

CAINTER

Costing Theory Smart Notes

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Dear Friends,

It is often noticed that most of us ignore the theory part in Paper 3 – Cost & Management Accounting. However, every examination paper always has conceptual theory questions to verify our understanding of the subject as a whole.

Theory portion plays a key role in Paper 3. Even in the toughest of C&MA Examination papers, if nothing works, then surely theory will work. Weightage of theory portion usually remains 20-25 marks, but generally we find at least **16-20 MARKS** of theory in every examination term.

It is true that we find it difficult to manage this part of the paper during our study time as it ends up becoming too time consuming and we lack confidence to be able to reproduce in examination; as a result of which it goes skipped. However, theory part is **VERY EASY** and **SCORING**. In fact, it acts as a **TIME SAVER** to complete the paper. Also, it leaves a good impression on the examiner that the candidate is well aware of key theory concepts that often are left unanswered by most candidates.

"Costing Theory Smart Notes" is an attempt to explain all the key theory concepts in this paper in a Summarized form in JUST 16 PAGES. It contains some memory techniques to retain these concepts and be able to reproduce them in the examination. The keys/codes/memory techniques may not make sense or appear funny, but TRUST ME, the funnier it gets, the more you will be able to recall.

Care has been taken to avoid mistakes while compiling this booklet. Students may post their suggestions and feedback by writing to me at capranavdedhia@gmail.com.

I hope this booklet helps you all to quickly revise and get a good hold over Costing Theory.

All the BEST for your Career

Happy Reading!!

CA Pranav Dedhia

This booklet is not for sale



Cost A/Cing & its Objectives

"The process of A/Cing for cost which begins (Key: C²A²RS) with recording of income & expenditure or basis on which they are calculated & ends with preparation of periodical statements & reports for ascertaining & controlling costs"

Objectives (Key: CARDS)

- Cost Control: Maintaining discipline in expenditure is an imp. obj. It ensures that expenditures are in consonance with predetermined standards & variation is
- scertainment of Cost: Costs are 💠 accumulated, assigned & ascertained for each cost object.
- Cost Reduction: Achievement of real & goods manufactured or services rendered without impairing their suitability for intended use or diminution in quality.
- Assisting mgmt. in Decision Making: Assists mgmt. in planning, implementing, measuring, controlling & evaluation of various activities by providing relevant
- Determination of Selling Price & Profitability: Helps in determination of objects. Basis for price fixation & rate

Scope of Cost A/Cing

technology for production, cost

activities & cost of same product

/ service over a period of time.

Cost Control: Same as Alongside

finding out factors responsible

Cost Reports: Ultimate function

mgmt. at different levels. Cost

Maintaining cost a/cing records

materials, labour & other items

of cost as per rules prescribed by

Compliances

Statutory

Accounting: Same as

of making different products &

Cost comparisons:

Role and Functions of C&MA

Essentials of a Good Cost A/Cing System

Role:

- * Provide relevant info. to mgmt. for decision making.
- Assist management for planning, control of business activities.
- Help in allocation of cost to products & inventories for both external & internal users.

Functions:

- Collection & accumulation of cost for each element of cost.
- Cost Analysis: Involves process of ❖ Assigning costs to cost objects to
- for variance in actual costs from **Budgets & Standards** are set for beforehand which are compared are reported.
- of cost a/cing. Reports are ❖ Provision of relevant information Management Information System (MIS) provides relevant & timely
 - Function of cost & mgmt. a/cing is to gather data like time taken, analyse data, prepare reports &

(Key: I Am Ultra FIT)

- Informative and simple: Should be tailormeeting requirements of business.
- accurate & authenticated; otherwise it
- consistency in classification, treatment & information is required for benchmarking & comparability of results.
- **Elexible & adaptive**: Should be flexible enough to make necessary amendments to incorporate changes in technological,
- **ntegrated & inclusive**: Should be complete overview & clarity in results.
- **Irust on the system**: Mgmt. should have trust on system & its output. An active development of such system that reflects a strong conviction for decision making.

- Accurate and Authentic: Data should be may distort system's output.
- **Iniformity & Consistency**: Uniformity &

Installation of Cost A/Cing System – Factors

MON IS Highly Powerful Personality)

- Statutory compliances and audit: Records are to be applicable cost accounting standards to be followed.
- Information Attributes: Information generated from Costing system should possess all attributes of information i.e. complete, accurate, timeliness, relevant etc.
- ethod of maintenance of cost records: Manner in which Cost & Financial Accounts could be inter-locked into a single integral accounting system & how results of separate sets of accounts i.e. cost & financial, could be reconciled by means of control accounts.
- **bjective**: Objective of costing system, viz. whether it is being introduced for fixing prices or for insisting a system of cost control.
- **lature of Business**: Every business has its own peculiarity & accounting methods are followed.
- Information Synchronisation: While drafting a costing system, information needs of various other departments should be taken into account.
- Organisational Hierarchy: Should fulfil info. requirements of different levels of mgmt.
- * Knowing the Product: Nature of product determines type of costing system to be implemented.
- Knowing the Production Process: Cost apportionment can be consumed in a particular process.

Notes



Controllable Cost **Differential Costs Responsibility Centres Out-of-Pocket Costs Shut Down Costs Absolute Costs** It is that portion of total * Refer to cost of any product, Cost Centres are held accountable for Cost that can be controlled, typically by a * Represents change in total cost Costs which continue to be incurred even when a process or unit in its totality control. Performance is measured against pretechnology, process or method of When costs are presented in **determined standards or budgets**. Two types: Controllable costs incurred in a particular production, etc. AKA Incremental ❖ Short-run concept used in shut-down, viz. Rent a statement form, various (a) Standard Cost Centre where output is responsibility centre can be influenced by & Decremental costs. decisions relating to fixation rates depreciation measurable & input required for output can be action of executive heading that centre. ❖ Eg. If any change is proposed in of selling price in recession, Cannot be eliminated shown in absolute amount specified. make/buy with closure of plant i.e. or as a percentage of total (b) Discretionary Cost Centre whose output cannot For eg., direct costs comprising direct production, increase or decrease ❖ These costs can be avoided be measured in financial terms, thus inputlabour, direct material, direct expenses & in total cost will be known as Such costs are base costs on be avoided output ratio cannot be defined. some overheads are generally controllable incremental cost or decremental temporary Revenue Centres are accountable for by shop level mgmt. closure of plant decisions are based. Sunk Costs **Uncontrollable Cost Imputed Costs** M'18 **Opportunity Costs Capitalised Costs** centre does not have control on expenditure, (2m). activities like commission to sales person etc ❖ Notional costs which do not Historical costs Refers to value of sacrifice **Profit Centres** have both responsibility of involve any cash outlay. ❖ Play no role in decision recorded as assets and Interest on capital, payment for expenditures. Profitability is the basis for For example, expenditure incurred by tool which is not actually made, is an measurement of performance. Eg. In case of decision room is controllable by foreman in-charge eg. of imputed cost. course of action. **Investment Centres** Not only responsible for of that section but share of tool-room * Eg. Withdrawal of FD to relating to replacement profitability but also have authority to make of machine, WDV of opportunity costs. finance expansion. Loss of N '09 capital investment decisions. Performance is machine shop is not to be controlled by interest on FD is opportunity existing machine is sunk measured on basis of ROI besides profit. machine shop foreman. cost for expansion cost Limitations of Cost A/Cing **Discretionary Costs Explicit Costs Implicit Costs Engineered Costs Product Costs** Conversion Costs ❖ AKA out of pocket **Expensive**: It is expensive because analysis, Costs which are not tied Costs Costs which are associated ❖ It is the cost of transforming basic allocation and absorption of overheads require to a clear cause & effect specifically from a clear material into finished goods. relationship b/w inputs & effect Conversion Cost consists of direct relationship b/w inputs & merchandise inventory). thus, additional money. **Requirement of Reconciliation :** Results shown by payment of cash. In production scenario, manufacturing overheads. Salaries, The relationship is usually such costs are associated ❖ So, Conversion Cost = Direct Labour wages, personally observable acquisition regarding postage outlay to be incurred. telegram, printing recorded in ***** Examples: conversion of materials & Manufacturing Overhead Duplication of Work: Involves duplication of Examples include stationery, Inputs: Direct Material Cost, all other manufacturing Also, Conversion Cost = Factory Cost work as organization has to maintain two sets of Direct Labour Costs, etc. advertising, public interest on loan inputs into finished **Direct Materials Cost** Outputs : Cars, Computers, A/Cs viz. Financial A/C and Cost A/C. relations, executive AKA products for sale ❖ Inefficiency : Costing system itself does not training etc. M'14 control costs but its usage does.

Costing Theory Smart Notes (CA Inter)

Compiled by CA Pranav Dedhia

رح Cost Unit & its Typical Examples

Unit of a Product or service or time (or combination of these) in relation to which costs may be ascertained or expressed.

