

Format of Balance Sheet

Balance sheet of

As at

Liabilities	Amount (Rs.)	Assets	Amount (Rs.)
Capital	Xxx	Land & Building	xxx
Profit & Loss a/c	Xxx	Plant & Equipments	
		- at Stores	xxx
		- at site	xxx
Outstanding Expenses	Xxx	Material	
		- at Stores	xxx
		- at site	xxx
		<u>Work in progress:</u>	xxx
		Value of work certified	
		Add: Value of work uncertified	
		Less: Cash received	
		Less: T/f to Reserve a/c	
		Cash & Bank	xxx
		Prepaid expenses	xxx
Total	Xxx	Total	xxx

COST PLUS CONTRACT

(Nov. 2000, 2002, 2008, May 2008)

Under Cost plus Contract, the contract price is ascertained by adding a percentage of profit to the total cost of the work. Such type of contracts are entered into when it is not possible to estimate the Contract Cost with reasonable accuracy due to unstable condition of material, labour services, etc.

ADVANTAGES

- (i) The Contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract.
- (ii) It is useful specially when the work to be done is not definitely fixed at the time of making the estimate.
- (iii) Contractee can ensure himself about 'the cost of the contract', as he is empowered to examine the books and documents of the contractor to ascertain the veracity of the cost of the contract.

DISADVANTAGES

The contractor may not have any inducement to avoid wastages and effect economy in production to reduce cost.

ESCALATION CLAUSE

(Nov 2000, May 2002, Nov 2007)

If during the period of execution of a contract, the prices of materials, or labour etc., rise beyond a certain limit, the contract price will be increased by an agreed amount. Inclusion of such a clause in a contract deed is called an "Escalation Clause".

Calculation of Escalation claim

For Material:

$$\text{Escalation claim} = \text{Standard Quantity} \times (\text{Actual price} - \text{Standard price})$$

For Labour:

$$\text{Escalation claim} = \text{Standard Hours} \times (\text{Actual Rate} - \text{Standard Rate})$$

DIFFERENCE BETWEEN JOB & CONTRACT COSTING

(May 2005)

JOB COSTING	CONTRACT COSTING
<ul style="list-style-type: none"> Job work is carried out in the premises. 	<ul style="list-style-type: none"> Contract work is carried out on the site.
<ul style="list-style-type: none"> An order, a unit, lot or batch of product may be taken as cost unit. 	<ul style="list-style-type: none"> Each contract is a cost unit.
<ul style="list-style-type: none"> Cost is first allocated to the cost centres and then charged to individual jobs. 	<ul style="list-style-type: none"> Most of the expenses are of direct and are directly charged to respective contract A/Cs.
<ul style="list-style-type: none"> It is a system of costing in which the element of cost are accumulated separately for each job or work undertaken by an organization. 	<ul style="list-style-type: none"> Only general overheads and head office expenses are appointed to individual contracts.
<ul style="list-style-type: none"> The price of the jobs are fixed based on the nature of costs and policy of the firm. 	<ul style="list-style-type: none"> The pricing is generally through bidding and external force have major influence in fixing the offer price.

OPERATING COSTING

Meaning

- ✓ It is a method of ascertaining costs of providing or operating a service.
- ✓ This method of costing is applied by those undertakings which provide services rather than production of commodities
- ✓ Operating costing systems is suitable for;-
 - Transport companies
 - Hospitals
 - Theatres
 - Schools etc.

Cost Unit of service sector

NATURE OF INDUSTRY	COST UNIT
Bus operator	Passenger Km
Goods Transport service	Tonne km.
Hospital	Patient per day or Bed per day
Hotel	Room per day
Canteen	Per item
Cinema	Per ticket

COMPUTATION OF COMPOSITE UNITS:

(Nov.2006)

- (i) **ABSOLUTE (WEIGHTED AVERAGE) TONNES-KMS.**
 Absolute tonnes-kms., is the sum total of tonnes-kms., arrived at by multiplying various distances by respective load quantities carried.
- (ii) **COMMERCIAL (SIMPLE AVERAGE) TONNES-KMS.**
 Commercial tonnes-kms., are arrived at by multiplying total distance kms., by average load quantity.

DIFFERENCE BETWEEN OPERATION COST AND OPERATING COST (May 2002)

Operation Cost	Operating Cost
<ul style="list-style-type: none"> ▪ Operation refers to a stage in manufacturing activity where output is converted from one form into another. Cost of each operation is called operation cost. 	<ul style="list-style-type: none"> ▪ Operating cost refers to the total cost of providing a utility or service or intangible product.
<ul style="list-style-type: none"> ▪ Output of each operation is tangible 	<ul style="list-style-type: none"> ▪ There is no tangible output. Only services are provided
<ul style="list-style-type: none"> ▪ Costs are classified into direct material, direct labour, direct expenses and production overhead. 	<ul style="list-style-type: none"> ▪ Costs are classified into fixed or standing charges, variable or running charges and semi-variable or maintenance charges.
<ul style="list-style-type: none"> ▪ Operation costing system is suitable for manufacturing industries, such as;- <ul style="list-style-type: none"> ○ Soap ○ Paint ○ Chemical 	<ul style="list-style-type: none"> ▪ Operating costing system is suitable for service industries, such as;- <ul style="list-style-type: none"> ○ Transport companies ○ Hospitals ○ Theatres ○ Schools etc.

CHAPTER 8

PROCESS COSTING

PROCESS

Stages in production wherein raw materials are converted into one identifiable stage to another. It's a form of operation costing which applies where *standardized goods* are produced. Industries which uses process costing system are Soap, paints, steel industries etc.,

Features

1. The output of one process becomes the input of another process.
2. The end product usually is like units not distinguishable from one another.
3. Process may be carried out either sequentially or parallelly (in case of single product sequential processing is possible and in case of joint product parallel processing is possible after the split off point)
4. Separate accounts has to be maintained for each and every process
5. One to one input out reconciliation of quantity is not possible
6. Cost unit of the process account is output of the process and cost centre is the process itself.
7. Output of the last process is transferred to finished stock account

ACCOUNTING TREATMENT OF NORMAL LOSS, ABNORMAL LOSS AND ABNORMAL GAIN

(Nov.'98)

PROCESS LOSS:

It is defined as the loss of material arising during the course of a processing operation and is equal to the difference between the input quantity of the material and its output. Process loss can be classified in to (i) Normal loss & (ii) Abnormal loss

(i) NORMAL LOSS:

- ✓ It is the loss of material which is inherent in the nature of work.
- ✓ It can be anticipated from
 - the nature of the material;
 - nature of operation;
 - the past experience and
 - technical data.
- ✓ The cost of normal process loss in practice is absorbed by good units produced under the process. The amount realised by the sale of normal process loss units should be credited to the process account.

(ii) ABNORMAL LOSS:

- ✓ It is the loss in excess of the pre-determined loss.
- ✓ It cannot obviously be estimated in advance.
- ✓ It may occur due to
 - the carelessness of workers,
 - Improper training
 - Poor quality of raw material
 - a bad plant design or operation etc.

