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BACHELOR OF BUSINESS ADMINISTRATION

BBAR-502

COST ACCOUNTING

Cost Accounting

Editorial Panel

Author
Dr Ashish Joshi
Associate Professor,
Pandit Deendayal Petroleum University,
Gandhinagar

Editor
Dr. Kamal Patel
Assistant Professor
Chimanbhai Patel Institute of Business Administration
Ahmedabad

Language Editor
Dr. Bhupesh Gupta
M.A., M.Phil., Ph. D.
Assistant Professor,
Lokmanya College of Commerce,
Ahmedabad

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ROLE OF SELF INSTRUCTIONAL MATERIAL IN DISTANCE LEARNING

The need to plan effective instruction is imperative for a successful distance teaching repertoire. This is due to the fact that the instructional designer, the tutor, the author (s) and the student are often separated by distance and may never meet in person. This is an increasingly common scenario in distance education instruction. As much as possible, teaching by distance should stimulate the student's intellectual involvement and contain all the necessary learning instructional activities that are capable of guiding the student through the course objectives. Therefore, the course / self–instructional material are completely equipped with everything that the syllabus prescribes.

To ensure effective instruction, a number of instructional design ideas are used and these help students to acquire knowledge, intellectual skills, motor skills and necessary attitudinal changes. In this respect, students' assessment and course evaluation are incorporated in the text.

The nature of instructional activities used in distance education self–instructional materials depends on the domain of learning that they reinforce in the text, that is, the cognitive, psychomotor and affective. These are further interpreted in the acquisition of knowledge, intellectual skills and motor skills. Students may be encouraged to gain, apply and communicate (orally or in writing) the knowledge acquired. Intellectual– skills objectives may be met by designing instructions that make use of students'prior knowledge and experiences in the discourse as the foundation on which newly acquired knowledge is built.

The provision of exercises in the form of assignments, projects and tutorial feedback is necessary. Instructional activities that teach motor skills need to be graphically demonstrated and the correct practices provided during tutorials. Instructional activities for inculcating change in attitude and behavior should create interest and demonstrate need and benefits gained by adopting the required change. Information on the adoption and procedures for practice of new attitudes may then be introduced.

Teaching and learning at a distance eliminates interactive communication cues, such as pauses, intonation and gestures, associated with the face–to–face method of teaching. This is particularly so with the exclusive use of print media. Instructional activities built into the instructional repertoire provide this missing interaction between the student and the teacher. Therefore, the use of instructional activities to affect better distance teaching is not optional, but mandatory.

Our team of successful writers and authors has tried to reduce this. Divide and to bring this Self Instructional Material as the best teaching and communication tool. Instructional activities are varied in order to assess the different facets of the domains of learning.

Distance education teaching repertoire involves extensive use of self–instructional materials, be they print or otherwise. These materials are designed to achieve certain pre–determined learning outcomes, namely goals and objectives that are contained in an instructional plan. Since the teaching process is affected over a distance, there is need to ensure that students actively participate in their learning by performing specific tasks that help them to understand the relevant concepts. Therefore, a set of exercises is built into the teaching repertoire in order to link what students and tutors do in the framework of the course outline. These could be in the form of students' assignments, a research project or a science practical exercise. Examples of instructional activities in distance education are too numerous to list. Instructional activities, when used in this context, help to motivate students, guide and measure student's performance (continuous assessment).

PREFACE

We have put in lots of hard work to make this book as user–friendly as possible, but we have not sacrificed quality. Experts were involved in preparing the materials. However, concepts are explained in easy language for you. We have included many tables and examples for easy understanding.

We sincerely hope this book will help you in every way you expect.

All the best for your studies from our team!

Cost Accounting

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Dr. Babasaheb
Ambedkar
OpenUniversity

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Cost Accounting

BLOCK-1 INTRODUCTION TO COST ACCOUNTING

BLOCK 1 : INTRODUCTION TO COST ACCOUNTING

Block Introduction

In this block we will understand the fundamental concepts of costing and some very important concepts such features and importance of costing will be covered. Second Unit of the block contain the financial accounting overview, along with management costing. Also, a comparison is made between the three forms of accounting. Third Unit consists of different elements of costing like material costing, labour costing, and expenses costing. Forth Unit comprises of different techniques of costing, introduction of cost centre and cost unit.