Number
Number
Ton / per bag
Litre, kilo, gallon, ton, etc.
Kilo watt hour (kWh)
Ton
Passenger-kilometre
Cubic feet
Barrel
1000 Bricks
Tonne/ton
Contract / job
Barrel / tonne / litre
Room / meal
Chargeable hour, job, contract
Course, Enrolled Student
Patient day
Accounts maintained
Requisitions issued / recd. Material movement, value issued
Personnel record

Identify	y the met	hods of	f costing:
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- Where all costs are directly charged to a specific job – Job Costing
- to a group of products Batch Costing
- single product Unit Costing or Single or Output Costing
- d. Where the nature of the product is complex and method can not be ascertained – Multiple Costing

Methods of Costing

Nature of Output	Method of Costing	Cost	Eg. of Industries
A Series of Processes	Process/Operation	For each Process	Sugar
Construction of Building	Contract	For each Contract	Real estate
Similar units of a Single Product, produced by Single Process	Unit or Output or Single Costing	For the entire activity, but averaged for the output	Cold Drinks
Rendering of Services	Operating Costing	For all services	Hospitals
Customer Specifications: Single Unit	Job Costing	For each order/assignment	Advertising
Multi-varieties of activities/processes	Multiple Costing	Combination of any method	Car Assembly

ı	Industry	Method of Costing	Cost Unit
I	Hotel	Operation Costing	Room day/per Bed
	Toy Making	Batch Costing	Units/Batch
	Steel	Process Costing	Per Tonne/Per MT
	Ship Building	Contract Costing	Project/Unit
1	Road Transport	Operation Costing	Passenger km or tonne km
I	Steel	Process Costing / Single/Unit Costing	Tonne / Metric Ton (MT)/ kg/ bar
I	Bicycles	Multiple Costing	Number / per piece
I	Bridge construction	Contract Costing	Project / Unit

Users of Cost and Management Accounting

Internal Users

- Managers use information to :
- know the cost of cost object & cost centre
- price for product or service
- Measure performance of resp. centres
- know product & customer-wise profitability evaluate strategic options, make decisions
- ❖ Operational Level staff like supervisors, foremen, team leaders require information to know
- Obj. & performance goals for them
- & process
- Performance parameters against which their performance is measured and evaluated
- to know divisional (responsibility centre) profitability
- * Employees are concerned with info. related with time, attendance, incentives for work, performance standards

External Users (Key: RASCAL)

- * Regulatory Authorities are concerned with cost accounting data & info. for tariff fixation etc.
- * Shareholders are concerned with info. that effect their investment in entity. Mgmt. communicate shareholders through periodic communique, annual reports
- Product & service specifications like volume, quality 🔗 Creditors and Lenders are concerned with data & info. which affects an entity's ability to serve lenders or creditors
 - * Auditors while conducting audit of FS or for some other special audits like cost audit etc. requires info. related with costing reports reviewed by mgmt.



Concept Achievement of real & permanent reduction in unit cost of products manufactured Savings Performance Applicability Applicability Dynamism Emphasis Permanent Dynamism Emphasis Standards Cost Reduction Vs Cost Control Cost and Profit Cost and Profit Cost and Profit Cost and Profit Cost Control Shows profit or loss of the organization either segment wise or as a whole Contracts, etc Control Shareholders, creditors, financial analysts and government and its agencies, etc V It classifies records, present and interprets transactions in monetary terms Limited applicability to those items of cost for which standards can be set Time Period Time Period Continuous process of critical examination Control is achieved through compliance with standards by themselves are not of Data Cost Control Cost Control involves a comparison of actual with the standards or budgets, to regulate the actual costs Cost Control is Shows profit or loss of the organization costs Contracts, etc Sharloders, creditors, financial analysts and government and its agencies, etc V It classifies records, present and interprets transactions in monetary terms Time Period Time Period Continuous process of critical examination Control is achieved through compliance with standards or budgets, to regulate the actual costs Control is achieved through compliance with standards or budgets, to regulate the actual costs Control is achieved through compliance with standards or budgets, to regulate the actual costs Control is achieved through compliance of standards		M'11				
Savings Savings Applicability Applicability Universally applicability	Key : Concept SPADES QC	Cost Reduction	vs Cost Control	-	Financial Accounting	vs Cost Accounting
Performance	Concept		the standards or budgets, to regulate the actual			object i.e. product, process, job,
Applicability Does not depend upon shadards, though target amounts may be set Dynamism Emphasis Standards Standards Standards Corrective / Providuct's Utility Quality and characteristics are retained Corrective / Preventive Corrective / Preventive Corrective / Preventive Cost reduction is a corrective measure Corrective / Preventive Cost reduction is a corrective measure Corrective / Preventive Cost reduction is a corrective measure Cost eduction is a corrective measure Cost Accounting Vs Management Accounting Vs Management Accounting Vi to follow any specific rules and regulations Cost find in the product is influenced by their PV ratio. Acrea Vi to follow scertain principles and procedures for recording osts of different products Vi to follow scertain principles and procedure for recording osts of different products Vi to follow scertain principles and procedure for regulations Vi to follow scertain principles and procedure for regulations Vi to follow any specific rules and regulation to mgmt. for planning and co-ordination Vi to follow any specific rules and regu	_ ~	■ Not concerned with maintenance of	 ↑ There could be temporary savings in cost ↑ The process involves setting up a target, investing variances and taking remedial measures to 	_	analysts and government an agencies, etc	d its management, some time regulatory authorities
Emphasis Emphasis Emphasis Emphasis Standards	<u>Applicability</u>	Does not depend upon standards, though target	♣ Limited applicability to those items of cost for	_	interprets transactions in mo terms	netary and interprets it in a significant manner
Emphasis — Emphasis here is partly on present costs and largely on future costs Standards Yenduct's Utility, Quality and Characteristics are retained Corrective/ Preventive Preventive Regulations Quiles and Regulations Quies and Regulations Area Area Pevelopment Pevelopment Pevelopment Pevelopment Pevelopment Pevelopment Pevelopment Pevelopment Percording of Development Percording of Development Percording of Development Pevelopment Peve	Dynamism	·	Less dynamic than Cost Reduction	Inne Period	* rs riepaieu usually for a year	
Quality Product's Utility, Quality and Characteristics are retained Corrective / Preventive Corrective / Preventive Corrective / Preventive Cost reduction is a corrective measure Cost control is a preventive measure Marginal Costing Vs Management Accounting Vs Only Variable Costs are considered for product costing inventory valuation. Vs Management Accounting Vs Only Variable Costs ar	_ '	♠ Emphasis here is partly on present costs and largely on future costs	♠ Emphasis on present and past behaviour of costs			
Corrective / Preventive Key: ROAD (pe) No Divider Rules and Regulations Objective Area Preventive To Cost Accounting Providing a service Area Providing a service It nolly deals with cost ascertainment Providing a service It nolly deals with cost ascertainment Providing a service It nolly deals with cost ascertainment Provider in scope as it includes financial accounting, budgeting, taxation, planning, etc Development Nature Recording of Vost Accounting Vs Management Accounting Vs It does not follow any specific rules and regulations Vs It does not follow any specific rules and regulations Vs Provides information to mgmt. for planning and co-ordination Vs Cost data presented highlight total contribution of each product. Vs Difference in magnitude of opening & closing stock does not affect unit cost of production. Vs Develops in accordance with the need of modern business Vs Records quantitative aspects only Recording of Vs Uses both past and present figures Post Accounting Vs Management Accounting Vs Management Accounting Vs Only Variable Costs are considered for product costing & inventory valuation Vs Pixed costs are considered for product costing & inventory valuation. Vs Pixed costs are considered for product costing & inventory valuation. Vs Pixed costs are considered for product costing & inventory valuation. Vs Pixed costs are considered for product costing & inventory valuation. Vs Pixed costs are considered for product costing & inventory valuation. Vs Pixed costs are considered for product costing & inventory valuation. Vs Both Fixed & variable costs. Vs Both Fixed cost and considered for product costing & loster product on costing & inventory valuation. Vs Both Fixed cost and costing costs are considered for product ocsts. Provides information to mgmt. fo	<u>S</u> tandards		standards. Standards by themselves are not	Data		
Key: ROAD (pe) No Divider Cost Accounting Vs Management Accounting	<u>Q</u> uality		Quality Maintenance is not a guarantee			& decision making
Rules and Regulations Objective Area It records the cost of producing a product and providing a service Area Development Nature Records quantitative aspects only Recording of Vision Accounting Vis	_	♠ Cost reduction is a corrective measure	♠ Cost Control is a preventive measure	N	Marginal Costing vs	Absorption Costing
Regulations It follows certain principles and procedures for recording costs of different products Variable Variab			vs Management Accounting			
Development Development Development Net records the cost of producing a product and providing a service It only deals with cost ascertainment Development Development Development Nature Net records the cost of producing a product and providing a service Development Development Development Development Nature Net records the cost of producting a product and providing a service Development Development Development Development Nature Nature Net cost data presented highlight total contribution of each product. Difference in magnitude of opening & closing stock affects unit cost of production. Development is related to industrial revolution Development Nature Nature Nature Net cost data presented highlight total contribution of each product. Difference in magnitude of opening & closing stock affects unit cost of production. Nature Nature Nature Nature Not cost data are presented in conventional pattern. Net contribution of each product. Not cost data are presented in conventional pattern. Net contribution of each product. Difference in magnitude of opening & closing stock affects unit cost of production. Nature Not cost data are presented in conventional pattern. Net contribution of each product. Difference in magnitude of opening & closing stock affects unit cost of production. In case of marginal costing, cost per unit remains same, irrespective of production as it is valued at variable cost. Nature Nature Nature Not cost data are presented in conventional pattern. Net contribution of each product. Not cost data are presented in conventional fixed cost along with their variable costs. Difference in magnitude of opening & closing stock affects unit cost of production. In case of marginal costing, cost per unit remains same, irrespective of production increases as it is fixed cost which reduces, whereas, variable cost remains the same per unit.				Profitability o	f different products is judged by pro pro	duct bears a reasonable share of fixed cost & fitability of a product is influenced by
* It only deals with cost ascertainment * Wider in scope as it includes financial accounting, budgeting, taxation, planning, etc * Development * Development is related to industrial revolution * Development is related to industrial revolution * Records quantitative aspects only * Records quantitative aspects only * Uses both past and present figures * Wider in scope as it includes financial accounting, budgeting, taxation, planning, etc * Difference in magnitude of opening & closing stock does not affect unit cost of production. * Development is related to industrial revolution * Develops in accordance with the need of modern business * Records quantitative aspects only * Records quantitative aspects only * Uses both past and present figures * Focused on projection of figures for future * Difference in magnitude of opening & closing stock does not affect unit cost of production. * In case of marginal costing, cost per unit reduces, as production increases as it is fixed cost which reduces, whereas, variable cost remains the same per unit.	<u>O</u> bjective				presented highlight total * Cos	t data are presented in conventional pattern. Net
Development Development is related to industrial revolution Nature Recording of Development is related to industrial revolution Recording of Develops in accordance with the need of modern business Records quantitative aspects only Records poduction. Develops in accordance with the need of modern business Records poduction. Poevelops in accordance with the need of modern business Records poduction. Records production due to impact of related fixed cost. In case of marginal costing, cost per unit reduces, as production increases as it is fixed cost which reduces, whereas, variable cost remains the same per unit.	<u>A</u> rea	t only deals with cost ascertainment	· · · · · · · · · · · · · · · · · · ·		fixe	d cost along with their variable costs.
Nature Records quantitative aspects only Records per unit reduces, as remains same, irrespective of production as it is valued at variable cost. * Records quantitative aspects only * Records both quantitative and qualitative aspects * In case of marginal costing, cost per unit reduces, as remains same, irrespective of production as it is valued at variable cost. * Uses both past and present figures * Focused on projection of figures for future	<u>D</u> evelopment	Development is related to industrial revolution		stock does no	at affect unit cost of production. affect fixe	ects unit cost of production due to impact of related d cost.
Recording of Subset both past and present figures Subset Pocused on projection of figures for future	<u>N</u> ature	* Records quantitative aspects only		remains same	e, irrespective of production as it pro	duction increases as it is fixed cost which reduces,
	~	Uses both past and present figures	Focused on projection of figures for future	is valued at va	rriable cost. Who	ereas, variable cost remains the same per unit.