- ✓ It can be kept under control by taking suitable measures.
- ✓ The cost of an abnormal process loss unit is equal to the cost of a good unit.
- ✓ The total cost of abnormal process loss is credited to the process account from which it arise.
- ✓ The total cost of abnormal process loss is **debited to costing profit and loss account.**

ABNORMAL GAIN:

- ✓ It is an unexpected gain in production under normal conditions.
- ✓ It will arise, when loss under a process is less than the anticipated normal figure.
- ✓ Ie., the actual production exceeds the expected figures.
- ✓ The difference between actual and expected loss or actual and expected production is known as abnormal gain.
- ✓ It should be debited in the process account
- ✓ The cost of abnormal gain is computed on the basis of normal production.
- ✓ Abnormal Gain = Actual Output – Expected Output

Format of Process account

PROCESS - I A/C

Particulars	Unit	Rate (Rs.)	Amount (Rs.)	Particulars	Unit	Rate (Rs.)	Amount (Rs.)
To Material	xxx	x	xxx	By Normal Loss	xxx	x	Xxx
To Labour				By Abnormal Loss	xxx	x	Xxx
To Overhead				By Output t/f to Next process	xxx	x	Xxx

W.N.1 Computation of process loss

Process Loss = Input Qty – Output Qty

(Process loss we can classify into normal loss & Abnormal loss / Abnormal gain if any)

W.N.2 Computation of Cost Per Unit

CPU = (Gross Cost – Normal Loss Value) / (Input Qty – Normal Loss Qty)

EQUIVALENT PRODUCTION UNITS

(May 2002)

It means converting the incomplete production units into their equivalent completed units.

Equivalent completed units = {Number of units in the process(WIP)} × {Percentage of work completed}

Eg.,

if No. of physical unit in process is 500 units; percentage of completion of work is 50% then Equivalent Production Unit = 500Units x 50% = 250 units.

Steps:

1. Prepare statement of Equivalent Production
 - a. Compute Input Output Qty reconciliation
 - b. Compute percentage of completion and their equivalent production
2. Compute Cost Per Equivalent Unit

$$\text{CPU} = (\text{Total Cost} / \text{Equivalent Units})$$
3. Prepare statement of evaluation
 (ie. Compute the value of Closing Work in Progress, Output transferred to next process & Abnormal loss or Abnormal gain if any.)
4. Prepare process accounts

Format of statement of Equivalent Production

Input	Unit	Output	Unit	Material		Labour		Overhead	
				% of completion	Eq.Units	% of completion	Eq.Units	% of completion	Eq.Units
Op. WIP	XXX	Output T/f to next process	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Current period Input	XXX	Normal Loss	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Abnormal loss	XXX	XXX	XXX	XXX	XXX	XXX	XXX
		Cl.wip	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total	XXX		XXX		XXX		XXX		XXX

Points to remember:

- If the problem is to be solved using FIFO method, % of completion for opening WIP should be there in the question.
- In case % of completion for opening WIP is not given, we can solve only by using Weighted Average Method.
- Two materials will come if the question requires preparation of any process account other than the first process.

INTER-PROCESS PROFITS

Generally in process costing output of the one process becomes the input of the next process at cost. However, if the output of one process is transferred to the next process at market value or cost plus a percentage of profit, then the difference between cost and the transfer price is known as inter-process profits.

Advantages:

- Comparison between the cost of output and its market price at the stage of completion is facilitated.
- Each process is made to stand by itself as to the profitability.

Disadvantages:

- The use of inter-process profits involves complication.
- The system shows profits which are not realised because of stock not sold out.

DISTINCTION BETWEEN JOB COSTING & PROCESS COSTING

(Nov.'98)

JOB COSTING	PROCESS COSTING
<ul style="list-style-type: none"> ▪ Job is performed against specific order 	<ul style="list-style-type: none"> ▪ Process is continuous
<ul style="list-style-type: none"> ▪ Each job is unique in nature ie heterogeneous 	<ul style="list-style-type: none"> ▪ All the end products are homogeneous in nature
<ul style="list-style-type: none"> ▪ Cost of job is calculated only when a job is completed 	<ul style="list-style-type: none"> ▪ Cost of process is calculated at the end of the each period
<ul style="list-style-type: none"> ▪ Cost centre is job 	<ul style="list-style-type: none"> ▪ Cost centre is a process
<ul style="list-style-type: none"> ▪ There may or may not be work in process 	<ul style="list-style-type: none"> ▪ Since process a continuous one there is always some work in process will be there
<ul style="list-style-type: none"> ▪ Generally no transfers from one job to another 	<ul style="list-style-type: none"> ▪ Always output of the one process will transferred to next process as input
<ul style="list-style-type: none"> ▪ The cost of each job is compiled separately by adding material, labour and overhead 	<ul style="list-style-type: none"> ▪ The unit cost here is the average cost of the process for a given period
<ul style="list-style-type: none"> ▪ Detailed supervision and control is needed as each job is distinct and different from others. 	<ul style="list-style-type: none"> ▪ Supervision and control is comparatively easier as the process operations are standardized.

CHAPTER 9

JOINT PRODUCTS & BY-PRODUCTS

JOINT PRODUCTS

- ✓ Two or more products of equal importance, produced, simultaneously from the same process, are known as joint products.
- ✓ *"two or more products separated in the course of the same processing operation usually requiring further processing, each product being in such proportion that no single product can be designated as a major product"*.
- ✓ Basic Characteristics:
 - All the products are equal importance in terms of sales value / profit
 - All the products are treated as main product
 - Until the split off point all the joint products are not distinguishable

Eg.

<i>Industry</i>	<i>Joint Products</i>
Petroleum	Gasoline, fuel oil, lubricants, coal tar & kerosene
Coal Gas	Coke, Tar, Benzol, sulphate of ammonia
Oil Refining	Petrol, diesel, LPG, kerosene etc.

CO-PRODUCTS

- ✓ Two or more products which are contemporary but do not emerge necessarily from the same material in the same process.

- Eg. (i) Wheat and gram produced in two separate farms with separate processing of cultivation, are the co-products.
 (ii) Timber boards made from different trees are co-products.

BY-PRODUCTS

- ✓ It emerges as a result of processing operation of another product or they are produced from the scrap or waste of materials of a process i.e., by-product is a secondary or subsidiary product which emanates as a result of manufacture of the main product.
- ✓ *"products recovered from material discarded in a main process, or from the production of some major products, where the material value is to be considered at the time of severance from the main product."*

Eg

<i>Main Product</i>	<i>By-product</i>
Sugar	Molasses
Soap	Glycerin

ACCOUNTING TREATMENT OF BY-PRODUCT

(May '97, Nov.2007)

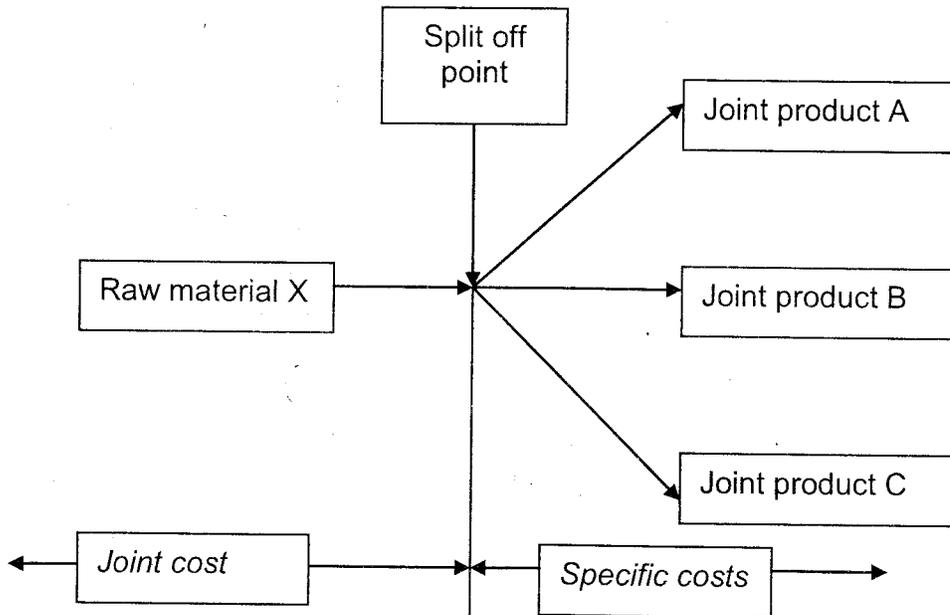
Situation	Treatment
1. When they are of small total value	The sales value of the by-products may be either credited to the Profit and Loss Account as <u>miscellaneous income</u> or it may be treated as <u>deductions from the total costs</u>
2. When the by-products are of considerable total value	It may be regarded as joint products rather than as by-products.
3. Where they require further processing	Net realisable value of the by-product at the split-off point may be arrived at by subtracting the further processing cost from the realisable value of by-products. a. If such NRV is small, it may be treated as credited to P&L accounts. b. If such NRV is considerable, it should be treated as a joint product.