Block Objectives

After learning this block, you will be able to understand :

- The meaning, Scope, and Importance of Costing.
- Objectives of Cost Accounting.
- Functions of Cost Accounting.
- Financial Accounting and Management Accounting.
- Cost Accounting Vs. Management Accounting.
- Classification of Costs.
- Advantages and Disadvantages of Classification of Costs.
- Techniques of Costing.
- Direct costing and Absorption costing.
- Cost Centre and Cost Unit.

Block Structure

Unit 1

COST ACCOUNTING : CONCEPT NATURE AND SCOPE

: UNIT STRUCTURE :

1.0 Learning Objectives :

- Express the place and role of cost accounting in the modern economic environment.
- Select the costs according to their impact on business.
- Differentiate methods of schedule costs per unit of production.
- Differentiate methods of calculating stock consumption.
- Interpret the impact of the selected costs method.
- Identify the specifics of different costing methods.

1.1 Introduction :

Cost and management accounting is a form of accounting that aims to maximise profit by managing revenues and expenses. It provides data and reports used by managers to inform their strategies around long–term profit and growth. Cost management accounting is a form of accounting that aims to improve a company's profitability by managing, controlling, and minimising expenses. Cost accounting helps businesses to determine the costs of products, projects, and processes, which shows the company financial position and is an integral part of budget planning. Cost and management accounting provides data and analyses reports that can be used by managers to make decisions that will lead to long term profits and growth.

1.2 Meaning, Definition and Need for Cost Accounting :

Cost Accounting is a part of bookkeeping and has been created because of restrictions of money related bookkeeping. Budgetary bookkeeping is basically worried about record keeping coordinated towards the readiness of Profit and Loss Account and Balance Sheet. It gives data with respect to the benefit and misfortune that the business venture is making and furthermore its money related situation on a specific date. The monetary bookkeeping reports help the administration to control in a general manner the different elements of the business, yet it neglects to give comprehensive details regarding the productivity of different divisions.

Cost bookkeeping is a wide term. It grasps numerous subjects inside its folds. By and large use, it is the utilization of costing and cost bookkeeping standards, strategies and systems to the science, craftsmanship and practice of cost control and ascertainment of benefit of business. The Institute of Cost and Management Accountants, England has characterized cost bookkeeping as "the use of costing and cost bookkeeping standards, strategies and systems to the science, workmanship and practice of cost control. It incorporates the introduction of data got there from with the end goal of administrative basic leadership." Thus, cost bookkeeping is the science, craftsmanship and practice of a cost bookkeeper. It is a science since it comprises of sorted out collection of information, which a cost bookkeeper must have for appropriate release of his duties.

Cost bookkeeping includes the use of costing guideline, strategies, and methods for discovering costs and their control by contrasting genuine expenses and the financial limit or standard. Cost bookkeeping is a craftsmanship additionally, on the grounds that it incorporates the capacity and aptitude with which a cost bookkeeper needs to apply his fundamental information to specific conditions. It includes the utilization of different costing systems and techniques, for example, minimal costing, standard costing, budgetary control and so forth. The uses of these systems help him in managing different issues, for example, cost decrease, cost control, ascertainment of benefit, and so on.

Cost bookkeeping is additionally the act of a cost bookkeeper since he needs to put forth consistent attempts in the field of cost bookkeeping. Such endeavours incorporate the data introduction to the top administration with the end goal of administrative basic leadership and keeping different records of business. It is a significant advancement in the field of bookkeeping. It is the way toward representing costs. It takes help from the bookkeeping methodology for identifying with recording of all transactions for the readiness of different explanations and reports with the object of discovering and controlling expenses.