Importance of Proper Recording & Material Control

Objectives of System of Material control

ABC Analysis – System of Inventory Control

Advantages – ABC Analysis

(Kev: PQRS Wastage)

- Price of final product: Material constitutes a significant part of any product & cost of final product is directly related with cost of materials used to produce it.
- Quality of final product: Quality of output depends on quality of inputs.
- * Regular information about Resources: Regular & Updated info. on availability & utilisation of materials are necessary for timely & informed decision making.
- **Cost of Stock holding & Stock-out**: An entity has to incur stock holding costs in form of interest and/or opportunity cost for fund used, stock handling losses like evaporation, obsolescence etc.
- * Wastage and other losses: Based on nature of material & process, these are classified as normal & abnormal for efficient utilisation & control.

(Key: ROMIO)

- * Reduction in Wastages: Avoidance of unnecessary losses & wastages that may arise from deterioration in quality due to defective or long storage.
- Optimisation of Material Cost: Seeing to it that all materials & stores are acquired at lowest possible price considering quality that is required & considering other relevant factors like reliability in respect of delivery.
- ❖ Minimising interruption in production process: Ensuring that production does not suffer from interruption for want of materials & stores.
- * Adequate Information: Maintenance of proper records to ensure that reliable info. is available for all items of materials.
- Order Completion in time: Proper material management is very necessary for fulfilling orders.

- ❖ A system of inventory control which exercises discriminating control over different items of stores classified on basis of investment involved.
- ❖ Usually, items are divided into 3 categories acc. to their importance, their value & frequency of replacement during a period.

Category	% of items	% of inventory
А	10%	70%
В	20%	20%
С	70%	10%

(Key: [ABC can be learnt easily by an] Attentive Child through Continuous and Systematic Work)

- Less Attention required : Management time is saved since attention need be paid only to some items rather than all the items.
- Lower Cost : Cost of placing orders, receiving goods & maintaining stocks is minimised specially if system is coupled with determination of proper economic order quantities.
- **Continuity in production**: It ensures that **minimum investment** will be made in stocks of materials without there being any danger of interruption of production due to materials or stores.
- Systematic Working: Much of the work connected with purchases can be systematized on a routine basis to be handled by subordinate staff.

Bill of Material Material Requisition Note

- ❖ Doc. prepared by engineering or planning department
- complete schedule component parts & raw materials required for a particular job or work order
- It serves the purpose of material requisition as it shows schedule of complete materials required for a particular job i.e. it can replace material requisition
- ❖ It can be **used for** purpose of quotations
- ❖ It helps in keeping a quantitative control materials drawn through material requisition

- It is prepared by production or other consuming department
- ❖ A **document** authorizing Storekeeper to issue materials to consuming dept
- ❖ It cannot replace a bill of material
- It is useful in arriving historical cost only
- It shows material actually drawn from stores

Stock Control Cards

- ❖ A quantitative record of inventory maintained by stores department for every item of material.
- Recording includes receipt, issue, return, in hand and orders given.

Advantages:

- * Records are kept in a more **compact manner** so that **easy reference** is facilitated.
- * Records can be kept in a **clean way** by men solely engaged in clerical work so that a division of workers b/w record keeping & actual material handling is possible.
- ❖ As records are at one place, it is possible to get an overall idea of **stock position** without necessity of going round stores.

Disadvantages:

- ❖ On the spot comparison of physical stock of an item with its book balance is not facilitated
- ❖ Physical identification of materials in stock may not be as easy as in case of bin cards, as Stock Control Cards are housed in cabinets or trays.

❖ JIT is a **system of inventory management** with an

- approach to have zero inventory in stores. As per JIT, material should only be purchased when it is **actually required** for production.
- ❖ JIT is based on two principles:
- Produce goods only when it is required and
- The products should be delivered to customers only when they want.
- ❖ AKA 'Demand pull' or 'Pull through' system of production.
- ❖ In this system, **production** process actually starts after order for products is received.
- **Based on demand**, production process starts & requirement for raw materials is sent to purchase department for purchase.
- This can be understood with help of diagram alongside:

Demand for final product



Production starts to process demand for product



Material Requirement is sent to Purchase department



Order for raw materials sent to supplier







Just in Time (JIT) Inventory Management

Material Cost

	N'17 (4m)	ヘジン
*	I <u>n</u> dividual/ Summarized	*
*	<u>T</u> ransfers	*
**	<u>E</u> ntries	*

(Who)

Maintains

Each transaction individually posted.

Inter-department transfers do not **appear** in Bin Card.

Bin Cards

- Entries are made when transaction takes place.
- ❖ It is maintained by **storekeeper** in the store.
- Contains ❖ It contains **only** quantitative details of material [Key: ITEM Contained recd, issued & Bin Cards and returned to Stores Ledger) stores.

Stores Ledger v/s

Transactions may

then posted.

recorded

transaction.

It is maintained

department.

It is

It

Material transfer

be summarized &

from one job to

another job are

costing purposes.

posted after the

in Cost A/Cing

information both

in quantity &

for

always

contains

Advantages:

Fewer mistakes as entries are made as & when goods are received/issued by person actually handling materials.

Advantages & Disadvantages of Bin Cards

- **Control over stock** can be more effective. as comparison of quantity in hand with book balance is possible anytime.
- ❖ Identification of different items of materials is facilitated by reference to Bin Card, bin or storage vessel.

Disadvantages:

- **Store records are dispersed** over a wide
- . Cards smear with dirt & grease due to material handling.
- ❖ People handling materials are not ordinarily suitable for clerical work involved in writing Bin Cards.

Classification of Inventories

On the Basis of Frequency of Usage

Fast Moving, Slow Moving & Non Moving (FSN) Inventory:

Classification of items into 3 categories depends on nature & managerial discretion.

A threshold range on the basis of inventory turnover is decided & classified accordingly

- Fast Moving: These items are placed nearer to store issue point & stock is reviewed frequently for making of fresh order.
- **Slow Moving**: These items are stored little far & stock is reviewed periodically for any obsolescence which may be then shifted to Non-moving category.
- Non Moving: These items are kept for disposal. These items are reported to mgmt. & an appropriate provision for loss may be created.

Vital, Essential & Desirable (VED) Inventory:

On the Basis of Criticality

Under this system, inventories are classified on the basis of its criticality for production function & final product. Generally, this classification is done for spare parts which are used for production.

- Vital: Items are classified as vital when its unavailability production process & cause a production
- **Essential**: Items under this category are vital. The essential not sub unavailability cause may standardisation & loss of efficiency in production process.
- **Desirable**: Items under this category are optional in nature, unavailability does not cause any production or efficiency loss.

Method of pricing issues of materials, in order of purchase. Materials are issued in order of arrival or items longest in stock are issued first. Each issue recovers purchase price which does not reflect market price.