DISTINCTION BETWEEN JOINT-PRODUCT AND BY-PRODUCT

JOINT-PRODUCT	BY-PRODUCT														
Two or more products, separated in the course of the same processing operation, considered as relatively important.	Products recovered from material discarded in a main process.														
Joint products are of equal importance	By-products are of small economic value.														
Joint products are produced Intentionally	By-products are produced incidentally in addition to the main products														
Eg. <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Industry</th> <th>Joint Products</th> </tr> </thead> <tbody> <tr> <td>Petroleum</td> <td>gasoline, fuel oil, lubricants, coal tar & kerosene</td> </tr> <tr> <td>Coal Gas</td> <td>Coke, Tar, Benzol, sulphate of ammonia</td> </tr> <tr> <td>Oil Refining</td> <td>Petrol, diesel, LPG, kerosene etc.</td> </tr> </tbody> </table>	Industry	Joint Products	Petroleum	gasoline, fuel oil, lubricants, coal tar & kerosene	Coal Gas	Coke, Tar, Benzol, sulphate of ammonia	Oil Refining	Petrol, diesel, LPG, kerosene etc.	Eg <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Main Product</th> <th>By-product</th> </tr> </thead> <tbody> <tr> <td>Sugar</td> <td>Molasses</td> </tr> <tr> <td>Soap</td> <td>Glycerin</td> </tr> </tbody> </table>	Main Product	By-product	Sugar	Molasses	Soap	Glycerin
Industry	Joint Products														
Petroleum	gasoline, fuel oil, lubricants, coal tar & kerosene														
Coal Gas	Coke, Tar, Benzol, sulphate of ammonia														
Oil Refining	Petrol, diesel, LPG, kerosene etc.														
Main Product	By-product														
Sugar	Molasses														
Soap	Glycerin														

SPLIT OFF POINT

- ✓ The split off point is that point or stage of production at which the joint products and the by products become separately identifiable.
- ✓ The significance of split off point lies on the fact that it's the point where costs can be classified as joint cost and specific cost.
- ✓ Joint costs – Costs prior to split off point which are common to all the products
- ✓ Specific costs- Costs after the split off point which can be allocated/ charged directly to a particular product.



METHOD OF APPORTIONING JOINT COST

- (i) Physical unit method
- (ii) Average unit cost method
- (iii) Technical Point method or survey method
- (iv) Contribution margin method
- (v) Market value method.
 - (a) Market value at Split off point method
 - (b) Market value after further processing method
 - (c) Net realisable value method.(NRV)

NRV:

Sales Value after further processing		xxxx
Less: Profit margin	xxxx	
Selling & Distribution overhead	xxxx	
Further processing cost	xxxx	xxxx
Net realizable value		<u>xxxx</u>

CHAPTER 10

STANDARD COSTING

MEANING

Standard costing is defined by the ICMA, London, "as the preparation and use of standard costs, their *comparison with actual* costs and the *analysis of variances* to their causes and points of incidence."

Standard cost is defined "as a *pre-determined cost* which is calculated from management's standards of efficient operation and the relevant necessary expenditure. It may be used as a basis for price fixing and for cost control through variance analysis."

TYPES OF STANDARDS

- (i) Ideal standards
- (ii) Normal standards
- (iii) Basic or Bogey standards
- (iv) Current standards

USES OF STANDARD COSTS

- Effective way for planning and controlling costs.
- Pricing decisions
- Decisions involving submission of quotations & tenders
- Measurement of variances if any, from standards
- Facilitates management by exception (MBE).

THE PROCESS OF STANDARD COSTING

STEP 1: The setting of standards,

STEP 2: Ascertainment of actual costs,

STEP 3: Comparison of actual and standard costs to determine the variance &

STEP 4: Investigation of variances and taking appropriate action.

DIFFERENCE BETWEEN STANDARD COST & ESTIMATED COST

STANDARD COST	ESTIMATED COST
<ul style="list-style-type: none"> ▪ It's a pre-determined cost ▪ It is calculated from managements 'expected standard of efficient operation' and the relevant necessary expenditure. ▪ It may be used as a basis for price fixing and for cost control through variance analysis. ▪ It is a relevant cost 	<p>Kohler defines estimated cost as "the expected cost of manufacture, or acquisition, often in terms of a unit of product computed on the basis of information available in advance of actual production or purchase".</p> <p>Estimated costs are prospective costs since they refer to prediction of costs.</p>

It is computed on scientific basis	It is computed with the help of historic data
It is suitable for the organizations which deal with standardized products.	It is suitable for the organizations which deal with non standardized products.
It is used for the purpose of variance analysis, cost control and cost reduction	It is applied for the purpose of decision making and price determination

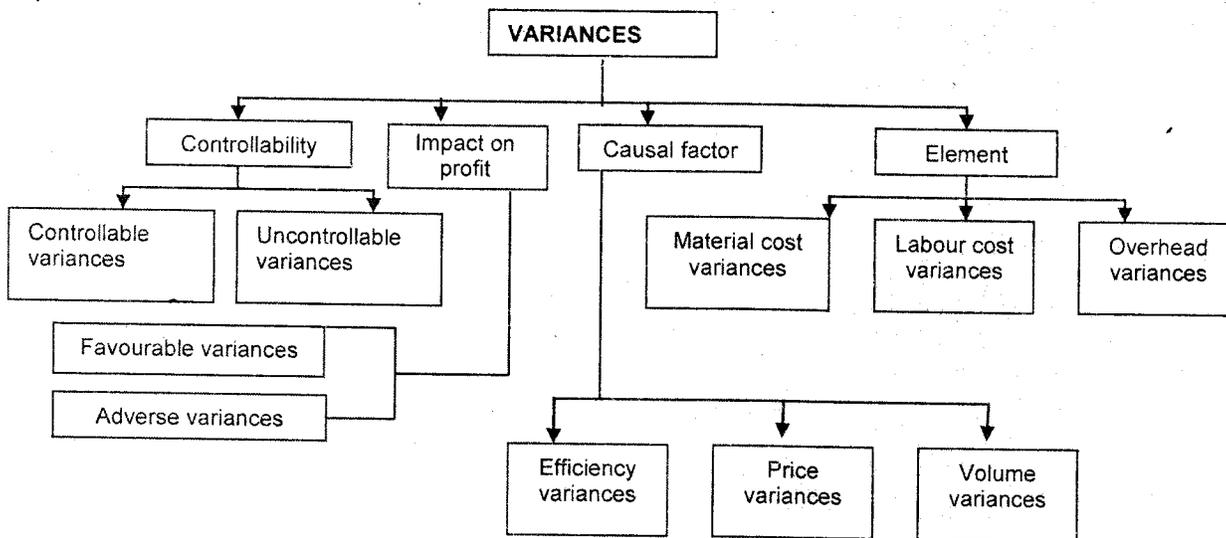
VARIANCE

- ✓ Difference between standard and actual is called variance
- ✓ Variance analysis is the analysis of the cost variance into its component parts and the explanation of variances.