1.2.1 Features of Cost Accounting :

Having determined expense and benefit, cost bookkeeping is worried about introduction of data to the executives. To empower the executives to complete its capacities, reports must be quickly made accessible at the ideal time, to the ideal individual and in an appropriate structure.

Cost bookkeeping is utilized in the exceptionally wide sense when contrasted with cost bookkeeping and costing. This is so because cost bookkeeping is worried about the detailing of standards, strategies, and procedures to be applied for learning cost and benefit.

The information so provided is to serve the purpose of managerial decision–making such as introducing a new line of product, replacement of manual labour by machines, make or buy decisions, etc.

1.2.2 Limitations of Cost Accounting :

No control on cost : Financial Accounting does not assist with controlling materials, supplies, wages, work, and overhead expenses.

Does not give benchmarks to evaluate the presentation : Financial Accounting does not help in creating principles to survey the exhibition of different people or departments. It additionally does not help in watching those expenses do not surpass a sensible farthest point for a given quantum of work of the essential quality.

Gives just chronicled data : Financial Accounting records just the verifiable expenses brought about. It does not give everyday cost data to the administration for making successful arrangements for what is to come.

No clear picture of working proficiency : Sometimes benefits in an association might be less or more in view of swelling or exchange wretchedness and not because of effectiveness or wastefulness. Be that as it may, budgetary bookkeeping does not give an unmistakable explanation behind benefit or misfortune.

Shortcoming not spotted out by aggregate outcomes : Financial Accounting shows the net aftereffect of an association. At the point when the benefit and misfortune record of an association, shows less benefit or a misfortune, it does not give the explanation behind it or it does not show where the shortcoming lies.

Does not help in fixing the cost : In Financial Accounting, we get the all–out expense of creation however it does not help in deciding costs of the items, administrations, generation request and lines of items.

No characterization of costs and records : In Financial Accounting, we do not get information identifying with costs brought about by offices, forms independently or per unit cost of product offerings, or cost caused in different deals domains. Further costs are not delegated immediate or circuitous, controllable, and wild overheads and the worth included each procedure is not accounted for.

No information for examination and basic leadership : It doesn't supply helpful information to the executives for correlation with past period and for accepting different money related choices as presentation of new items, substitution of work by machines, cost in ordinary or extraordinary conditions, delivering a section in the industrial facility or getting it from outside market, creation of an item to be proceeded or surrendered, need concurred to various items, speculation to be made in new items or not and so on.

No examination of misfortunes : It does not give total investigation of misfortunes because of imperfect material, inert time, inactive plant, and hardware and so on. At the end of the day, no qualification is made among avoidable and unavoidable wastage.

Lacking data for reports : It does not give sufficient data to reports to outside offices, for example, banks, government, insurance agencies and exchange affiliations.

No response for specific inquiries : Financial Accounting will not assist with responding to addresses like :

(a) Should an endeavour be made to sell more items or is the manufacturing plant working to limit ?

(b) If a request or agreement is acknowledged, is the value possible adequate to show a benefit ?

(c) If the assembling or offer of item A were stopped and endeavours make to expand the offer of B, what might be the impact on the net benefit ?

(d) Why the benefit of a year ago is of such a limited quantity notwithstanding the way that yield was expanded generously ? And so on.

1.2.3 Objectives of Cost Accounting :

The main objectives of cost bookkeeping are ascertainment of cost, obsession of selling cost of item, legitimate account, and introduction of cost information to the administration for estimating effectiveness and for cost control. Following are the primary destinations of cost bookkeeping :

Ascertainment of Cost : Ascertainment of cost is essential target of cost bookkeeping in the underlying phases of its improvement. In any case, in present day times this has expected the auxiliary target of cost bookkeeping. Cost ascertainment includes the assortment and arrangement of uses at the principal occurrence. Those things of consumptions or costs which are equipped for charging legitimately to the items fabricated are designated. At that point different costs which are not able to do coordinate distribution are allotted on some reasonable premise. Therefore, the expense of generation of products made is found out. Right now, bookkeeping includes upkeep of various kind of books to record different cost components. Cost of creation is determined by utilizing any of the costing system and strategy, for example, authentic costing, standard costing, minimal costing, work costing, unit costing, and so forth.