FIFO Method

- FIFO is considered suitable in falling price as material cost charged to production will be high but replacement cost of materials will be low.
- In case of rising prices, if FIFO is adopted, charge to production will be low compared replacement cost

"Perpetual inventory system comprises Bin Card & Stores Ledger, but efficacy of system depends on continuous stock taking."

- * Perpetual inventory represents system of records maintained by stores dept. It comprises: Bin Cards & Stores Ledger.
- Bin Cards maintain a quantitative record of receipts, issues & closing balances of each item of stores

value.

- * Stores Ledger is maintained to record all receipt & issue transactions for materials. It is filled up with help of goods received note & material requisitions.
- Perpetual Inventory system's efficacy depends on system of continuous stock taking. Continuous stock taking means physical checking of records i.e. Bin cards & stores ledger with actual physical stock.

Main advantages of perpetual inventory are as follows: (Key: PQRS + Discrepancies)

- Physical stocks can be counted & book balances adjusted when required w/o waiting for entire stock-taking.
- Quick compilation of P&L A/c due to prompt availability of stock figures.
- (3) Systematic Review of perpetual inventory reveals existence of surplus, dormant, obsolete & slow-moving materials for further remedial measures.
- (4) Fixation of various Stock Levels & checking of actual balances in hand with these levels assist Store keeper in maintaining stocks within limits & in initiating purchase requisitions for correct quantity at proper time.
- (5) Discrepancies are easily located & corrective action can be promptly taken.

Continuous Stock Verification

Physical Checking of inventory is an essential feature of every sound system of material control. The system of continuous stock-taking consists of physical verification of items of inventory. Stock verification may be done without | 💠 In case of falling prices, use of FIFO gives better prior notice by internal audit dept. but are independent of store & production staff. The element of surprise is essential for effective control of system.

Advantages:

- **Closure** of normal functioning is **not necessary**.
- Stock discrepancies are likely to be brought to notice & corrected much earlier than under annual stock-taking system.
- System generally has a sobering influence on stores staff because of surprise element.
- Movement of stores items can be watched more closely by stores auditor.
- **Final Accounts can be ready quickly**. Interim accounts are possible quite conveniently.

Advantages of FIFO Method

- Simple to understand & easy to operate
- ❖ Material cost charged to production represents actual cost with which cost of production should have been charged
- Closing stock of material will be represented very closely at current market price.

Disadvantages of FIFO Method

- ❖ If **prices fluctuate** frequently, FIFO may lead to clerical error.
- ❖ Since each issue of material is related to a specific purchase price, **costs** charged to same job are likely to show a variation between periods
- ❖ In case of **rising prices**, real profits of concern being low, may not be adequate to meet materials purchase demand at market price.



Material Cost

	$lack \psi$						
	Waste	Scrap	Spoilage		Defectives		Obsolescence
Concept	❖ The portion of raw material which is lost during storage or production and discarded. The waste may or may not have any value.	 Materials which are discarded & disposed-off without further treatment. Generally, scrap has either no value or insignificant value. Some time it may be reintroduced into the process as raw material. 	It is the term used for materials damaged in manufacturing open cannot be rectified econom taken out of process to be disp manner without further process	ng operations, and they which do not meet quality stds. The sub-standard materials, bad supple be disposed of in some planning, etc.		ey arise due to pervision, bad per quality std. wn as reworks. t up to quality may either be	Obsolescence is defined as "the loss in the intrinsic value of an asset due to its supersession". Materials may become obsolete under any of the following circumstances: (i) Where it is a spare part or component of m/c used in mfg. & that m/c becomes obsolete; (ii) where it is used in mfg. of product which has become obsolete; (iii) where material is replaced by another mat. due to improved quality or fall in price
Treatment- Normal Treatment- Abnormal	 Cost of normal waste is absorbed by good production units. Cost of abnormal loss is trfd. to Costing P&L A/c. 	 The cost of scrap is borne by good units and income arising on account of realisable value is deducted from cost. Scrap account should be charged with full cost. Credit is given to job or process concerned. Profit or loss in scrap account, on realisation, will be trfd. to Costing P&L A/c. 	either by charging it to product production overhead. Salvage credited to production production overhead account. The cost of abnormal spoilage Costing P&L A/c. When spoiled rigid specification, cost of sabsorbed by good production			tives are not d as loss after value of such	 In all 3 cases, value of obsolete material held in stock is total loss & immediate steps should be taken to dispose it off at best available price. The loss arising out of obsolete materials on abnormal loss does not form part of cost of mfg.
Was	te vs Scı	rap (N'15 Scrap	vs Defectives	Reclamati	on of loss from defective units	(5	LIFO Method
with raw material output output or inputs to production process. Waste of Scraps are generally materials may be visible or invisible. Generally waste Scraps are termed output Scraps are not in but cannot be elim due to nature of more process itself. Generally scraps are used or rectified.		output Scraps are not intended but cannot be eliminated due to nature of material or process itself. Generally scraps are not used or rectified. Scraps have insignificant	with the output but it can be in the input as well. Defectives also are not intended but can be eliminated through proper control. Defectives can be used after rectification.	take steps to reclain (i) All defective purpose; (ii) These shou (iii) Goods & so taken into so (iv) Parts which should be	that have been spoiled, it is necessary to aim as much of loss as possible. For this: e units should be sent to place fixed for ld be dismantled; erviceable parts should be separated & tock; can be made serviceable by further work separated & sent to workshop for the taken into stock after defects have been	assumptio the first to The prices until it Is e Cost of M Cost of Clo During infl that the cost	nethod of pricing the issues of materials on the on that the items of the last batch (lot) purchased are be issued. Is of the last batch (lot) are used for pricing the issue, exhausted, and so on. Islaterials Issued represents the cost of latest purchases. Islationary period, the use of LIFO would help to ensure cost of production determined on the above basis is ately the current one.

recoverable value.

one.

Parts which cannot be made serviceable should be

collected in one place for being melted or sold.

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Employee Cost & Direct Expenses

Requisites of a Good Time Keeping System

Normal Idle Time

Abnormal Idle Time

1. System should **not allow proxy** for another employee.

- 2. A provision of recording of time of piece employees so that regular attendance and discipline may be maintained.
- 3. Time of arrival & time of departure of employees should be recorded for wages calculation.
- 4. Method of recording of time should be mechanical so that disputes regarding time may not arise between employees & time-keeper.
- 5. Late-comers should record late arrivals. Any relaxation by timekeeper in this regard will encourage indiscipline.
- 6. System should be simple, smooth and quick. Unnecessary queuing for marking attendance should be avoided.
- 7. System should be reviewed & maintained periodically to prevent any error.

Causes Treatment

- Time lost between * Treated as part of cost of factory gate & place of
 - production. In case of direct workers, allowance for normal idle time is considered setting of std hours or std. rate.
- ❖ The interval between ❖ In case of indirect workers. one job & another normal idle time is considered for computation of overhead rate.
- Setup time for machine
- Normal rest time, break for lunch

Causes

- ❖ Idle time may also arise due to abnormal factors like lack of coordination, Power failure, Breakdown of machines, Non-availability of supervision, fire, flood etc.
- Causes for abnormal idle time should be further analysed into controllable & uncontrollable.
- Controllable abnormal idle time refers to that time which could have been put to productive use had the mgmt. been more alert & efficient.
- Uncontrollable abnormal idle time refers to time lost due to abnormal causes, over which management does not have any control e.g., breakdown of machines, flood etc.

Treatment

- Abnormal idle time cost is not included as a part of production cost & is shown as a separate item in Costing P&L A/c.
- Cost of abnormal idle time should be further categorised into controllable & uncontrollable. For each category, break-up of cost due to various factors should be separately shown. This would help mgmt. in fixing responsibility for controlling idle time.
- Management should aim at eliminating controllable idle time & on a long-term basis reducing even normal idle time. This would require a detailed analysis of causes leading to such idle time.

Overtime Premium

Causes

- urgency of work.
- to some unexpected development.
- ❖ OT work may be necessary to make up a shortfall in production due to some fault of management.
- ❖ OT may be resorted to, to secure out-turn in excess of normal output to take advantage of expanding market or rising demand

Treatment

- Customer may agree to bear entire charge of OT because
 If OT is resorted to at desire of customer, premium may be charged to job directly.
- OT may be called for to make up any shortfall in production due
 If OT is required to cope with general production programmes or for meeting urgent orders, premium should be treated as overhead cost of particular dept. / cost centre which works OT.
 - ❖ If OT is worked in a dept. due to fault of another dept., premium should be charged to latter department.
 - ❖ OT worked on account of abnormal conditions such as flood. earthquake etc., should be charged to Costing P&L A/c.

Halsey Premium Plan

Advantages

- ❖ Time rate is guaranteed while there is opportunity for increasing earnings by increasing production.
- ❖ The system is **equitable** in as much as **employer gets** a direct return for his efforts in improving production methods and providing better equipment.

Disadvantages

- Incentive is not so strong as with piece rate system. The harder the worker works, lesser he gets per piece.
- The sharing principle may not be liked by employees.

