. Classification of costs under Marginal Costing:

Variable cost: Variable cost is that portion of cost which changes (or) varies proportionately based on output

Therefore, Variable cost = Direct Material + Direct Labor + Direct Expenses + Variable Production OH + Variable AOH + Variable S&D OH

Variable cost per unit is assumed to remain constant at all levels of output

Total variable cost is changing according to output

Variable cost is considered as product cost

In case of Inventory valuation the below variable cost will include

Direct Material, Direct Labor, Direct Expenses, Variable production OH

Fixed cost: Fixed costs are which are assumed to be remain constant for a given period of time

Fixed cost = Fixed production OH + Fixed Administration OH + Fixed selling & Distribution OH

Fixed cost per unit of output will vary (variable)

Fixed costs are treated as period cost

Semi variable cost: These are expenses exhibits characteristics of Fixed & Variable Eg: Telephone charges

2. Segregation of semi variable expenses into variable & Fixed

- High & Low point method
- Level of Activity Method
- Graphical Method
- Analytical Method
- Simultaneous Equation Method

1) High & Low points Method:

Step 1: Compute variable cost per unit

$$\text{V.C per unit} = \frac{\text{Difference in total cost}}{\text{Difference in total output}}$$

Step 2: Compute variable cost (at a particular point)

Step 3: Compute fixed cost

Fixed cost = Total cost at particular point – Total variable cost at that particular point

2) Level of Activity Method:

Step 1: Compute variable cost per unit

$$\text{V.C per unit} = \frac{\text{Difference in total cost}}{\text{Difference in total output}}$$

(Between two activity levels)

Step 2: Compute total variable cost (at a particular level)

Step 3: Compute fixed cost

Total F.C = Total cost at particular activity – Total variable cost at a particular level (or) activity

Marginal cost sheet format (simple format)

Particulars	Rs.
a) Sales	xxx
b) Less: variable cost	xxx
c) Contribution (a-b)	xxx
d) Less: Fixed cost	xxx
e) Profit (operating profit)	xxx
	xxx

Detailed format

Particulars	Rs.	Rs.
a) Sales		xxx
b) Less: variable cost of sales		
D. Material	xxx	
D. Labour	xxx	
D. Expenses	xxx	
Variable production OH	xxx	
Variable cost of production	xxx	
Add: Opening stock value	xxx	
Less: Closing stock value	(xxx)	
Variable cost of goods sold	xxx	
Add: Variable ADM OH	xxx	
Variable S&D OH	xxx	
Variable cost of sales	xxx	(xxx)
c) Contribution (a-b)	xxx	xxx
d) Less: Fixed cost		
Fixed production OH		
Fixed ADM OH	xxx	
Fixed S&D OH	xxx	
e) Profit (c-d)	xxx	(xxx)
		xxx

Formulas:**Marginal cost Equations:** Sales- variable cost = contribution = fixed cost + Profit**Contribution:** Contribution is the excess of sales revenue over variable cost

$$\text{Contribution} = \text{sales} - \text{variable cost}$$

$$\text{Contribution} = \text{Fixed cost} + \text{profit}$$

$$\text{Contribution} = \text{sales value} \times \text{P.V ratio}$$

P.V ratio (Profit volume ratio): P.V ratio is the relation between contribution & sales

$$\text{P.V ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

$$\text{P.V ratio} = 100\% - \text{variable cost \%}$$

$$\text{P.V ratio} = \frac{\text{Change in Contribution}}{\text{Change in Sales}} \times 100$$

$$\text{P.V ratio} = \frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100$$

Significances:

1. Sales $\uparrow$ $\rightarrow$ PV ratio $\uparrow$
2. Sales $\downarrow$ $\rightarrow$ PV ratio $\downarrow$
3. Variable cost $\uparrow$ $\rightarrow$ PV ratio $\downarrow$
4. Variable cost $\downarrow$ $\rightarrow$ PV ratio $\uparrow$

Break Even Point (BEP):

Break Even Point is the level of sales (in Rs. Or in Quantity) at which total contribution = Fixed cost

- Break Even Point (in units) = $\frac{\text{Fixed cost}}{\text{Contribution per unit}}$
- Break Even Point (in Rs.) = $\frac{\text{Fixed cost}}{\text{PV ratio}}$

Margin of safety: Margin of safety represents the difference between Actual & Break Even Sales

- Margin of Safety (in sales) (in Rs.)
 $= \text{Actual Sales (in Rs.)} - \text{Break Even Sales (in Rs.)}$
 $= \frac{\text{Profit}}{\text{PV ratio}}$
- Margin of Safety sales (in QTY) =
 $= \text{Actual Sales (in units)} - \text{Break Even Sales (in units)}$
 $= \frac{\text{Profit}}{\text{Contribution per unit}}$

$$\text{Sales Required to Earn desired profit (in QTY)} = \frac{\text{Fixed Cost} + \text{desired profit}}{\text{Contribution per unit}}$$

$$\text{Sales Required to Earn desired profit (in Rs.)} = \frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{PV ratio}}$$

Shut Down Point:

It indicates the level of operations below which it is not justifiable to continue the operations.

- a) Avoidable fixed cost
- b) unavoidable fixed cost

Formula:

$$\text{Shut down Point in Rs.} = \frac{\text{avoidable fixed cost}}{\text{PV ratio}}$$

$$\text{Shut down point in Quantity} = \frac{\text{avoidable fixed cost}}{\text{Contribution per unit}}$$

Signification of shut down point & consequence decisions:

Level of sales	Decision	Reason
Below shut point	Close down operations	Avoidable fixed cost are not fully recovered. It is better to closer down & save additional expenses.
At shut down point	Continue operations	Avoidable fixed cost are recovered
Above shut down point	Continue	Avoidable fixed cost are recovered further contribution leads to recovery of the balance fixed cost also

Profit under marginal & absorption costing & Reconciliation**Income statement under absorption costing:**