$$\text{Variance} = \text{Expectation} - \text{Actual}$$

TYPES OF VARIANCES

(May 2000)



ACCOUNTING PROCEDURE FOR STANDARD COST

There are three methods for recording standard cost operation in the book of accounts

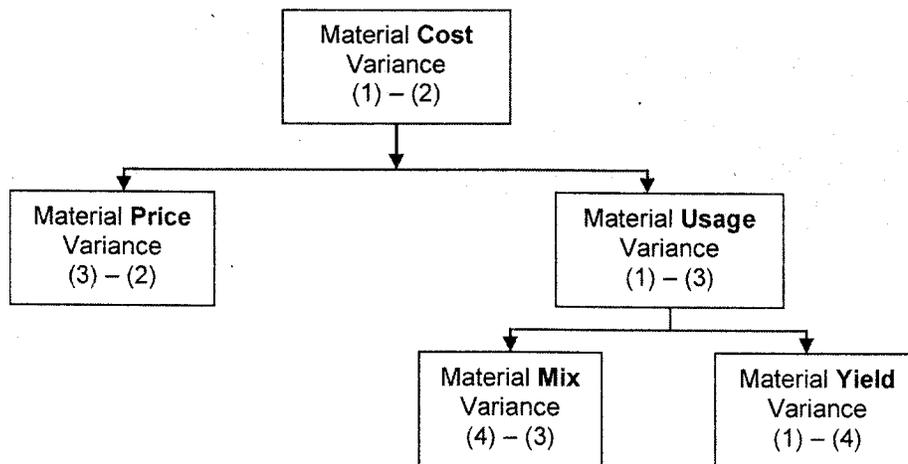
1. **PARTIAL PLAN:** Variances are analyzed and accounted at the end of the accounting period
2. **SINGLE PLAN:** Variances are analyzed and accounted at the time of transaction
3. **DUAL PLAN:** Variances are analyzed in the form of efficiency

DISPOSAL OF VARIANCES IN STANDARD COSTING

(Nov '98)

- (i) Write off all variances to profit and loss account
- (ii) Distribute the variance pro-rata to
 - a. Cost of sales,
 - b. Work-in-progress and
 - c. Finished good stocks.
- (iii) Write off quantity variance to profit and loss account but the price variances may be spread over cost of sales, work-in-progress and finished goods stocks.

MATERIAL VARIANCE



Material	1	2	3	4
	SQ X SP	AQ X AP	AQ X SP	RAQ X SP
X				
Y				
Total				

Where,

SQ = Standard Quantity (Standard Quantity for actual output)

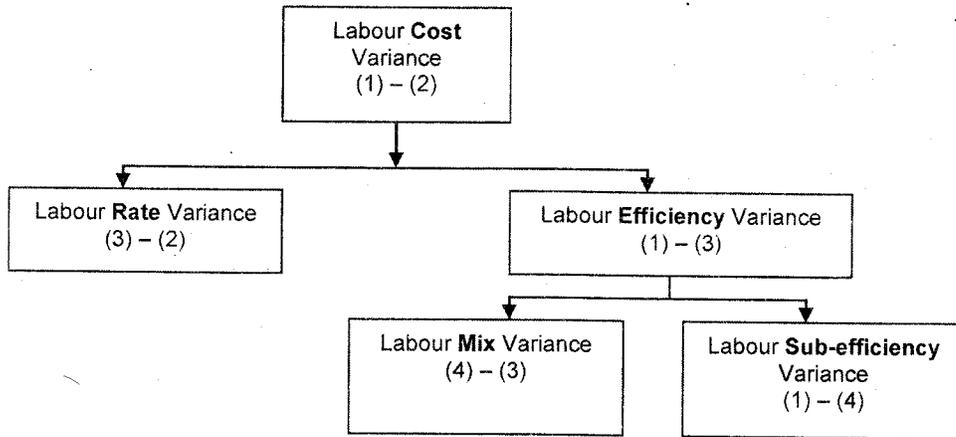
AQ = Actual Quantity

RAQ = Revised Actual Quantity (Actual Quantity rewritten in standard proportion)

SP = Standard Price per unit

AP = Actual Price per unit

LABOUR VARIANCE



Grade of Labour	1	2	3	4
	SH X SR	AH X AR	AH X SR	RAH X SR
Skilled				
Semi skilled				
Total				

Where,

SH = Standard Hours (Standard hours required for actual output)

AH = Actual Hours

RAH = Revised Actual Hours (Actual hours rewritten in standard proportion)

SR = Standard Rate per hour

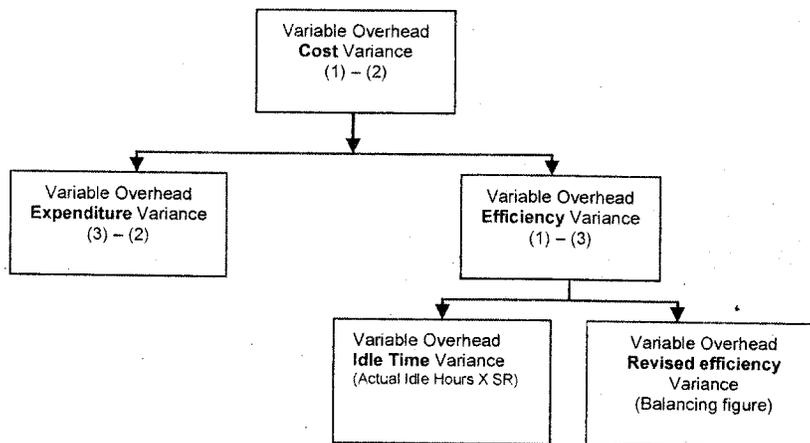
AR = Actual Rate per hour

IDLE TIME VARIANCE

Labour Efficiency Variance may also be classified into

1. Idle Time Variance (ie Actual Idle hours X Standard Rate per hour)
2. Revised Efficiency Variance (Balancing figure)

VARIABLE OVERHEAD VARIANCE



Variable Overhead	1	2	3
	SH X SR	AH X AR	AH X SR

Where,

SH = Standard Hours (Standard hours required for actual output)