Time Rate System

- 1. Simple to understand and to calculate wages.
- 2. Reduces temptation on the part of workers to increase the output at the cost of quality.
- inefficient employee due to quality of production.
- 4. Stability in wages

Demerits

- 1. No monetary incentive to raise the level of production.
- No distinction between the slow and the efficient worker.
- 3. The tendency is for the fall in output; this raises cost per unit.
- 3. Unity in employee, no distinction between efficient and 4. A firm cannot be sure of employee costs per unit under this method and, hence, may suffer a loss on quotations if already submitted.

Rowan Premium Plan

Advantages

- Claimed to be a fool-proof system in as much as a worker can never double his earnings even if there is bad rate setting.
- ❖ Admirably suitable for **encouraging moderately efficient** workers as it provides a better return for moderate efficiency than under Halsey Plan.
- Sharing principle appeals to employer as being equitable.

Disadvantages

- System is a bit complicated.
- Incentive is weak at a high production level where time saved is more than 50% of time allowed.
- Sharing Principle generally welcomed by employees.



Employee Cost & Direct Expenses

Factors increasing Employee productivity **Employee Turnover**

- Employing only workers with right type of skill.
- Right Man for the right job
- Train young & old workers by providing them right types of opportunities
- Taking appropriate measures to avoid situation of excess or shortage of employees
- Carrying out work study for fixation of wages & for simplification & standardisation of work

or labour turnover in an organisation is the rate of change in composition force employee during a specified measured

index

Methods of Calculating Employee Turnover

C N'14 (4m) Replacement Method:

Number of employees Replaced during the period Average number of employees on roll

Separation Method:

Number of employees Separated during the period Average number of employees on roll

Flux Method:

Number of employees Separated + Replaced Average number of employees on roll

Causes of Employee (Labour) Turnover

Personal Causes:

- Change of jobs for betterment
- Premature retirement due to ill health or old
- Domestic problems and family responsibilities
- Discontent over the jobs working environment

Unavoidable Causes:

- Seasonal nature of business
- Shortage of raw material, power, slack market for the product etc.
- Change in the plant location
- ❖ Disability, making a worker unfit for work
- Disciplinary measures
- ❖ Marriage (generally in the case of women)

Avoidable Causes:

- Dissatisfaction job, remuneration, hours of work, working conditions
- Strained relationship with mgmt, supervisors, fellow workers
- Lack of training facilities & recreational medical facilities
- Low wages and allowances.

M'10,M'12 M'15 (4m)

Cost Accounting System

Integrated Accounting System & its advantages

System of A/cing where both costing & financial transactions are recorded in same set of books.

Advantages

- No need for Reconciliation The question of reconciling costing profit & financial profit does not arise, as there is only one figure of profit.
- Less efforts Due to use of one set of books, there is significant saving in efforts made.
- Less time consuming No delay is caused in obtaining information provided in books of original entry.
- Economical Process It is economical also as it is based on the concept of 'Centralization of Accounting Function'.

Motivational Factors for Adopting a Reconciliation Process

- ❖ When cost & financial accounts are kept separately, it is imperative that these should be reconciled, otherwise cost accounts would not be reliable.
- Reco. of two set of accounts can be made, if both sets contain sufficient detail to enable causes of differences to be located.
- ❖ In financial accounts, expenses should be analysed in same way as in cost accounts.

Motivation for reconciliation is:

- ❖ To ensure **reliability** of cost data.
- To ensure ascertainment of correct product cost.
- ❖ To ensure correct decision making by the management based on Cost & Financial data.

(2m),

Items included in Financial Accounts only

Purely Financial Expenses

- ❖ Interest on loans or bank mortgages
- Expenses relating to issue & trf. of share & deb. viz. stamp duty expenses; discount on share & debentures etc.
- Losses on sales of fixed assets & investments
- Fines and penalties
- ❖ Damages payable under law
- Legal charges
- Goodwill, Preliminary Expenses written off
- Income tax, Donations, Subscriptions
- Expenses of Company's share transfer office

Purely Financial Income

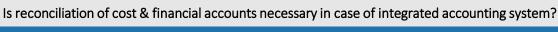
- Interest recd. bank deposits, loans & invst.
- Dividends recd
- Profits on sale of FA & invst.
- Transfer fee
- Rent receivable

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Cost Accounts only

Notional Expenses

- Charges in lieu of rent where premises are owned
- ❖ Interest on cap (though not incurred)
- Salary for proprietor (though not incurred)
- Notional dep. on fully dep asset (BV = Nil)
- Items whose treatment is diff in two sets of account
- Varying basis of valuation



- ❖ In integrated accounting system, cost and financial accounts are kept in the same set of books.
- Such a system will have to afford full information required for Costing as well as for Financial Accounts.
- In other words, information and data should be recorded such a way so as to enable firm to ascertain cost of each product, job, process, operation or any other identifiable activity.
- ❖ It also ensures ascertainment of marginal cost, variances, abnormal losses & gains.
- In fact, all information that management requires from system of Costing for doing its work properly is made available.
- Integrated accounts give full information in a manner that P&L A/c & Balance sheet can be prepared according to requirements of law & mgmt, maintains full control over liabilities & assets of business.
- Since, only one set of books are kept for both cost accounting and financial accounting purpose so there is no necessity of reconciliation of cost and financial accounts

Overheads N'10'14'15 Treatment of Over and Under Absorption in Cost Accounting Cost Allocation v/s **Cost Absorption** Over/Under Meaning ❖ Cost allocation is the allotment of Amount of under-absorbed or over-absorbed overheads is trfd. (credited or debited) to * Cost absorption is the process of absorbing all Transfer to Absorption Costing P&L Account when whole item of cost to a cost centre or a indirect costs or overhead costs allocated or Costing amount is minor and insignificant or Undercost unit apportioned over particular cost centre or P&LA/c absorption has it is caused by abnormal circumstances i.e., the factors beyond control of mgmt production department by the units produced. Allocation of overheads occurs before effect Sequence Absorption of overheads is the last step in the entire Amount is carried over to subsequent years when over absorption in current period will understating absorption in the process of process of distribution of overheads and result in an be neutralized by under-absorption in the next. This method may be followed when: while distribution of overheads ultimate charge to products, jobs or orders etc cost Carry industry is seasonal with fluctuation in demand & production over-Forward ❖ normal business cycle extends >1 year Cost Allocation v/s **Cost Apportionment** absorption has to next year project is new & output is initially low but there will be more output in next year effect which will absorb more overheads. ❖ Allocation is a **direct process** of charging ❖ Apportionment is an **indirect process** because Meaning overstating expenses to different cost centres there is a need for the identification of the cost. Over or When Amount is significant or large, then cost of product needs to be adjusted by using appropriate portion of an expense to be borne by under-Supplemsupplementary rates. It is calculated by dividing amount of over absorption or underabsorption of the different departments benefited. entary Rate absorption by equivalent units usually. Under this method, balance of under & over ❖ Deals with whole items of cost, which are overheads may Deals with Deals with proportions of an item of cost. Method absorbed overheads may be charged to cost of W.I.P., finished stock & cost of sales be disposed of identifiable with any 1 department. proportionately with help of supplementary rate of overhead. in foll. ways: ❖ Possible when nature of expenses is such ❖ Done in case of those overhead items which can't Nature of Expense that it can be easily identified with a be allocated to a particular department. As Prime Cost of primary packing necessary for protecting product or for convenient handling particular cost centre M'11 Cost Prime Cost. Example Salary paid to foreman of particular Salary paid to works manager of factory cannot be (4m), > production dept. can be directly identified charged wholly to particular production dept. but As Distrib-Cost of packing to facilitate transportation of product from factory to customer will have to be charged to all departments of with that dept. & it will be directly 1. ution Cost **Distribution Cost.** charged to that department. factory on equitable basis. Packing Basis for No basis is required for allocation. Apportionment is made on some basis which may **Expenses** On Specific If cost of special packing is at request of customer - Specific Work Order or Job. Distribution be area, assets value, number of workers etc. Job ❖ It is that part of capacity of a plant, machine or equipment which cannot be effectively utilised in production. D N'15 As Selling Cost of fancy packing necessary to attract customers is an advertising expenditure. 🔯 It may arise due to lack of product demand, no availability of raw-material, shortage of skilled labour, shortage Overhead Hence - selling overhead. (4m), of power, etc. Costs associated with idle capacity are mostly fixed in nature. These costs remain unabsorbed or unrecovered 3. These are additional payments/facilities provided to workers apart from their salary and allowances due to under-utilisation of plant and service capacity. Idle like house rent, dearness allowances, etc. These are given in form of OT, extra shift duty allowance, **Treatment** Capa holiday pay, pension facilities, etc. If idle capacity cost is due to unavoidable reasons, a supplementary overhead rate may be used to recover idle city Such indirect benefits tend to improve morale, loyalty & stability towards organization. capacity cost. In this case, costs are charged to production capacity utilised. Fringe Costs Expenditure on fringe benefits in respect of factory workers should be apportioned among all If idle capacity cost is due to avoidable reasons such as faulty planning, etc. cost should be charged to Costing Benefits production & service depts. on basis of no. of workers in each dept. Profit & Loss Account. M'11 ❖ If amount of fringe benefit is considerably large, it'll be recovered as direct charge by a ❖ If idle capacity cost is due to trade depression, etc., - being abnormal in nature, cost should also be charged to supplementary wage rate otherwise collected as part of production overheads. Costing Profit & Loss Account

Activity Based Costing, Activity Based Budgeting and Activity Based Cost Management

Non Value Added Activities ABC Value Added Activities Categories in ABC ABB ❖ Activity Based Budgeting An accounting methodology ❖ An activity where there is an **opportunity** Unit Level Activities : ❖ An activity that customers perceive as Assigns costs to activities adding usefulness to product or service they of cost reduction without reducing the - Use of indirect materials, Inspection / Testing, Indirect Consumables is a process of planning & rather than products & controlling expected purchase. product's service potential to customer. Product Level Activities : services. Enables resources & activities for organisation ❖ An activity that, if eliminated, will ❖ Activity that, **if eliminated**, will **NOT** to derive a cost-effective * Facility Level Activities: overhead costs to be reduce actual utility which customers obtain reduce actual or perceived value that assigned **budget** that meets customers obtain by using product or Maintenance of Buildings, Plant Security accurately from using product or service. to products & services that forecasted workload & **Enhance value** of products & services in eyes

Type of activity

agreed strategic goals.