Particular	Rs.	Rs.
A. Sales		xxx
B. Less: Manufacturing cost of goods sold		
D. Material	xxx	
D. Labour	xxx	
D. Expenses	xxx	
Prime cost	xxx	
Add: Production OH → variable	xxx	
→ fixed	xxx	
Gross works cost	xxx	
Add: Opening WIP	xxx	
Less: Closing WIP	(xxx)	
Net works cost	xxx	
Add: Opening stock of FG	xxx	
Less: Closing stock of FG	(xxx)	
Cost of goods sold	xxx	
Under/over absorption adjustments	xxx	
C. Gross profit (A-B)		
D. Administration & Selling Expenses		xxx
Profit under absorption cost sheet		(xxx)
		xxxx

Income statement under Marginal costing:

Particular	Rs.	Rs.
A. Sales		xxx
B. Variable cost of sales		
D. Material	xxx	
D. Labour	xxx	
D. Expenses	xxx	
Variable production OH	xxx	
Variable cost of production	xxx	
Add: Opening stock value	xxx	
Less: Closing stock value	(xxx)	
Variable cost of goods sold	xxx	
Add: Variable ADM OH	xxx	
Variable S&D OH		

Variable cost of sales	xxx	
Net works cost	xxx	
C. Contribution (a-b)	xxx	xxx
D. Less: Fixed cost		
Fixed production OH	xxx	
Fixed ADM OH	xxx	
Fixed S&D OH	xxx	(xxx)
E. Profit (C-D) under marginal costing	xxx	Xxx

Reconciliation b/w marginal costing & absorption costing:

Particular	Rs.
Profit under marginal costing	xxx
Add: Closing stock over valued in absorption cost	xxx
Less: Opening stock over valued in absorption cost	xxx
Profit under absorption costing	xxx

PROCESS COSTING**Theory Questions**

1. Process Costing
2. Comparison between Job costing and process costing
3. Procedure for valuation of WIP
4. Equivalent production
5. Inter process profits

Practical**Process costs classification**

Direct Material, Direct Labour, Direct Expenses, Production OH

Process losses – Accounting treatment:

1. **Process Loss**= Input quantity – output quantity.
2. **Normal loss**: Normal loss is the loss of material due to inherent & unavoidable reasons. Normal loss can be calculated in any of the following ways.
 - a) **Based on Input**: Normal loss percentage X Input Quantity
 - b) **Based on Production**: Normal loss percentage X (opening WIP+ fresh units – closing WIP)
3. **Abnormal loss**: Abnormal loss is the loss in Excess of the pre-determined loss. It occurs due to avoidable reasons & cannot be anticipated E.g.: carelessness of workers, a bad plant design or operation etc;

Abnormal loss= Total process loss – Normal loss

4. **Abnormal gain**: Abnormal gain is the unexpected gain in production under normal conditions. Abnormal gain can be calculated in any of the following ways;

Abnormal gain = Actual production – Expected production (or,) = Normal loss- process loss.

Accounting procedure for process loss**Stage 1: Loss analysis:-**

1. Compute process loss= Input quantity – output quantity
2. Determine Normal loss = (either based on Input or Production)
3. Compute abnormal loss/gain

Stage 2: Cost Analysis:-

1. Determine
 - a) Gross cost , b) Gross input quantity

2. Determine normal loss quantity & scrap value
3. Compute
 - a) Net cost i.e. gross cost + scrap value of normal loss
 - b) Expected output gross input quantity + Normal loss quantity
4. Compute effective cost per unit = $\frac{\text{Net cost}}{\text{Net expected output}}$

Stage 3: Valuation:

The various items are valued as under

Item	Basis of valuation
1. Units produced & transferred	Effective cost per unit as per stage 2 4 th point
2. Normal loss	Scrap value only
3. Abnormal loss	Effective cost per unit (abnormal loss is concerned as deemed good production & is valued as if for good units produced)
4. Abnormal gain	Effective cost per unit (abnormal gain constitutes a actual excessive good production)

Stage 4: Scrap Realization Entries:

Normal loss A/c: 1. Debit with normal loss quantity & scrap value thereon.

2. Credit with Amt realized by way of sale of scrap.

3. When process loss less than normal loss the difference is transferred to abnormal gain A/c.

Abnormal loss A/c: 1. Debit with abnormal loss quantity & Cost thereon at Effective cost per unit as per process A/c

2. Credit with the Amt realized by way of sale of scrap

3. Net abnormal loss is transferred to costing P&L A/c

Abnormal gain A/c: 1. Credit with abnormal gain quantity & Value thereon.

2. Debit/adjust normal loss scrap value & process loss Less than normal loss.

3. Net abnormal gain is transferred or credited to P&L A/c.

Format of Process A/c:

Particulars	Qty	Rs.	Particular	Qty	Rs.
To Opening WIP	xx	xx	By subsequent process (or),	xx	xx
To Previous Process	xx	xx	By Finished goods ctrl A/c	xx	xx
To Materials	xx	xx	By Normal loss	xx	xx
To Labour		xx	By Abnormal loss if any	xx	xx
To D. Expenses		xx	By Closing WIP	xx	xx
To Production OH		xx			
To Abnormal gain					xxx

Format of Normal loss A/c:

Particulars	Qty	Rs.	Particular	Qty	Rs.
To Process A/c	xx	xx	By Bank (scrap realization)	xx	xx
		xx	By Abnormal gain	xx	xx
		xxx			xxx

Format of Abnormal loss A/c:

Particulars	Qty	Rs.	Particular	Qty	Rs.
To Process A/c	xx	xx	By Bank (scrap realization)	xx	xx
		xx	By Costing P&L A/c	xx	xx
		xxx			xxx

Format of Abnormal gain A/c:

Particulars	Qty	Rs.	Particular	Qty	Rs.
To Normal loss A/c	Xx	xx	By Process A/c	xx	xx
To Costing P&L A/c	xx	xx			xx
		xxx			xxx

Equivalent Production concepts:**A) Need for valuation WIP:**

1. If all the units introduced into a process during the period are fully completed & transferred to next process
2. Avg cost per unit = $\frac{\text{Total Process cost}}{\text{Total output quantity}}$
3. However when all units introduced into a process are not fully completed i.e when they are lying as closing WIP,
 - i) Completing opening WIP
 - ii) Work on completion units
 - iii) Part of work on closing WIP
4. To ascertain the cost of each completed units it is necessary to ascertain the cost of WIP in the beginning & at the end of the process

B) Basis and procedure of Valuation of WIP:

1. **Based on actual:**
WIP can be valued on actual basis i.e. material used on the unfinished units & the Actual Amt of Labour expenses involved. However this method does not ensure accuracy.
2. **Based on equivalent production:**
In order to provide higher measure of accuracy in alternative method of WIP valuation is based on the converting partly finished units into equivalent finished units.
3. **Methods of valuation:**
a. FIFO method, b. LIFO method, c. Weighted Avg cost method
4. **Out of the above 3 methods generally FIFO & Weighted Avg method are using**

Equivalent Production:

1. Equivalent production means converting the incomplete production units into their equivalent completed units
2. Equivalent units = Physical units (Partly Completed) X % of completion.