Obsession of Selling Price : Every business undertaking targets amplifying benefit. The absolute expense of creation establishes the premise on which selling cost is fixed by including a piece of benefit. Cost bookkeeping outfits the complete expense of generation just as cost brought about at every single phase of creation. Almost certainly different components are mulled over before fixing of selling cost, for example, economic situations, the region of circulation, volume of offers, and so on. Be that as it may, cost assumes the ruling job in the value obsession.

Cost Control : At one time cost control was considered as auxiliary target of cost bookkeeping. Yet, in current business it comprises the essential target. Cost control is practiced at various stages in an industry, viz., procurement of materials, enlisting of work, during the generation procedure, etc. In that capacity, we have material cost control, work cost control, generation cost control, quality control, etc. Nonetheless, authority over expense is practiced through the strategies of budgetary control, chronicled costing, and standard costing. The control strategies empower the administration in knowing the working proficiency of a business association.

Offer Various Policies : Cost information, all things considered, helps in figuring the different arrangements of a business or industry and in basic leadership. As each elective choice includes venture of capital expense, costs assume a significant job in basic leadership of association. In this way, accessibility of cost information is an unquestionable requirement for all degrees of the executives.

1.3 Costing and Cost Accounting :

The primary object of conventional cost accounts is the examination of money related records, to subdivide use and to distribute it cautiously to chosen cost focuses, and henceforth to develop a complete expense for the divisions, procedures or employments or agreements of the endeavour. The degree to which the investigation of use ought to be conveyed will rely on the idea of business and level of precision wanted. The other significant goal of costing is cost control and cost decrease.

The costing wording of C.I.M.A., London characterizes costing as "the strategies and procedures of learning costs". These systems comprise of standards and rules which administer the methodology of learning cost of items or administrations. The methods to be followed for the examination of costs and the procedures by which such an investigation ought to be identified with various items or administrations vary from industry to industry. These systems are likewise powerful, and they change with time.

Cost Accounting might be viewed as "A particular part of bookkeeping which includes characterization, aggregation, task and control of costs." The costing wording of C.I.M.A, London characterizes cost bookkeeping as "the way toward representing costs from where consumption is caused or focused on the foundation of its definitive association with cost focuses and cost units. In its most extensive use, it grasps the arrangement of information, the use of cost control techniques and the ascertainment of benefit of exercises completed or arranged".

1.3.1 Nature of Cost Accounting :

(a) Ascertainment of Cost : Cost bookkeeping is a workmanship in the sense it requires the capacity and aptitude with respect to cost bookkeeper in applying the ideas, standards, strategies, and systems of cost bookkeeping to different administration choices. These choices incorporate the ascertainment of items and administrations, control of costs, ascertainment of benefit, and so on.

(b) Identification of Cost : Cost bookkeeping is a science as it is a group of precise information identifying with cost bookkeeping as well as identifying with a wide assortment of courses, for example, law, office practice and system, information preparing and introduction, generation, and control, and so forth. It is essential for a cost bookkeeper to have unique information on all these field of concentrate to carry on his everyday business or association exercises.

(c) Analysing the Cost : Cost bookkeeping decides the expense of deficient work or employment if the work stays uncompleted. It is additionally giving measures to control and direction for different degrees of the board i.e., top, centre and lower the board.

(d) Communicating the Results : Cost bookkeeping is a calling. As of late cost bookkeeping has gotten one of the significant callings which have gotten more testing. This view is obvious from two realities. Initially, the setting up of different expert bodies. Also, countless understudies have taken on different foundations to get costing degrees and enrolments for acquiring their employment.

1.3.2 Principles of Cost Accounting :

An expense ought to be identified with its causes : Cost ought to be connected as intently as conceivable to their causes so cost will be shared uniquely among the cost units that pass careful the division of which the costs are connected.