Quantity of activity

Key Elements (TQC)

Cost of activity

Example: Painting a car in a company manufacturing cars; or

of organisation's customers while meeting

- A computer manufacturing company making computers with preloaded software.
- value Example:

service.

Storage & moving of raw materials, reworking or repairing of products

Do not contribute to customer-perceived

- Product Design, Customized Production of Parts, Advertising Costs
- Batch Level Activities :

The cost of some activities is driven by the number of batches of units produced. Examples of this are:

- **Material Ordering** An order is placed for every batch of production.
- Machine Set-up Costs M/c need reset b/w different production batch
- Inspection of Products 1sti item in every batch is inspected rather than every 100th item

Business Applications of ABM

(Key: ABC uses Benchmarking for Performance Measurement)

- ❖ Activity Based Budgeting : SAME AS ABOVE
- Business Process Re-Engineering :

Involves examining business processes & making substantial changes in day to day operation of organisation.

Cost Reduction :

consume them

* Resources are assigned to

on consumption estimate

activities & activities are

assigned to cost objects based

ABCM helps in identification of costs against activities & to find opportunities to achieve reduction in unit cost of products manufactured. It continuously attempts to achieve genuine savings in cost

Benchmarking:

Benchmarking is process of identifying & learning from best practices. It is a powerful tool for continuous improvement.

Performance Measurement :

Organizations are now focussing on activity performance as a means of facing competitors & managing costs by monitoring the effectiveness & efficiency of activities

ABC: A Decision Making Tool

(Key: Wholesalers TAP Market for Facilities and Human Resources)

its own goals.

- ❖ WHOLESALE DISTRIBUTORS can gain significant advantage in decision-making process through implementation of ABC concepts.
- ❖ ABC is a complement to TQM.
- ❖ Using Traditional ABSORPTION costing, overheads may get distributed equally across all product lines. ABC traces costs back to activity and consumption of resources by each product.
- ❖ Companies who wish to determine PRICE based on cost plus mark-up basis find ABC method of costing very relevant to determine competitive prices.
- Other areas where ABC system can be relevant include MARKET, MAKE OR BUY decisions, TRANSFER PRICING, SHUT DOWN decisions, etc.
- Other decisions that can be assisted by ABC include FACILITY and resource expansion. Often, the basis for relocation or opening of a new distribution centre is based on cost associations.
- ❖ Decision support for **HUMAN RESOURCES** can be augmented by ABC. Where activity & cost can be associated to an individual, new levels of financial performance can be determined.

Activity Based Costing Traditional Absorption Costing VS Key: CAR ka Driver CAR mein hai

- Classification Activities are classified as — (i) Unit Level, (ii) Batch Level, (iii) Product Level and (iv) Facility Level activities
- Overheads are related to activities and Allocation grouped into activity cost pools
- Realistic / Non Realistic

Driver

Recovery

Rate

- Costs are related to activities and hence are more realistic
- Activity-wise cost drivers are determined
- **Cost Control** ABC aids cost control
- Cost are assigned to cost objects, e.g. Assigned to customers, products, services, departments
 - Activity—wise recovery rates are determined & there is no concept of a single overhead recovery rate

- Activities are classified as (i) Unit Level (Variable) and (ii) Facility Level (Fixed) activities
- Overheads are related to cost centers / departments
- Costs are related to cost centers and hence not realistic of cost behaviour
- Time (Hours) are assumed to be the only cost driver
- Not suitable for cost control
- Costs are assigned to Cost Units i.e. to products, or iobs or hours
- Either multiple overhead recovery rate (for each department) OR a single overhead recovery rate may be determined for absorbing overheads

Unit Costing, Batch Costing & Job Costing

Unit Costing

- A method of costing used where output produced by an entity is identical & each unit of output require identical cost.
- ❖ AKA Single or Output Costing but these are sub-divisions of unit costing method.
- Followed by industries which produce single output or few variants of a single output.

Cost per unit = Total Cost of Production No. of Units produced

Batch Costing

- ❖ A form of specific order costing where articles are manufactured in predetermined lots, known as batch.
- Cost object for cost determination is a batch for production rather than output as seen in unit costing.
- Each batch consists of a number of like units. Each batch is treated as a cost unit. All costs are accumulated & ascertained for each batch.
- ❖ A separate Batch Cost Sheet is used for each batch and is assigned a certain number by which the batch is identified.

Cost per unit = Total Cost of batch No. of items produced

Job Costing

Job Costing

v/s

Batch Costing

- ❖ Method of costing used when work is undertaken as per customer's special requirement.
- ❖ When an inquiry is received from customer, costs expected to be incurred on job are estimated & on basis of this estimate, a price is quoted to customer.
- Actual cost of materials, labour & overheads are accumulated & on completion of job, these actual costs are compared with quoted price & profit or loss is determined
- Method of costing used for non-standard & repetitive products produced as per customer specification against specific orders.
- Cost determined for each Job
- ❖ Jobs are **different** from each other and independent of each other. Each Job is unique
- Homogeneous products produced in a continuous production flow in lots
- Cost determined aggregate for the entire Batch and then arrived at on per unit basis.
- Products produced in a batch are homogeneous and lack of individuality

Job Costing - Advantages and Disadvantages

Advantages

- Details of Cost of material. labour & overhead for all job is available to control
- Profitability of each job can be derived
- It facilitates production planning
- Budgetarv control **Standard Costing** can be applied **Previous records** of costs in job costing
- Spoilage & detective can be identified & responsibilities can be fixed accordingly

Disadvantages

- ❖ Job Costing is costly and laborious method
- As lot of clerical process is involved, chance of error is more
- ❖ Not suitable in inflationary condition
- will be **meaningless** if there is any change in market condition

Job costing

- ❖ A Job is carried out or a product is produced by specific orders
- Costs are determined for each job
- **Separate** and **independent** of other jobs
- ❖ Each job or order has a number and costs are collected against the same job number
- * Costs are computed when a job is completed. The cost of a job may be determined by adding all costs against the job
- As production is not continuous & each job may be different, managerial attention is regd. for effective control

Process Costing v/s

- * The process of producing the product has a continuous flow and the product produced is homogeneous
- * Costs are compiled on time basis i.e., for production of a given accounting period for each process or department
- ❖ Products lose their individual identity as they are manufactured in a continuous flow
- The unit cost of process is an average cost for the period
- * Costs are calculated @ end of cost period. Unit cost of process may be computed by dividing total cost by output of process
- Process of production is usually **standardized** and is therefore, quite stable. Control is comparatively easier

Joint Products & By Products

Methods of Apportionment of **Joint Costs amongst Joint Products**

1. Market value after further processing:

* Basis of apportionment of joint cost is total sales value of finished products

2. Average Unit Cost Method:

❖ Average unit cost = Total process cost (upto point of separation) + Total units of joint product produced.

3. Physical Unit Method

- Sased on assumption that joint products are capable of being Sample NRV of each joint product is found out Sample Or apportionment of joint costs to joint products measured in same units. Accordingly, joint costs are apportioned on the basis of some physical base, viz. weight, numbers.
- 🌣 Basis used for apportioning joint cost over joint products is physical 💠 NRV is found out by deducting foll. 💠 To determine apportionment of joint costs over joint volume of material present in joint products at point of separation. Any loss arises during joint production process is also apportioned over products on same basis.
- This method cannot be applied if physical units of two joint products are different. Main defect of this method is that it gives equal • importance and value to all joint products.

4. Net Realisable Value at Split-off Point:

- & Joint Costs are apportioned in ratio of such NRV.
- from sales value of joint products (at processing):
- estimated profit margins
 - selling and distribution expenses, and
- post-split off costs

5. Market value at point of separation:

- upto split off point. It is difficult to apply this method if MV of products at point of separation is not available.
- products, a factor known as multiplying factor is determined.

Multiplying factor : Joint Cost Total Sales Revenue

- 6. Contribution Margin Method :
- ❖ Joint costs are segregated into 2 parts-variable & fixed.
- ❖ Variable costs are apportioned over joint products on basis of units produced (average method). In case products are further processed after point of separation, all variable cost incurred be added to variable costs determined earlier.
- * Thus, total variable cost is arrived which is deducted from their respective sales values to ascertain their contribution.
- Fixed costs are then apportioned over joint products on the basis of contribution ratios.