Steps Involved in Equivalent Production Concept:**Step 1: Statement of Equivalent Production:**

Particulars input (units)	Input	Output	Materials		Labour		Overhead	
			% Completion	Equivalent units	% Completion	Equivalent units	% Completion	Equivalent units
Opening WIP	xxx	Transfer to next process						
	xxx	-Open WIP						
		-Fresh units introduced						
		By normal loss						
		By abnormal loss						
		By Closing WIP						

Step 2: Statement of cost per equivalent units (FIFO method):

Cost element	Total cost	Equivalent units	Cost per equivalent units
Materials	Xx		
(-) Normal loss	(xx)		
Net	xx	xxx	
Labour	xx	xxx	
OH	xx	xxx	

Statement of cost per Equivalent units (weighted AVG method):

Cost element	Opening WIP	Current cost	Total cost	Equivalent Production	Cost per equivalent production
Materials					
(-) Normal loss					
Net					
Labour					
OH					

Step 3: Statement of cost apportionment:

Item	Material	Labour	OH	Total
Transfer to next process				
Abnormal gain				
Closing WIP				
Abnormal Loss				
Total				

Step 4: Preparation of Respective Process A/c, Normal Loss A/c, Abnormal Loss A/c, Abnormal Gain A/c.**Important Notes:**

Before applying the above steps students are 1st required to decide on the following.

i) **Method of valuation** i.e. FIFO or weighted average:

1. **FIFO method should be used if:**

- Degree of completion of opening WIP is given
- Cost breakup of opening WIP is not given

2. **Weighted Average method should be used if:**

- Degree of completion of opening WIP is not given
- Cost breakup of opening WIP is given

3. **Weighted AVG method or FIFO method may be used when:**

- Degree of completion of opening WIP is given
- Cost breakup of opening WIP is given

ii) **First process or Subsequent process:**

- For 1st process the cost elements are
 - Material, b. Labour, c. Production
- For any subsequent process the cost elements are

- Material A – That is transferred from previous process
- Material B – This process material current process material
- Labour
- OH

iii) **Scrap value of normal loss** if any is reduced from the cost of material:

In case of 2nd & subsequent process it is reduced from the cost of material A (i.e. previous process material)

JOINT PRODUCTS AND BY PRODUCTS

Theory Questions

1. Joint products, Co products, By-products
2. Difference between joint products and by products
3. Difference between joint products and Co products
4. Split off point
5. By product Revenue treatment in cost accounting

Practical:

Joint cost apportionment: Joint cost should be apportioned over the joint products by using any of the following method.

1. **Physical quantity method:** Joint costs are apportioned on basis of physical quantities such as weight or measure expressed in gallons, tones, kilograms, litres etc.
 - a. This method is suitable when joint products are capable of being measured in the same physical quantities
2. **Avg unit cost method:** Under this method total joint cost upto the split off point are divided by total units of joint products produced.
3. **Survey/Technical Evaluation/ Points method:** It is based on technical survey of all the factors involved in the production & distribution of product.
4. **Contribution Margin method:** This method involves the following steps
 - a. Classify the joint cost into (a) variable & (b) Fixed costs.
 - b. Apportion the variable cost to joint products by using any of the earlier three methods.
 - c. Compute total variable cost = apportioned variable cost + further processing variable cost.
 - d. Compute contribution = final sale value – total variable cost
 - e. Apportion fixed joint cost on the basis of contributions.
5. **Market value methods:**
 - a. **Market value at split off point** – Joint cost may be apportioned on The basis of sale value or market value at split of point.
 - b. **Market value after further processing** – Joint cost may be apportioned on the basis of final sale value.
 - c. **Net realizable value** – Joint cost may be apportioned on the basis of net realizable value. (At split off point)

Net realizable value (at split off point) = Final sale value – Profit margin – Selling & Distribution OH – Further processing cost

Joint Cost Apportionment & Further Processing decisions:

Steps involved in decision making of further processing or sell at split off point:

Step 1: Compute additional revenue = sale value after further processing – Sale value at split off point

Step 2: Compute additional cost = Further processing + S&D OH

Step 3: Compute additional profit = Additional Revenue - Additional cost

Step 4: Decision: a) If additional profit Greater than or Equal to zero further process

b) If additional profit less than zero sales at split off point

By Product Accounting: Value of By product may be arrived by using below methods

- Market value of By - product
- Net Realizable value
- Standard cost of By - product
- Comparative price
- Re-use or opportunity costs basis

By product Cost/Revenue treatment in cost accounting:

1. When they are **small of total value**

a) Credit to P&L A/c, b) Reduced from Total cost (Either cost of production or cost of sales)