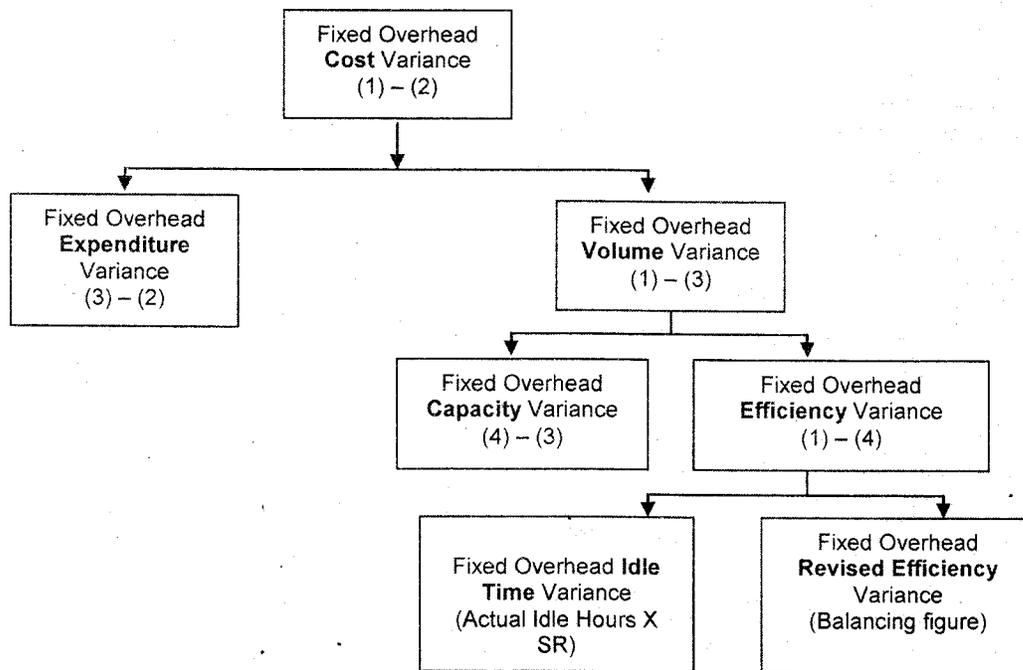
AH = Actual Hours

SR = Standard Rate per hour

AR = Actual Rate per hour

FIXED OVERHEAD VARIANCE

1. FIXED OVERHEAD – WITHOUT CALENDAR VARIANCE



Fixed Overhead	1	2	3	4
	AO X SR	AFOH	BFOH	AH X SR

Where,

AO = Actual Output

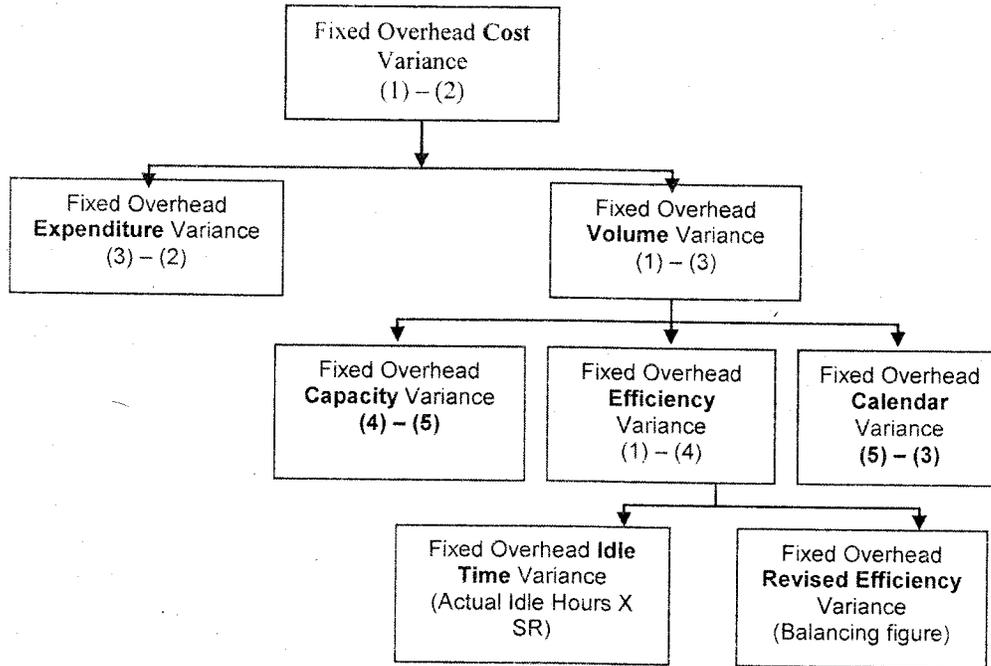
SR = Standard Rate (per unit for (1); Per hour for (4))

AFOH = Actual Fixed Overhead

BFOH = Budgeted Fixed Overhead

AH = Actual Hours

2. FIXED OVERHEAD – WITH CALENDAR VARIANCE



Fixed Overhead	1	2	3	4	5
	AO X SR	AFOH	BFOH	AH X SR	PFOH

Where,

AO = Actual Output

SR = Standard Rate (per unit for (1); Per hour for (4))

AFOH = Actual Fixed Overhead

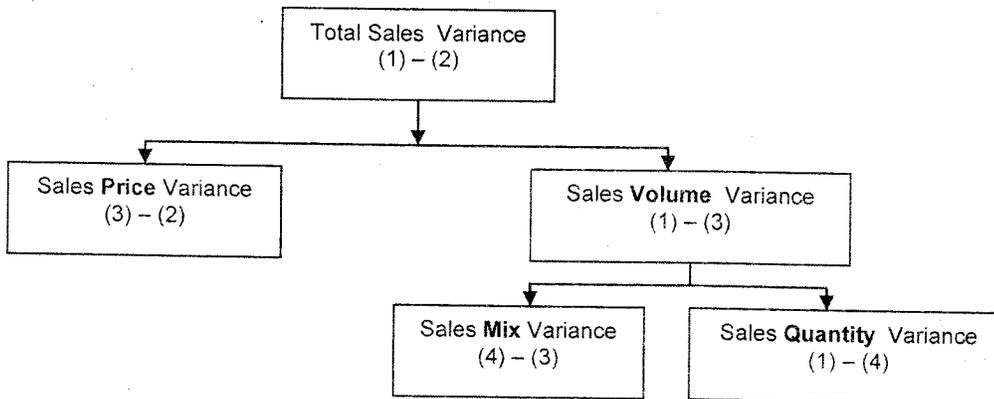
BFOH = Budgeted Fixed Overhead

AH = Actual Hours

PFOH = Possible Fixed Overhead ie = (BFOH / Budgeted Days) X Actual Days

SALES VARIANCE

1. TOTAL OR TURNOVER APPROACH



Product	1	2	3	4
	BQ X BP	AQ X AP	AQ X BP	RAQ X BP
X				
Y				
Total				

Where,

BQ = Budgeted Quantity

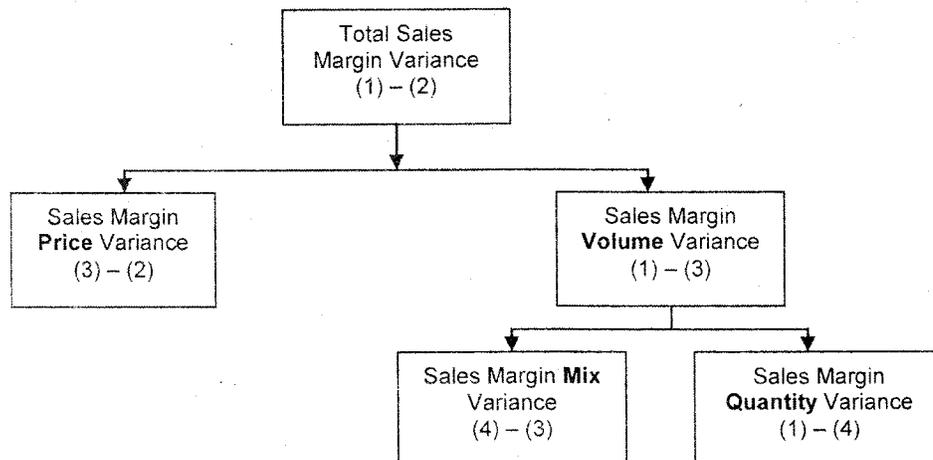
AQ = Actual Quantity

BP = Budgeted Price per unit

AP = Actual Price per unit

RAQ = Revised Actual Quantity (*Actual Quantity rewritten in Budgeted proportion*)