N'10

Contract Costing

Cost Plus Contracts & its Advantages

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

Advantages

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

Process of estimating profit / loss on incomplete contracts

- ❖ <25% complete : No profit should be taken into account</p>
- ❖ 25% or more but : 1/3 × Notional Profit × <u>Cash Received</u> <50% complete</p>
 Work certified
- ❖ 50% or more but : 2/3 × Notional Profit × <u>Cash Received</u>
 <90% complete</p>
 Work certified
- ❖ Contract nearing : Est. Profit × Work Certified completion, i.e. Contract price b/w 90% and 100%
 Est. Profit × Cash Received
 - Est. Profit × <u>Cash Received</u> Contract price
 - Est. Profit × Cost of work to date
 Estimated total cost
 - Est. Profit × Cost of work to date x Cash Recd.

Est. total cost Work Cert.

Notional Profit × Work Certified
Contract price

Notional Profit

N'14

- ❖ Is the balancing figure of contract account prepared by contractor if the total of credit side exceeds the total of debit side.
- Represents the diff. b/w value of work certified & cost of work certified.
- It is determined as follows:

Notional profit = Value of work certified - (Cost of work to date - Cost of work not yet certified) Contractor does not receive full

Retention Money

- payment of work certified by Surveyor.
 Contractee retains some amount (say 10% to 20%) to be paid, after sometime, when it is ensured that there is no fault in work carried out by contractor.
- Any deficiency or defect noticed in work, is to be rectified by contractor before release of retention money.
- Retention money provides a safeguard against risk of loss due to faulty workmanship.
- It is determined as follows:

Retention Money = Value of work certified - Payment actually made/ cash paid This clause is usually provided in contracts as a safeguard against any likely changes in price or utilization of material & labour.

Escalation Clause

- If during execution of contract, prices of materials/labour rise beyond certain limit, contract price will be increased by agreed amount.
- Such Escalation Clause usually relates to change in price of inputs, it may also be extended to increased consumption/ utilization of quantities of materials, labour etc.
- Contractor has to satisfy contractee that increased utilization is not due to his inefficiency.

Progress Payment

It refers to amount received by contractor from contractee for a particular period.

Computation

Value of Work Certified – Retention money – Payment to date

Cash Received Vs. Progress Payment

- Total amount received by contractor on a particular date is referred to as Cash received whereas the amount received by contractor from contractee for a particular period is called Retention money.
- Thus, Cash received is for all the collective periods whereas retention money is not.



Inter Process Profit - Advantages & Disadvantages

In some process industries, output of one process is transferred to next process not at cost but at market value or cost plus a percentage of profit.

complete

Difference b/w cost & transfer price is known as interprocess profits.

Advantages

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

Disadvantages

- Use of inter-process profits involves complication.
- System shows profits which are not realised because of stock not sold out.

(4m)

Process Costing

Equivalent Production

- When opening & closing stocks of work-in-process exist, unit costs cannot be computed by simply dividing total cost by total number of units still in process.
- We can convert work-in-process units into finished units called equivalent production units so that unit cost of these uncompleted (W-I-P) units can be obtained.
- Equivalent Production units = Actual number of units in production × Percentage of work completed
- It consists of -
- balance of work done on opening work-in-process
- current production done fully and
- part of work done on closing WIP with regard to different elements of costs viz., material, labour and overhead.

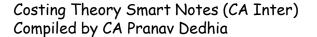
OperaTION Costing (Don't Confuse with OperaTING Costing)

M'15

(2m)

- ❖ This product costing system is used when an **entity produces more than one variant of final product** using different materials but with similar conversion activities. Which means conversion activities are similar for all product variants but materials differ significantly.
- Operation Costing method is AKA Hybrid product costing system as material costs are accumulated by job order or batch wise but conversion costs i.e. labour & overhead costs are accumulated by department & process costing methods are used to assign these costs to products. Under operation costing, conversion costs are applied to products using predetermined application rate based on budgeted conversion costs.
- Eg. A company is manufacturing two grades of products, Product Deluxe & Product-Regular. Both products pass through similar production process but require different quality & quantities of raw materials. Cost of raw material is accumulated on basis of job or batches or units of two variants of products. But, costs for conversion activities need not be identified with product variants as both Products requires similar activities for conversion. Hence, conversion activity costs are accumulated on basis of departments or processes only.





Standard Costing

Steps involved in adopting standard costing system

Advantages of Standard Costing

Criticism of Standard Costing

- **Setting of Standards**: 1st step is to set standards which are to be achieved.
- * Ascertainment of actual costs: Actual cost for each component of cost is ascertained from books of account, material invoices, wage sheet, charge slip.
- Comparison of actual cost & standard cost : Actual costs are compared with the standards costs and variances are determined.
- ❖ Investigation of variances : Variances arising are investigated for further action. Based on this, performance is evaluated and appropriate actions are taken.
- ❖ Disposition of variances : Variances arising are disposed off by transferring to relevant accounts (costing P&L A/c) as per accounting method (plan) adopted

- ❖ It serves as a basis for MEASURING OPERATING PERFORMANCE & COST CONTROL. By setting standards, proper classification and determination of variances is possible.
- ❖ It aids **PRICE FIXING**. Standard costing can be used to predict costs.
- ❖ Introduction of standard costing facilitates EVALUATION OF JOBS & INTRODUCTION OF INCENTIVES.
- Standard costing facilitates the ESTIMATION OF COST OF NEW PRODUCTS with greater accuracy.
- It serves as a basis for INVENTORY VALUATION.
- Standard costing greatly aids BUSINESS PLANNING, BUDGETING & MANAGERIAL DECISION MAKING.
- Standard costing aids in STANDARDISATION OF PRODUCTS, OPERATIONS & PROCESSES.

Marginal Costing

- * Variation in price: One of the chief problem faced in operation of standard costing system is precise estimation of likely prices or rate to be paid. The variability of prices is so great that even actual prices are not necessarily adequately representative of cost.
- * Varying levels of output : If standard level of output set for predetermination of standard costs is not achieved, standard costs are said to be not realised.
- Changing standard of technology: Not suitable for industries having frequent technological changes affecting production.
- * Attitude of technical people : Technical people are accustomed to think of standards as physical standards and therefore, they will be misled by standard costs.
- Fixation of standards may be costly: May require higher skill & competency.

Angle of Incidence **Key Factor**

Marginal Costing

CVP Analysis - Basic assumptions

Practical Application of Marginal Costing

Margin of Safety & Relationship b/w Op. Leverage & MOS Ratio

- ❖ A factor which at a particular time or over a period limits activities of an
- undertaking. It may be the level of demand for products or service or it be may shortage of one or more of productive resources.

M'10

- This angle is formed by intersection of sales line & total cost line at break-even point.
- This angle shows rate at which profits are being earned once break-even point has been reached.
- ❖ Wider the angle, the greater is rate of earning profits.
- ❖ A large angle of incidence with a high margin of safety indicates extremely favourable position.

- Costing System where products and services are valued at variable costs only. It does not take consideration of fixed costs.
- This system costing is **AKA direct** costing as only direct costs forms part of product costs.
- Costs are classified on the basis of behaviour rather than **functions** as done in absorption costing.

- Changes in levels of revenues & costs arise only because of changes in number of products (or service) units produced & sold.
- ❖ Total cost can be separated into 2 components - Fixed & variable.
- Graphically, behaviour of total revenues & total cost are linear in relation to output level within a relevant range.
- Selling price, variable cost per unit & total fixed costs are known & constant.
- All revenues & costs can be added, subtracted & compared without taking into account time value of money.

- Pricing Policy : Since marginal cost per unit is constant from period to period, firm decisions on pricing policy can be taken particularly in short term.
- ❖ Decision Making : MC helps mgmt. in taking business decisions like make or buy, discontinuance of a particular product, machine replacement, etc.
- **❖ Ascertaining Realistic Profit** : Stock of finished goods & WIP are carried on marginal cost basis & fixed exp. are written off to P&L A/c as period cost.
- ❖ Determination of production level : MC helps in preparation of break-even analysis which shows effect of increasing or decreasing production activity on profitability.

❖ Margin of Safety (MoS) is the EXCESS OF TOTAL SALES OVER THE BREAK EVEN SALES. MoS defines the amount upto which level sales can decline before occurring loss. A greater MoS reflects soundness of business. If MoS is small, any fall in sales value may even result in loss.

Margin of safety = Actual sales or output – Break even sales or productions Margin of Safety Ratio = Sales - Break Even Sales

Relationship between Operating Leverage and Margin of Safety

- ❖ Op. leverage is calculated as **Contribution** ÷ **Operating profit** wherein contribution margin plays an important role.
- ❖ If sales are expected to increase, higher operating leverage will result in higher profit. When sales are expected to decrease, lower operating leverage will result in higher profit.
- ❖ Higher variable cost & lower fixed cost will result into higher MoS & risk will be lower & vice versa.
- So, like Operating leverage, MoS is a measure of risk as to what extent an organisation is exposed to change in sales volume.