2. When the by-products are of considerable total value

In this case we can treat by-product as Joint product & treated accordingly

3. When they require further processing.

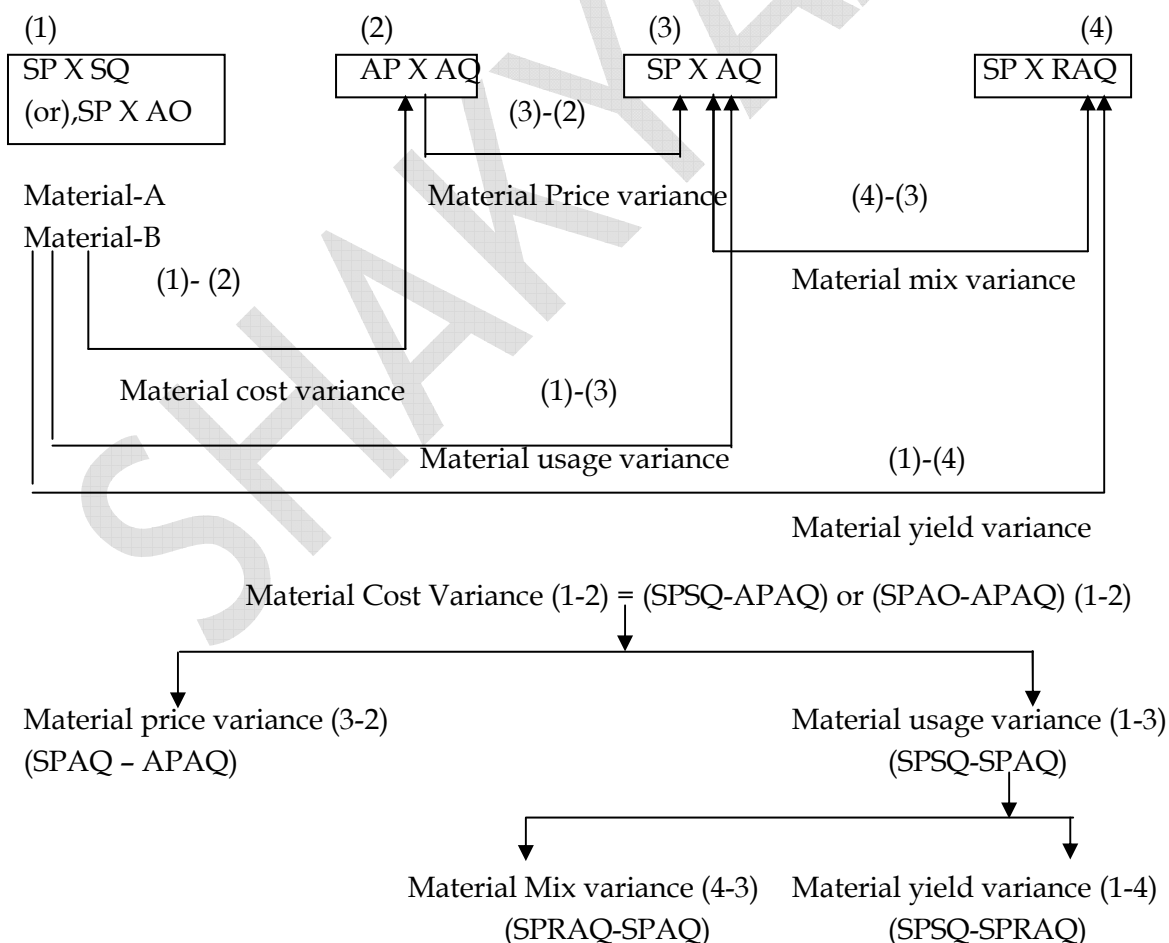
a) Compute NRV at split off,

b) If NRV is small: i) Cr. to costing P&L A/c or, ii) Reduced from total cost or, iii) Cr. to process A/c

c) If NRV is considerable value - then we can treat this one also as joint product & treatment accordingly.

STANDARD COSTING

Material variances: Format:



Meaning of terms & Abbreviations used:

SP = Standard Price per unit of Material Consumed (or), SP= Standard Material cost per each unit

SQ = Standard Material Consumption for Actual output=Actual Output X Standard material QTY per unit

AO = Actual Output, AP = Actual Price per unit of Material Consumed

AQ = Actual Qty of Material consumed for Actual output

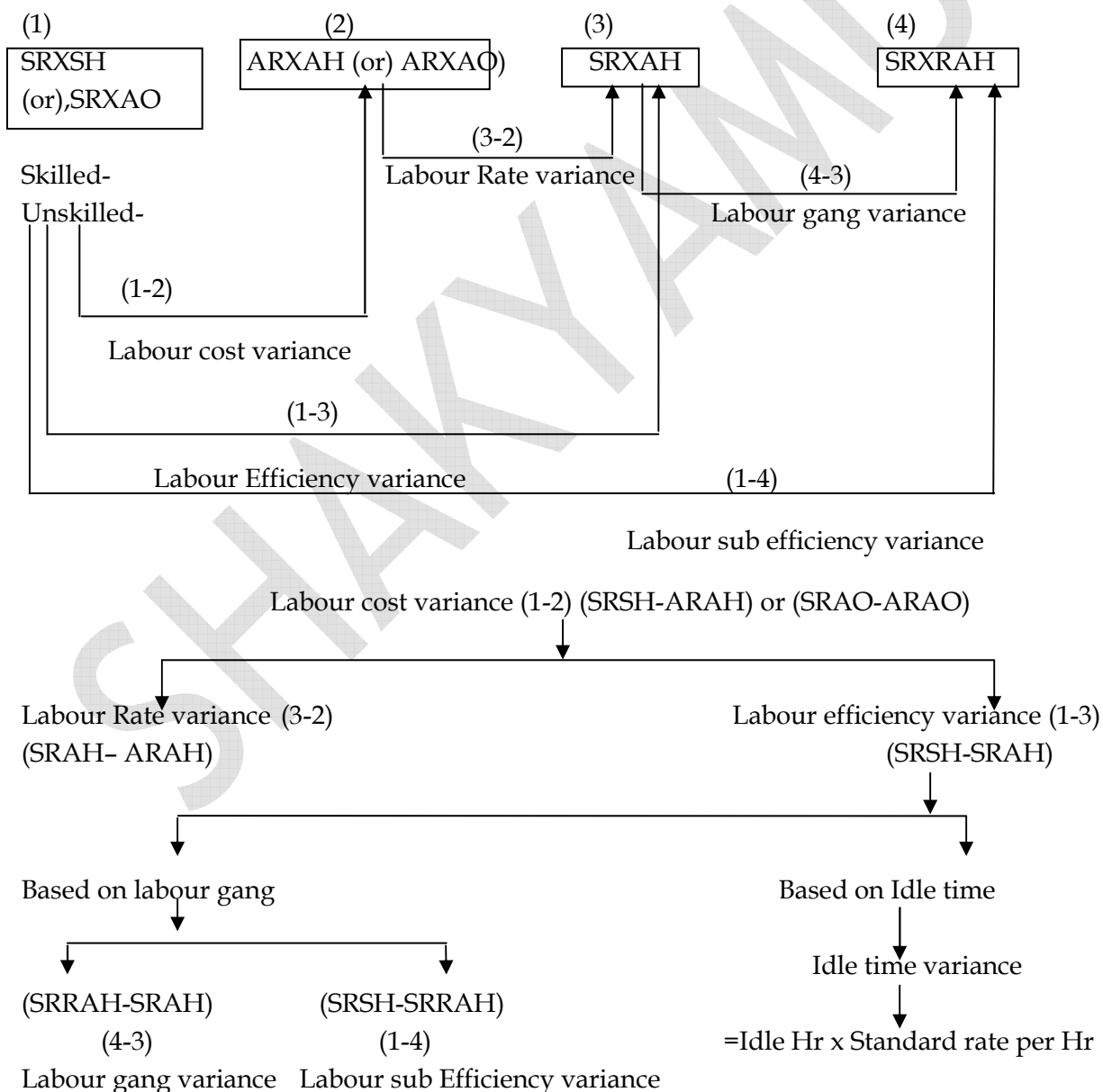
RAQ = Revised Actual Qty = Actual Qty Re-return in standard proportion