2. PROFIT OR MARGIN APPROACH



Product	1	2	3	4
	BQ X BM	AQ X AM	AQ X BM	RAQ X BM
X				
Y				
Total				

Where,

BQ = Budgeted Quantity

AQ = Actual Quantity

BM = Budgeted Margin (*Budgeted Price per unit – Standard Cost per unit*)

AM = Actual Margin (*Actual Price per unit – Standard Cost per unit*)

RAQ = Revised Actual Quantity (*Actual Quantity rewritten in Budgeted proportion*)

CHAPTER 11

MARGINAL COSTING

MEANING

- Marginal costing is not a distinct method of costing like job costing, process costing etc.,
- It uses a special technique for managerial decision making.
- It is used to provide a basis for interpretation of cost data to measure the profitability
- Here cost has been classified on the basis of behaviour or Nature (*ie Fixed cost, Variable cost & Semi-variable cost*)

THEORY OF MARGINAL COSTING

- In relation to a given volume of output, additional output can normally be obtained at less than proportionate cost
- This is because of within limits the aggregate of certain items of cost will tend to remain fixed

DECISION MAKING INDICATORS IN MARGINAL COSTING

1. Profit Volume Ratio (PV Ratio)
2. Break Even Point (BEP)
3. Margin of Safety (MOS)
4. Indifference Point &
5. Shut down Point

(Note: The last two decision making indicators (Indifference Point & Shut down Point) does not form part of IPCC/PCC syllabus)

FORMAT OF MARGINAL COST SHEET

<i>Particulars</i>	<i>Amount</i>
Sales Value	xxx
Less: Variable Cost	<u>xxx</u>
Contribution	xxx
Less: Fixed Cost	<u>xxx</u>
Profit	<u>xxx</u>

ABSORPTION COSTING

- ✓ It is a procedure of cost recognition wherein costs are classified on the basis of functions.
- ✓ CIMA, London defines the absorption costing as "the practice of charging all costs, both variable and fixed, to operations, processes or products".
- ✓ All cost of production, both fixed and variable are included in inventory valuation.

Difference between Marginal Costing and Absorption Costing

MARGINAL COSTING	ABSORPTION COSTING																																		
1. Only variable costs are included for product costing and inventory valuation.	1. Both fixed and variable costs are considered for product costing and inventory valuation.																																		
2. Expenses are classified based on nature (ie. Variable and Fixed)	2. Expenses are classified based on Functions. (ie. Production, administrative, selling and distribution)																																		
3. All fixed costs are treated as period cost	3. Only <u>administration</u> , <u>selling</u> and distribution overheads are treated as period cost.																																		
4. Only variable manufacturing costs are treated as product cost	4. All variable manufacturing costs and fixed production overheads are treated as product cost.																																		
5. Managerial Decisions are based on contribution.	5. Managerial Decisions are based on Net profit.																																		
6. The difference in the magnitude of opening and closing stock does not affect the unit of production	6. The difference in the magnitude of opening and closing stock affect the unit cost of production due to the impact of the related fixed cost																																		
7. In variance reporting, Fixed overhead expenditure variance only can be computed. There is on volume variance since fixed overheads are not absorbed.	7. In variance reporting, Fixed overhead expenditure and volume variances can be computed. Volume variance can also be sub classified into Capacity, Efficiency and Calendar variances.																																		
8. It aids decision making	8. It distorts decision making																																		
9. Fixed costs are regarded as period costs. The profitability of different products is judged by their P/V ratio.	9. Fixed costs are charged to the cost of production. Each product bears reasonable share of fixed costs and thus the profitability of a product are influenced by an apportionment to fixed asset.																																		
10. Format for The presentation of information to management: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Particulars</th> <th>Rs.</th> </tr> </thead> <tbody> <tr> <td>Sales Value</td> <td>xxx</td> </tr> <tr> <td>Less: Variable cost</td> <td>xxx</td> </tr> <tr> <td style="padding-left: 20px;">Contribution</td> <td>xxx</td> </tr> <tr> <td>Less: Fixed cost</td> <td>xxx</td> </tr> <tr> <td style="padding-left: 20px;">Profit</td> <td>xxx</td> </tr> </tbody> </table>	Particulars	Rs.	Sales Value	xxx	Less: Variable cost	xxx	Contribution	xxx	Less: Fixed cost	xxx	Profit	xxx	10. The presentation of information to management: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Particulars</th> <th>Rs.</th> </tr> </thead> <tbody> <tr> <td>Sales Value</td> <td>xxx</td> </tr> <tr> <td>Less:</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">a. Direct Material</td> <td>xxx</td> </tr> <tr> <td style="padding-left: 20px;">b. Direct Labour</td> <td>xxx</td> </tr> <tr> <td style="padding-left: 20px;">c. Factory OH</td> <td>xxx</td> </tr> <tr> <td style="padding-left: 40px;">Gross Profit</td> <td>xxx</td> </tr> <tr> <td>Less:</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">a. Admi. Exp.</td> <td>xxx</td> </tr> <tr> <td style="padding-left: 20px;">b. S & D Exp.</td> <td>xxx</td> </tr> <tr> <td style="padding-left: 40px;">Net Profit</td> <td>xxx</td> </tr> </tbody> </table>	Particulars	Rs.	Sales Value	xxx	Less:		a. Direct Material	xxx	b. Direct Labour	xxx	c. Factory OH	xxx	Gross Profit	xxx	Less:		a. Admi. Exp.	xxx	b. S & D Exp.	xxx	Net Profit	xxx
Particulars	Rs.																																		
Sales Value	xxx																																		
Less: Variable cost	xxx																																		
Contribution	xxx																																		
Less: Fixed cost	xxx																																		
Profit	xxx																																		
Particulars	Rs.																																		
Sales Value	xxx																																		
Less:																																			
a. Direct Material	xxx																																		
b. Direct Labour	xxx																																		
c. Factory OH	xxx																																		
Gross Profit	xxx																																		
Less:																																			
a. Admi. Exp.	xxx																																		
b. S & D Exp.	xxx																																		
Net Profit	xxx																																		

PROFIT VOLUME RATIO (PV Ratio)

- It is the ratio of contribution to sales
- This ratio is usually expressed in percentage
- Higher the PV Ratio it is better
- It indicates the effect on profit for a given change in the sales.
- It measures the profitability of each product, process, operation etc.
- It facilitates managerial decision making

Formula

1. PV Ratio	=	$\frac{\text{Contribution}}{\text{Sales}} \times 100$
2. PV Ratio	=	$\frac{\text{Changes in Profit}}{\text{Changes in Sales}} \times 100$
3. PV Ratio	=	100 – Variable Cost Ratio

WAYS TO IMPROVE PV RATIO

- By way of reducing variable cost or
- By way of increasing the selling price or
- By way of improving Sales Mix

BREAK EVEN POINT (BEP)

- ✓ It is the point at which there is **neither a profit nor a loss** to the firm
- ✓ **ie. No profit No loss situation**
- ✓ It is the volume of operation at which total sales revenue is just equal to total cost

In BEP

- Profit = Nil
- Contribution = Fixed Cost
- Total income = Total cost (FC + VC)