Budget & Budgetary Control

Important Formulae

- Efficiency Ratio Activity Ratio
- Calendar Ratio
- Standard Capacity Usage Ratio
- 5. Actual Capacity Usage Ratio
- 6. Actual Usage of **Budgeted Capacity Ratio**

M'14

(Standard Hours / Actual Hours) × 100 (Standard Hours / Budgeted Hours) × 100 (Avail. Working Days / Budg. Working Days) × 100 (Budgeted Hours / Max. Possible Hours in Budgeted Period) × 100 (Actual Hours Worked / Maximum Possible Working Hours in a Period) × 100

(Actual Working Hours / Budgeted Hours) × 100

Budget Manual

Collection of documents that contains key information. Typical contents:

- Introductory explanation of budgetary planning & control process, including statement of budgetary objective & desired results.
- Org. chart to show who is responsible for preparation of each functional budget & way in which budgets are interrelated.
- Timetable for preparation of each budget prevents formation of 'bottleneck' with late preparation of 1 budget holding up preparation of others.
- **Copies of all forms** to be completed by those responsible for preparing budgets, with explanations concerning their completion.
- A list of organization's account codes, with full explanations to use them.
- ❖ Info. concerning key assumptions to be made by managers in their budgets, viz rate of inflation, exch. rates, etc.

M'16 ,) Fixed Budget

v/s Flexible Budget (4m),

- actual volume of output.
- ❖ Operates under 1 level of activity & 1 ❖ It consists of various budgets for set of conditions. It assumes that conditions would remain static.
- ❖ Costs are **not classified** according to ❖ Costs are **classified** according to their variability i.e., fixed, variable and semi variable.
- ❖ If budgeted & actual activity levels ❖ Flexible budgeting at different levels differ significantly, aspects like cost ascertainment & price fixation do not give correct picture.

- ❖ It is inflexible & does not change with ❖ It can be re-casted according to the level of activity.
 - different levels of activity
 - their variability i.e., fixed, variable and semi variable.
 - of activity facilitates ascertainment of cost, fixation of selling price & tendering of quotations.

Advantage of ZBB

- 1. Provides a systematic approach for evaluation of different activities & ranks them in order of preference for allocation of scarce resource.
- Ensures that various functions of organisation are critical 4. It requires proper TRAINED MANAGERIAL STAFF for achievement of its objectives & are being performed in best way.
- Provides an opportunity to mgmt. to allocate resources for various activities after having a thorough cost-benefit analysis.
- Area of wasteful expenditure can be easily identified &
- Departmental budgets are closely linked with corporate objectives
- The technique can also be used for introduction & implementation of system of 'management by objective'.

Zero Based Budgeting

Limitations of ZBB (Key: OT₃)

- Various OPERATIONAL PROBLEMS are likely to be faced in implementing the technique.
- The full SUPPORT of **TOP MANAGEMENT** is required.
- It is **TIME CONSUMING** as well as **COSTLY**.

Steps involved in the process of Zero Based Budgeting (Key: DEAD Body)

- **DETERMINATION** of a **SET OF OBJECTS** is the pre-requisite and essential step in the direction of ZBB technique.
- 2. Deciding about the **EXTENT** to which the technique of ZBB is to be applied whether in all areas of organization activities or only in few selected areas on trial basis.
- Identify the AREAS where decisions are required to be taken.
- Developing **DECISION PACKAGES** and ranking them in order of performance.
- Preparation of BUDGET that is translating decision packages into practicable units/items and allocating financial resources.

ZBB is an extension of cost benefit analysis method to area of corporate planning & budgeting.

ZBB Superior to Traditional Budgeting – How?



Zero based budgeting is superior to traditional budgeting in following manner:

- ❖ It provides a **systematic approach for evaluation** of different
- It ensures that function undertaken are critical for achievement of objectives.
- ❖ It provides an opportunity for management to allocate resources to various activities after a thorough - cost benefit analysis.
- ❖ It helps in identification of wasteful expenditure & then their elimination.
- * It facilitates close linkage of departmental budgets with corporate objectives
- ❖ It helps in introduction of system of Management by Objectives.

Traditional Budgeting v/s Zero Based Budgeting

- ❖ Traditional budgeting is accounting oriented. Main stress happens to be on previous level of expenditure.
- ❖ In traditional budgeting, first reference is made to past level of spending and then demand for inflation and new programmes
- ❖ In tradition budgeting, some managers deliberately inflate their budget request so that after the cuts they still get what they want
- ❖ In traditional budgeting, it is for top management to decide why a particular amount should be spent on a particular decision unit.

- ❖ Zero-based budgeting makes a **decision** oriented approach. It is very rational in nature and requires all programmes, old and new, to compete for scarce resources.
- ❖ In zero- based budgeting, management focuses attention to only on decision packages, which enjoy priority to others.
- ❖ In zero-based budgeting, a rationale analysis of budget proposals is attempted. The managers, who unnecessarily try to inflate the budget request, are likely to be caught and exposed. Management accords its approval only to a carefully devised result-oriented package
- ❖ In Zero-based budgeting, this responsibility is shifted from top management to the manager of decision unit.



Budget & Budgetary Control





Essentials of Budget



Capital Exp. Budget - Considerations



Preparation of Budget – Steps involved

Budgets which relate to individual functions in an org. are known as Functional Budgets.

Commonly used Functional budgets:

- ❖ Sales Budget
- Production Budget
- Plant Utilisation Budget
- Direct Material Usage Budget
- Direct Material Purchase Budget
- Direct Labour (Personnel) Budget
- Factory Overhead Budget
- Production Cost Budget

- Org. structure must be clearly defined & responsibility should be assigned to identifiable units. Setting of clear obj & reasonable targets. Obj. should be in consonance with org's long term plan.
- ❖ Obj & degree of responsibility should be clearly communicated to mgmt./ responsible person.
- * Budgets are prepared for future periods based on expected course of actions. Entire org. must be committed to budgeting
- * Budgets are updated for events that were not kept into mind while establishing budgets. Hence, budgets should be flexible enough for mid-
- ❖ Budgets should be **quantifiable & master budget** should be broken down into various functional budgets.
- ❖ Budgets should be **monitored periodically**. Variances from set standards should be analysed & responsibility should be fixed

- Overhead on production facilities of certain departments as indicated by plant utilisation budget.
- * Replacement requests from concerned departments.
- Future development plans to increase output by expansion of plant facilities.
- * Factors like:
- sales potential to absorb the increased
- possibility of price reductions,
- increased costs of advertising and sales promotion to absorb increased output,

- ❖ Definition of objectives : A budget is a plan for achievement of certain operational objectives, so these should be defined precisely.
- ❖ Location of key factor: Factor(s) which sets a limit to total activity is known as key factor. For proper budgeting, it must be located & estimated properly.
- ❖ Appointment of controller : Formulation of budget usually requires whole time services of senior executive known as budget controller.
- Budget Manual: Effective budgetary planning relies on provision of adequate information which are contained in budget manual.
- Budget period : Period covered by budget is known as budget period. It may be months/quarters/such periods as coincide with period of trading activity.
- Standard of activity or output: Results of past should only be applied when similar conditions are like to repeat in future.

Advantages of Budgetary Control System

- Efficiency: Use of budgetary control system enables mgmt. to conduct its business activities efficiently.
- 2. Control on expenditure: It is a powerful instrument used by business houses for expenditure control.
- 3. Finding deviations: It reveals deviations to mgmt., from budgeted figures after making a comparison with actual figures.
- Effective utilisation of resources: Effective utilisation of various resources like—men, material, machinery & money—is made possible, as production is planned after taking them into account.
- 5. Implementation of Standard Costing system: It creates suitable conditions for implementation of standard costing system in a business organisation.
- Cost Consciousness: Budgets are studied by outside fund providers also such as banking & financial institutions, realising that mgmt. encourages cost consciousness & maximum utilisation of available resources.
- Credit Rating: Mgmt. which have developed a well ordered budget plan & which operate accordingly, receive greater favour from credit agencies.

Limitations of Budgetary Control System

- 1. Based on Estimates: Budgets are based on series of estimates which are based on conditions prevailed when budget is established.
- 2. Time factor: Some preliminary steps are required to be accomplished before budgets are
- 3. Co-operation: Required Staff co-operation is usually not available during budgetary control exercise. In a decentralised organisation each unit has its own objective and these units enjoy some degree of discretion.
- 4. Expensive: Its implementation is guite expensive.
- Not a substitute for management: Budget is only a managerial tool & must be applied correctly for management to get benefited.
- 6. Rigid document: Budgets are considered as rigid document. But in reality, an organisation is exposed to various uncertain internal & external factors.

Advantages of Capital Exp. Budget

- It outlines capital development program & estimated capital exp during budget period.
- 2. It enables co. to establish system of priorities. When there is shortage of necessary.
- Serves as tool for expenditure control
- It provides amount of exp. to be incorporated in future budget summaries for calculation of estimated return on capital employed.
- Enables cash budget to be completed With other cash commitments, capital expenditure commitment should also budget.
- It facilitates cost reduction programme, covered by this budget.

Operating Costing / Service Costing

How to compute composite units?

- Operating Costing is a method of ascertaining costs of providing or operating a SERVICE
- It is usually used by transport companies, gas & water works departments, electricity supply companies, canteens, hospitals, theatres, schools etc.

Computation of Composite Units:

When two units are merged into one, it is called Composite units. Composite units i.e. tonnes kms., quintal kms. etc. may be computed in two ways:

- 1. Absolute (weighted average) tonnes-kms : Absolute tonnes-kms., are the sum total of tonnes-kms., arrived at by multiplying various distances by respective load quantities carried.
- Commercial (simple average) tonnes-kms: Commercial tonnes-kms., are arrived at by multiplying total distance kms., by average load quantity.



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