PQ = Purchase Qty

Reasons for Material Variances:

Material Cost Variance: Standard cost for actual output vs Actual cost for actual output

1. **Material Price Variance:** Standard Material Price vs Actual Price Consumed
2. **Material Usage Variance:** Standard Qty vs Actual Qty
 - **Material Mix Variance:** Standard Mix vs Actual Mix
 - **Material Yield Variance:** Standard Qty vs Actual Qty in Standard ratio.(RAQ)

Labour Variances: Format

Meaning of terms & Abbreviations used:

SR = Standard Rate per hr (or),

SR = Standard Labour cost per unit

SH = Standard Hr for Actual Output = Actual output x standard hr per unit

AR = Actual Rate

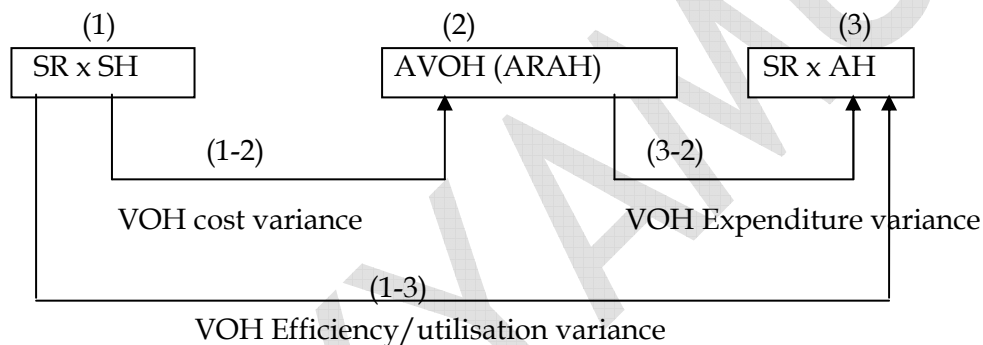
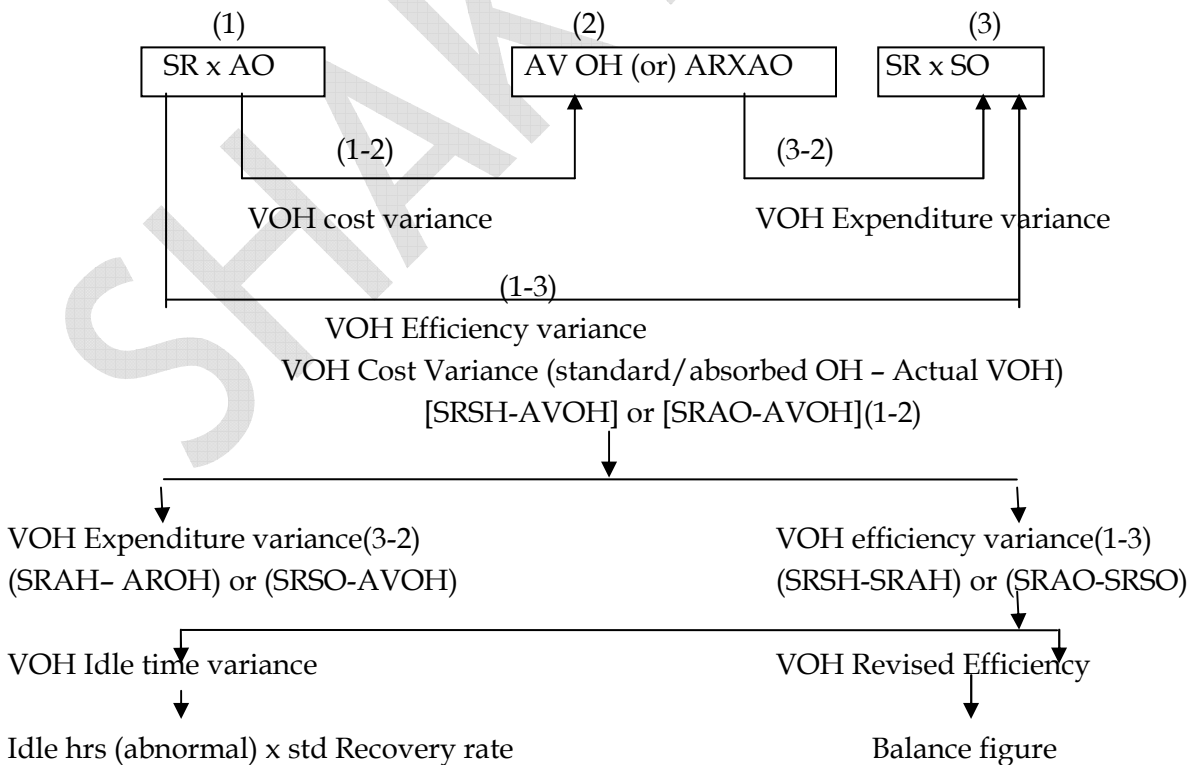
AH = Actual hr for Actual output

RAH = Revised Actual hr i.e. Actual Hr re-written in standard Proportion labour. Idle time variance = Actual idle hrs x standard rate per hrs.