Formula

BEP (in units)	=	$\frac{\text{Fixed Cost}}{\text{Contribution per unit}}$
BEP (in Value)	=	$\frac{\text{Fixed Cost}}{\text{PV Ratio}}$
BEP (in Value/Units)	=	Total sales – MOS sales
BEP (in %)	=	100 – MOS(in%)

Significance of BEP

LEVEL OF SALES	IMPACT ON BEP
Less than BEP	Guaranteed Loss
Equal to BEP	No Profit / No Loss
More than BEP	Guaranteed Profit

Break even analysis is based on a number of assumptions which are as follows: (Nov.'98)

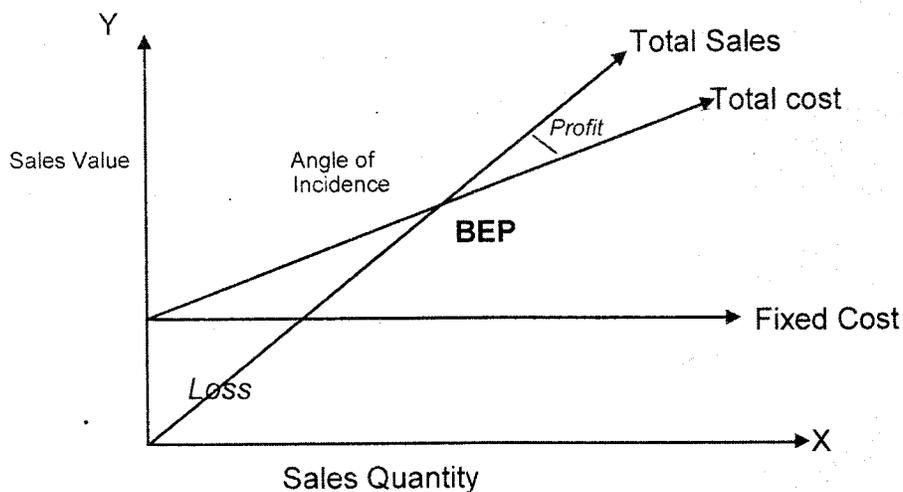
1. Total costs can be easily classified in to fixed and variable
2. Variable cost per unit remains constant. However total variable costs vary in proportion to output
3. Total fixed costs remain constant irrespective of level of output.
4. Selling price per unit remains constant irrespective of quantity sold
5. Costs and revenues are linear over the range of activity under consideration.
6. Costs and revenues are influenced only by volume.
7. The state of technology, methods of production and efficiency remain unchanged.
8. Productivity of the factors of production will remain the same
9. There will be no significant change in the levels of inventory.
10. The company manufactures a single product.
11. In the case of a multi product company, the sales mix will remain unchanged.

BREAKEVEN CHART

A breakeven chart records costs and revenues on the vertical axis and the level of activity on the horizontal axis. The different types of Break-Even charts are as follows

- (i) Contribution Break-Even Chart
- (ii) Cash Break-Even Chart
- (iii) Control Break-Even Chart
- (iv) Analytical Break-Even Chart
- (v) Product wise Break-Even Chart
- (vi) Profit graph

(May 2001)



Margin of Safety (MOS)

(May '97, 99)

- ✓ Margin of safety is the excess of sales over the break-even sales i.e., it is the difference between the Actual sales and the Break Even sales.
- ✓ It may be expressed as a percentage of total sales or in value or in terms of quantity.
- ✓ In MOS, firm will earn guaranteed profit.

In MOS

- i. Contribution = Profit
- ii. Fixed cost = Nil

Formula

MOS (in units)	=	$\frac{\text{Profit}}{\text{Contribution per unit}}$
MOS (in Value)	=	$\frac{\text{Profit}}{\text{PV Ratio}}$
MOS (in Value/Units)	=	Total Sales – BEP Sales
MOS (in %)	=	100 – BEP(in%)

COST-VOLUME-PROFIT ANALYSIS

(Nov 2000, May 2001)

- Cost-Volume-Profit (CVP) analysis is the analysis of three variables
 - Cost;
 - Volume &
 - Profit.
- Such an analysis explores the relationship between costs, revenue, activity levels and the resulting profit.
- It aims at measuring variations in cost and volume.

CVP analysis is based on the following assumptions:

--- Same as 'assumption under BEP' listed above ---

ANGLE OF INCIDENCE

(May '99)

- The angle formed at the point of intersection of total cost and the sales line is called the angle of incidence.
- This is the angle at which the total sales line cuts the total cost line.
- It is shown as angle.
- If the angle is large, the firm is said to make profits at a high rate and vice versa.

KEY FACTOR

(May '98)

- The CIMA defines a key factor "factor which at a particular time, or over a period, will limit the activities of an undertaking".
- It represents a resource whose availability is less than its requirement (*Resource constraint*)
- It is the most important factor for taking decisions about the profitability of a product.
- It is also called Limiting Factor or Critical Factor or Budget Factor

Examples of Key Factors

- Shortage of raw material.
- Shortage of labour.
- Demand
- Availability of Plant capacity
- Availability of Cash

Steps for solving Key factor problems

1. Identification of key factor
2. Compute contribution per key factor
3. Rank the products based on the contribution per key factor as computed above
4. Allocate the key resources based on the rank
5. Prepare the profitability statement

CIRCUMSTANCES IT MAY BE JUSTIFIABLE TO SELL AT A PRICE BELOW MARGINAL COST

(May 2000)

- a. Where materials are of perishable nature
- b. Where stocks have been accumulated in large quantities and their market prices have fallen
- c. To popularize a new product
- d. Where such reduction enables a firm to boost the sale of other products having larger profit margin
- e. To capture foreign market
- f. To obviate shut-down cost
- g. To capture prospective market

BUDGETARY CONTROL

BUDGET

CIMA of England and Wales defines the terms budget as "A financial / quantitative statement, prepared and approved prior to a defined period of time of the policy to be pursued during that period for the purpose of attaining a given objective. It may include income, expenditure and employment of capital".

BUDGETARY CONTROL

CIMA London defines budgetary control as " the establishment of the budgets relating to the responsibilities of executives to the requirement of the policy and the continuous comparison of actual with the budgeted results either to secure by individual action the objective of that policy or to provide a base for its revision".

THE SALIENT FEATURES OF BUDGETARY CONTROL SYSTEM

(Nov. '97)

- ✓ Determining the **objectives to be achieved**, over the budget period.
- ✓ Determining the variety of **activities that should be undertaken** for the achievement of the objectives.
- ✓ Drawing up a **plan** or a scheme of operation in respect of each class of activity
- ✓ Laying out a system of **comparison** of actual performance by each person, section or department with the relevant budget
- ✓ Determination of causes for the **discrepancies**, if any.
- ✓ Ensuring that **corrective action** will be taken.

OBJECTIVES OF BUDGETARY CONTROL

1. **PLANNING:** Planning is deciding in advance the future course of action budgeting also performs the same task. It will force management at all levels to plan the activities and policies for future period.
2. **DEFINING RESPONSIBILITIES:** The main purpose of budgeting is defining the responsibilities of each functional executive so that there may be no conflict among the executives.
3. **COORDINATION:** Budgetary control helps in coordinating various activities of the firm like planning policies, directing, scheduling, processing etc so that the common objective of firm may be achieved successfully.
4. **PERFORMANCE EVALUATION:** Budget can provide the basis for comparison between actual performances with budgeted. It helps in controlling the deviation and to take corrective action.
5. **COST CONTROL:** Budget is a powerful tool for controlling the expenditures.