Reasons for Labour variances:

Labour Cost Variance: Standard labour cost vs Actual labour cost

1. **Labour Rate Variance:** Standard Rate vs Actual Rate
2. **Labour Efficiency Variance:** Standard hrs vs Actual hrs
 - **Labour Gang Variance:** Standard Mix(RAH) vs Actual Mix(AH)
 - **Labour sub Efficiency Variance:** Standard hrs vs Actual hrs in standard ratio

Variable Overhead Variances:**a. Based on time:****b. Based on output:**

Meaning of terms & Abbreviations used:

SR = Standard Recovery rate per Hr or per unit / VOH recovery Rate

SH = Standard hrs for Actual output

AH = Actual hrs worked

AO = Actual output

$$SO = \text{Standard output for Actual hrs worked} = \frac{\text{Actual hrs}}{\text{Std hrs per unit}}$$

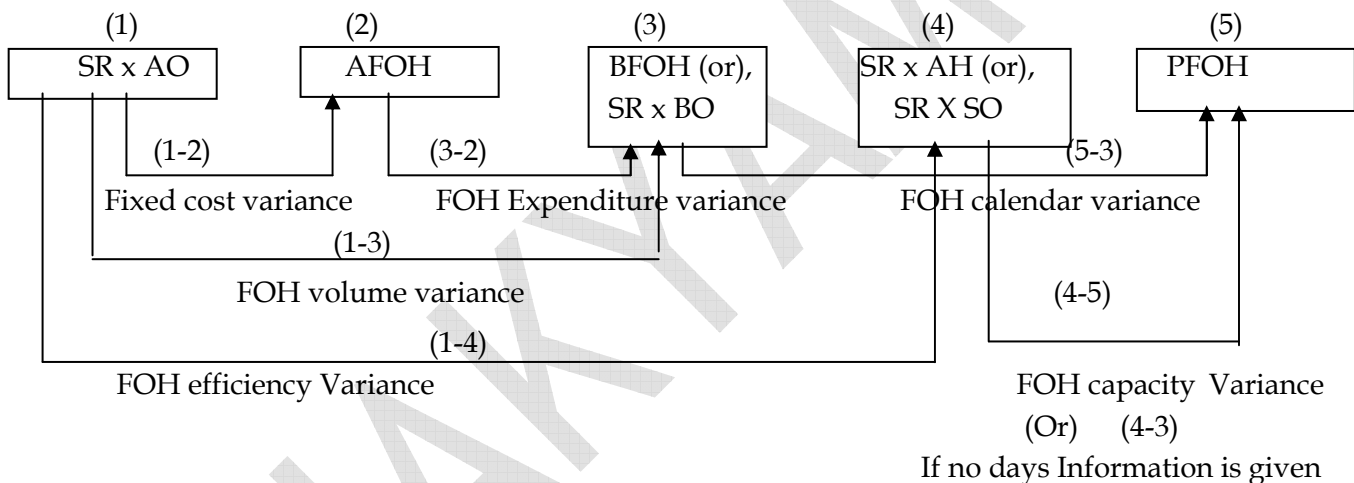
AVOH = Actual variable OH

Reasons for Variable OH variance:**Variable OH Cost Variance:** Absorbed OH vs Actual OH

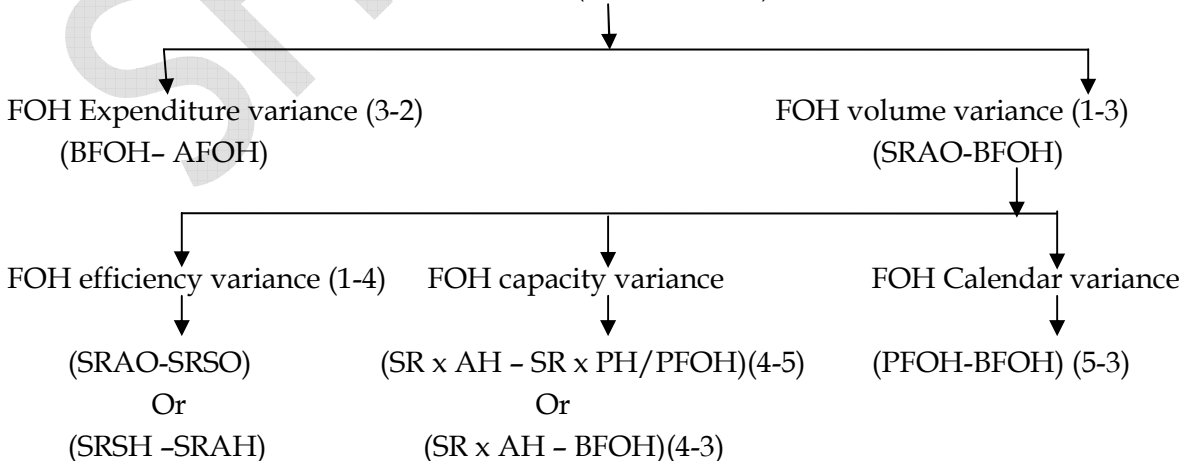
1. **VOH Expenditure Variance:** Standard recovery rate vs Actual recovery rate
2. **VOH Efficiency Variance:** Standard hrs vs Actual hrs

Conversion factor used in computation

S.No	Time based	Output based	Comment/ This represents
1	SRSH	SRAO	Standard/ absorbed OH
2	AVOH	AVOH	Actual variable OH
3	SRAH	SRSO	Standard cost of actual hrs worked

Fixed Overhead Variances: Format

Fixed OH cost variance (1-2) = Standard OH (or) Absorbed OH - Actual FOH
(SRAO-AFOH)



Meaning of terms & Abbreviations used

AO = Actual Output, BO = Budgeted Output

$$SO = \text{Standard Output} = \frac{\text{Actual Hrs worked}}{\text{Standard Hrs per unit}}$$

$$PO = \text{Possible Output} = \frac{\text{Possible hrs}}{\text{Standard hrs per unit}}$$

AH = Actual hrs worked

BH = Budgeted hrs

SH = Standard hrs for Actual output

PH = Possible hrs

AFOH = Actual Fixed Over head

BFOH = Budgeted Fixed Overhead

$$PFOH = \text{Possible Fixed OH} = \text{Budgeted FOH} \times \frac{\text{Actual days}}{\text{Budgeted days}}$$

SR = Standard Rate per unit/ per hrs as the case may be.

Conversion Factors used in Computation:

S.No	Time based	Output based	This Represents
1	SRSH	SRAO	Std/ absorbed OH
2	SRBH	SRBO	Budgeted FOH
3	SRAH	SRSO	Standard cost of actual hrs worked.
4	SRPH	SRPO	Possible fixed OH

Reasons for Fixed OH variance:**Fixed OH cost variance** – Absorbed OH vs Actual OH1. **Fixed OH Expenditure variance** – Budgeted FOH vs Actual FOH2. **Fixed OH volume variance** – Budgeted output vs Actual output

- **Efficiency Variance** – Standard hr per Actual output vs Actual hr for Actual output
- **Calendar variance** – Budgeted days vs Actual days
- **Capacity variance**
 - i.If budgeted days given – possible hrs vs Actual hrs
 - ii.If budgeted days not given – Budgeted hrs vs Actual hrs

Note:

If day's information is given in the problem then volume variance is classified as calendar, Efficiency, capacity variances

If day's Information is not given in the problem then volume Variance is classified into efficiency & capacity variance only.

Ratios:

$$\text{Volume or Activity ratio} = \frac{\text{Standard hrs for actual out put(SH)}}{\text{Budgeted(BH)}}$$

Or

$$= \frac{\text{Actual out put(AO)}}{\text{Budgeted out put(BO)}}$$

=Capacity ratio x Efficiency ratio x Calendar ratio

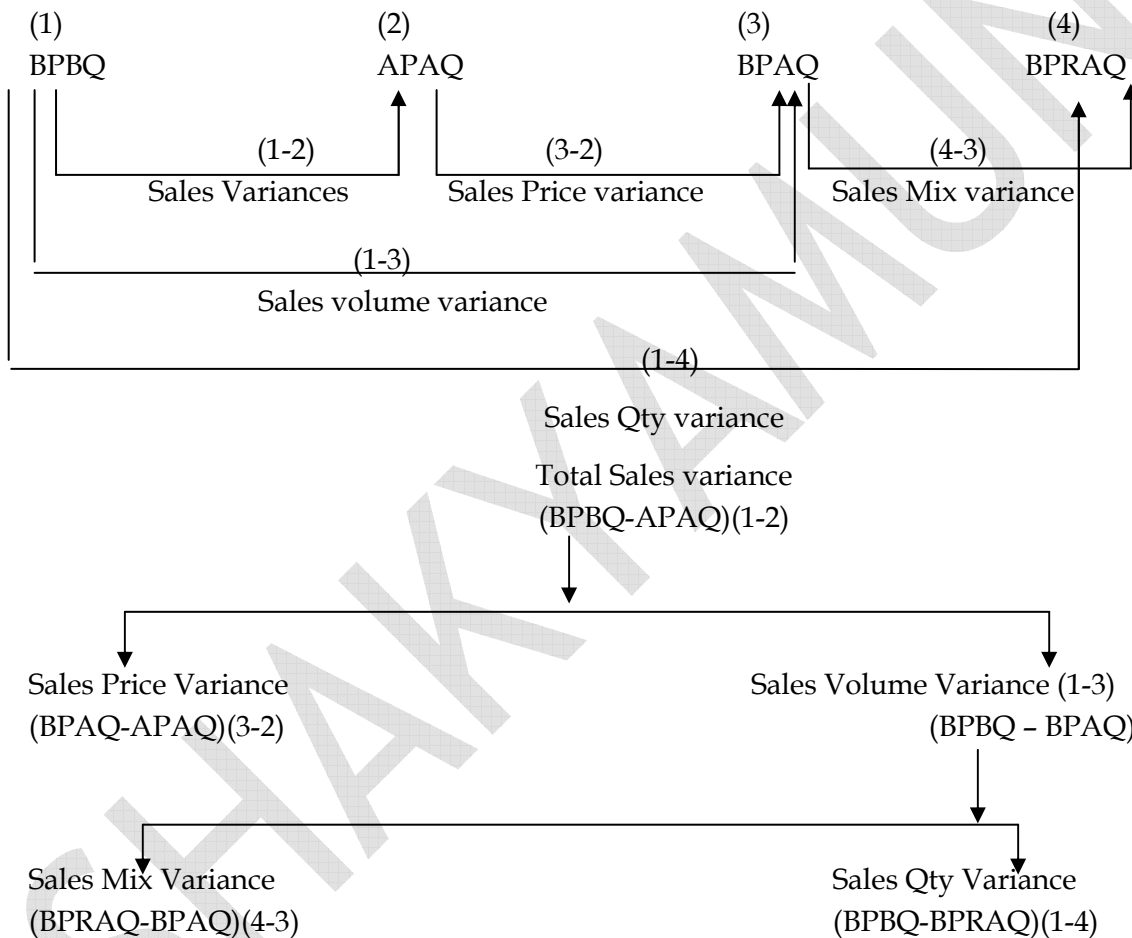
$$\text{Efficiency ratio} = \frac{\text{Standard Hrs(SH)}}{\text{Actual Hrs(AH)}} \quad \text{Or} \quad = \frac{\text{Actual Out put(AO)}}{\text{Standard Out put(SO)}}$$

$$\text{Calendar ratio} = \frac{\text{Actual days}}{\text{Budgeted days}} \quad \text{Or} \quad = \frac{\text{Possible Hrs(PH)}}{\text{Budgeted Hrs(BN)}}$$