ADVANTAGES OF BUDGETARY CONTROL

- (i) It establishes the **objective** of the organization and enables management to conduct business in the most efficient manner
- (ii) Budget is helpful in allocating scarce **resources** in most optimal way
- (iii) Budget identifies the areas of **inefficiencies** within the organization.

- (iv) Budget is the most important tool of **controlling** because it provides a yardstick, against which the performance of organization can be evaluated.
- (v) It provides a basis for management by exception (**MBE**) by comparing actual and budgeted results.
- (vi) It ensures **effective utilization** of men, machine, material and money.

LIMITATIONS OF BUDGETARY CONTROL SYSTEM

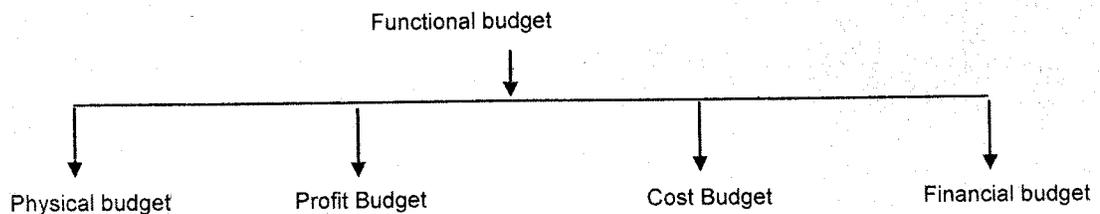
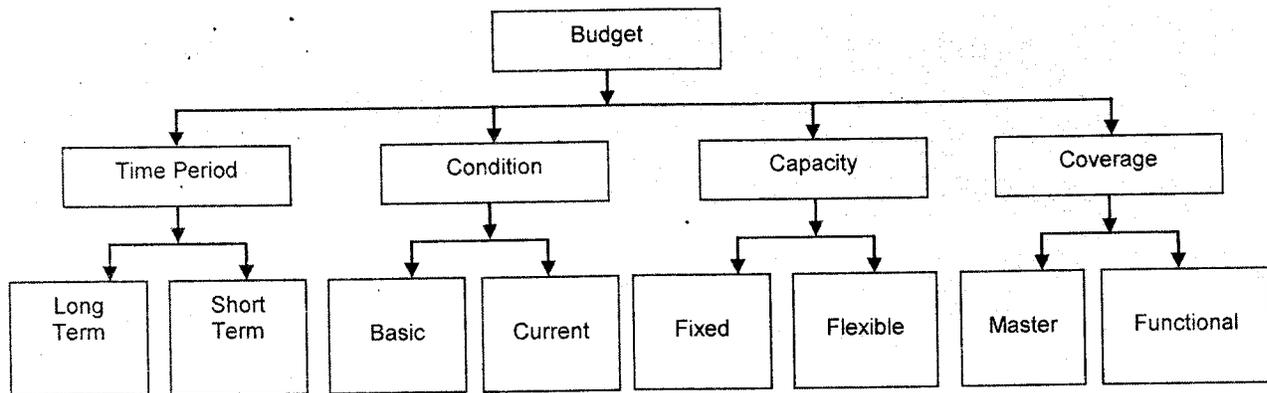
(Nov '98)

- (i) Budgets may or may not be true, as they are based on estimates.
- (ii) Budgets are considered as rigid document.
- (iii) Budgets cannot be executed automatically.
- (iv) Staff co-operation is usually not available during budgetary control exercise.
- (v) Its implementation is quite expensive.

TYPES OF BUDGET

Budgets may be classified on the following basis:

1. Time period
2. Condition
3. Capacity
4. Coverage



Difference between Fixed and Flexible budget

(May 2002)

FIXED BUDGET	FLEXIBLE BUDGET (Nov.2008)
i. According to CIMA of England, "a fixed budget, is a budget designed to remain unchanged irrespective of the level of activity actually attained".	i. It is defined as "a budget which, by recognising the difference between fixed, semi-variable and variable costs is designed to change in relation to the level of activity attained".
ii. It is also know Rigid Budget or inflexible budget	ii. It can be recasted on the basis of activity level to be achieved. Thus it is not rigid
iii. It operates for one level of activity and under one set of conditions.	iii. It consists of various budgets for different levels of activity.
iv. Variance analysis does not give useful information	iv. Variance analysis provides useful information
v. If the budgeted and actual activity levels differ significantly, then the aspects like cost ascertainment and price fixation do not give a correct picture.	v. It facilitates the ascertainment of cost, fixation of selling price and submission of quotations.
vi. Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between two activity levels.	vi. It provides a meaningful basis of comparison of the actual performance with the budgeted targets.

Difference between Functional and Master budget

FUNCTIONAL BUDGET	MASTER BUDGET (May '97)
<ul style="list-style-type: none"> ▪ Budgets which relate to the individual functions in an organisation are known as Functional Budgets. ▪ For example, purchase budget; sales budget; production budget; plant-utilisation budget and cash budget. 	<ul style="list-style-type: none"> ▪ It is a consolidated summary of the various functional budgets. ▪ It serves as the basis upon which budgeted P & L A/c and forecasted Balance Sheet are built up.

Difference between Long-term budget and Short-term budget

LONG-TERM BUDGET	SHORT-TERM BUDGET
<ul style="list-style-type: none"> ▪ The budgets which are prepared for periods longer than a year are called long-term budgets. 	<ul style="list-style-type: none"> ▪ Budgets which are prepared for periods less than a year are known as short-term budgets.

<ul style="list-style-type: none"> Such budgets are helpful in business forecasting and forward planning. Eg. Capital expenditure budget and Research and Development budget. 	<ul style="list-style-type: none"> Such types of budgets are prepared in cases where a specific action has to be immediately taken to bring any variation under control. Cash budget is an example of short-term budget.
---	--

Difference between Basic budget and Current budget

BASIC BUDGET	CURRENT BUDGET
<ul style="list-style-type: none"> A budget which remains unaltered over a long period of time is called basic budget. 	<ul style="list-style-type: none"> A budget which is established for use over a short period of time and is related to the current conditions is called current budget.

Difference between Standard costing and Budgetary control

STANDARD COSTING	BUDGETARY CONTROL
<ul style="list-style-type: none"> Standard costing is the preparation of standard cost and applying them to measure the variations from actual cost and analyzing the causes of variation with a view to maintain maximum efficiency in production 	<ul style="list-style-type: none"> Budgets are financial statements prepared and approved prior to defined period of time to attain a given objective
<ul style="list-style-type: none"> Standard costing is based on technical assessment 	<ul style="list-style-type: none"> It is based on past performance adjusted with future trend.
<ul style="list-style-type: none"> Standards are set only for production expenses 	<ul style="list-style-type: none"> Budgets are prepared for all items of income and expenditure
<ul style="list-style-type: none"> Standard costs are projection of cost accounts and deals with individual products and ascertaining and controlling their costs 	<ul style="list-style-type: none"> Budgets are projection of financial accounts and it deals with the overall efficiency of the business
<ul style="list-style-type: none"> Standard costing represents what the cost should be under the specific condition of production 	<ul style="list-style-type: none"> Budgets are anticipated costs used for forecasting of material, labour overhead, cash etc
<ul style="list-style-type: none"> Standard costing sets the target which should be maintained in actual performance. 	<ul style="list-style-type: none"> Budget setup maximum limit of expenses above which the actual expenditure should not normally exceed
<ul style="list-style-type: none"> Range of standard costing is narrow as it is mainly confined to the control of products on costs 	<ul style="list-style-type: none"> Range of budgeting is wider than that of standard costing. It covers sales, capital and financial expenses as well.