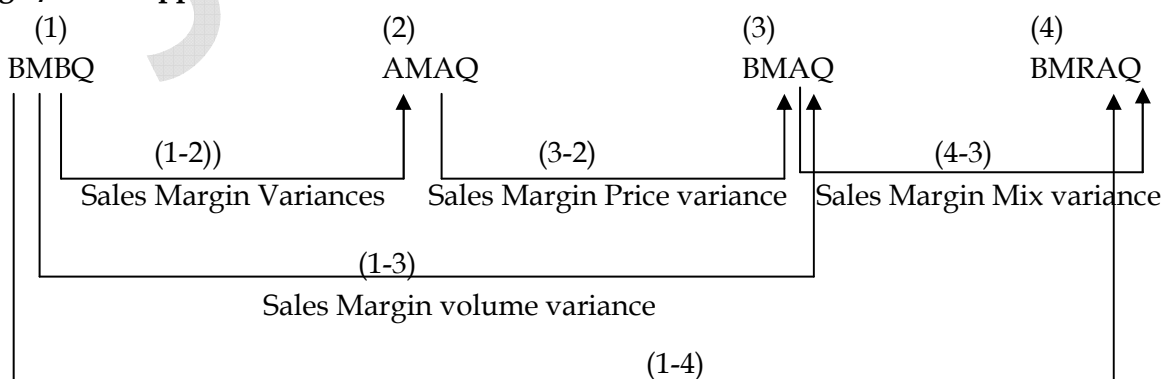
$$\text{Capacity ratio} = \frac{\text{Actual Hrs(AH)}}{\text{Possible Hrs(PH)}} \quad (\text{If days info given}) \quad \text{Or} \quad = \frac{\text{Actual Hrs(AH)}}{\text{Budgeted Hrs(BH)}}$$

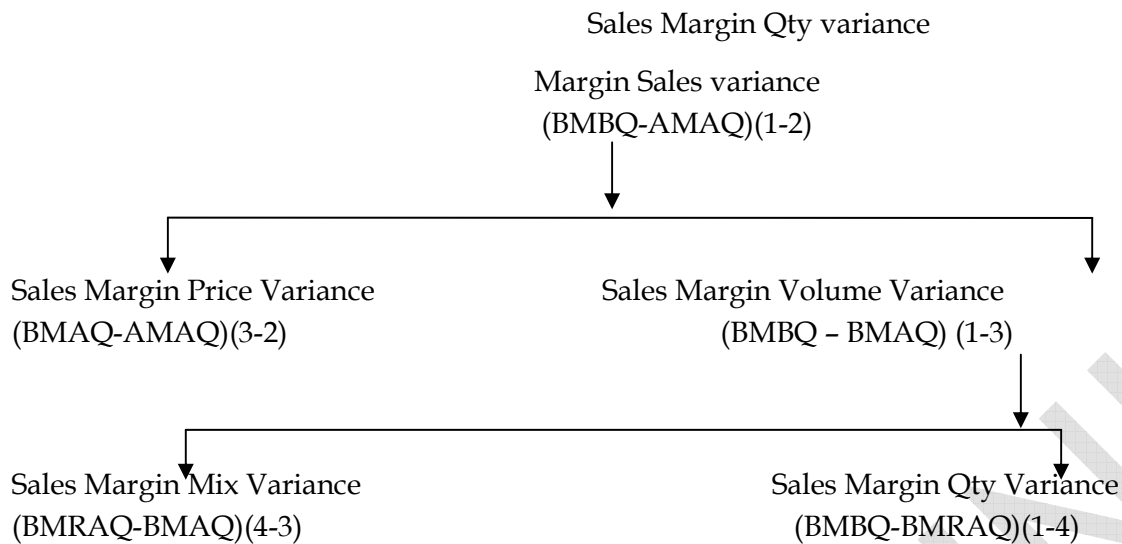
Sales Variances: Format:

1. Total / Turnover approach:



2. Margin/Profit Approach:



**Meaning of terms & Abbreviations used**

BP – Budgeted Selling Price per unit

BM – Budgeted Margin = Budgeted Selling Price – **Standard cost per unit**

BQ – Budgeted Sales QTY

AP = Actual selling price Per unit

AM = Actual Margin = Actual selling price per unit – **Standard cost per unit**

RAQ = Revised Actual Sales Qty= Actual sales Qty re-written in Budgeted Proportion.

All Variances**A. Cost variances**

1. **Material cost variance**=Standard cost for actual output-Actual cost for actual out put
2. **Labour cost Variances**=Standard Labour cost for actual output –Actual labour cost for actual out put
3. **VOH cost variances**=Absorbed OH-Actual OH
4. **FOH cost variances**=Absorbed OH-Actual OH
5. **Total cost variance**=Material cost variance + Labour cost variance+VOH cost variance +FOH cost variance

B. Sales Variances

1. **Sales value variance**=Budgeted sales-Actual sales
2. **Sales Margin value Variance**=Budgeted Margin-Actual margin

Note: Negative sign in case cost variance represent Adverse effect (A) VS positive sign represents Favourable effect (F)

Negative sign in case sales variances represent Favourable effect (F) VS positive sign represents Adverse effect (F)

JOB AND BATCH COSTING**Theory Questions**

1. Job costing
2. Batch costing
3. Circumstances under which Batch costing Adapted:
4. Economic Batch Quantity (EBQ)
5. Job costing Vs Batch costing

Practical:

Blanket VS Departmental OH rate
Economic Batch Quantity (EBQ)

Formula

$$EBQ = \sqrt{\frac{2AS}{C}}$$

Where A=Annual demand for finished product

S=Set up cost per batch

C=Carrying cost per unit of finished product per annum

Batch cost sheet**OPERATING COSTING****Theory Questions**

1. Operating costing:
2. Cost units determination in the rendering of services
3. Absolute and commercial ton-Kilometers
4. Operating cost VS operating cost

Practical:

1. **Transport**
Bus service, Cab service, Lorry service, Scholl Bus
2. **Air service**
3. **Hotel service**
4. **Hospital service**
5. **Electricity**
6. **Library service**

Budgetary Control systems**Theory Questions**

1. Definition of Budget
2. Features
3. Master budget:
4. Functional budgets
5. Flexible budgets
6. List the commonly used functional Budgets

Practical:

1. **Functional budgets**
2. **Master Budget**
3. **Flexible budget**