The show of judiciousness ought to be disregarded : Usually bookkeepers have faith in authentic expenses and keeping in mind that deciding cost, they generally join significance to chronicled cost. In Cost Accounting this show must be overlooked, something else, the administration examination of the productivity of the ventures might be vitiated. As indicated by W.M. Harper, "a cost articulation should, quite far, give realities with no known predisposition. If a possibility should be mulled over it ought to be demonstrated independently and unmistakably".

Abnormal costs should be excluded from cost accounts : Costs which are of abnormal nature (e.g., Accident, negligence etc.) should be ignored while computing the cost, otherwise, it will distort costs figures and mislead management as to working results of their undertaking under normal conditions.

A cost should be related to its causes : Cost should be related as closely as possible to their causes so that cost will be shared only among the cost units that pass thorough the department of which the expenses are related.

Past expenses not to be charged to future period : Costs which could not be recuperated or charged in full during the concerned period ought not be taken to a future period, for recuperation. If past expenses are remembered for the future time frame, they are probably going to impact the future time frame and future outcomes are probably going to be mutilated.

Standards of twofold section ought to be applied any place : Costing requires a more prominent utilization of cost sheets and cost articulations with the end goal of cost ascertainment and cost control, however cost record and cost control records ought to be kept on twofold passage guideline beyond what many would consider possible.

1.3.3 Importance of Cost Accounting :

Cost Control : Cost control is the direction and guideline by official activity of the expenses of working and undertaking. This direction and guideline are finished by the official who is answerable for causing the deviation. This procedure will turn out to be clear by listing the means engaged with any method of cost control. Cost control is practiced through an assortment of procedures, for example, stock control, item control, quality control, budgetary control, standard costing, and so forth.

Ascertainment of Cost : It manages the assortment and investigation of costs, the estimation of creation at various stages and connecting of generation with the costs. To accomplish the initial step, costing has created various frameworks, for example, Historical or Actual Cost, Estimated Cost and Standard Cost. For accomplishing the subsequent advance, costing has created various strategies, for example, single or yield costing, work costing, contract costing, and so forth. At long last, for accomplishing the last advance costing has created significant strategies, for example, Marginal Costing, Standard Costing, Budgetary Control, Total Absorption Costing and Uniform Costing.

Cost Audit : The phrasing of ICMA, London, characterizes cost review, as "the check of the accuracy of cost accounts and of the adherence to the cost bookkeeping plan". Cost review has a lot more extensive task to carry out in an industry or association than individuals could envision. The point of cost review is to feature the weaknesses inborn in the cost bookkeeping framework.

Costing as a guide to the board : Cost bookkeeping gives significant guide to the board. It gives point by point costing data to the administration to empower them to keep up powerful authority over stores and stock, to build proficiency of the association and to check wastage and misfortunes. It encourages designation of obligation regarding significant assignments and rating of representatives. For all these the administration ought to be fit for utilizing the data gave by cost accounts in an appropriate manner.

Helps in Exchange : Cost bookkeeping helps in times of exchange despondency and exchange rivalry. In times of exchange wretchedness, the association cannot stand to have wastages which pass unchecked. The administration must know zones where economies might be looked for, squander disposed of and effectiveness expanded. The association must wage a war for its endurance as well as proceeded with development. The administration should know the real expense of their items before setting out on any plan of value decrease. Sufficient arrangement of costing encourages this.

Value Determination : helps value obsession. Although the law of market interest decides the cost of the item, cost to the maker plays a significant job. The maker can take vital direction from his costing records if he is in a situation to fix or change the value charged.

Decision Making : Cost bookkeeping helps in making decision. Sufficient costing records give a solid premise to making decision and citing tenders.

Recognize Productive and Non Productive Activity : Cost bookkeeping helps in channelizing creation on right lines. Appropriate costing data makes it feasible for the administration to recognize productive and non–beneficial exercises; benefits can be augmented by focusing on gainful activities and disposing of non–productive ones.

Reduce Wastage : Cost bookkeeping takes out wastages. As cost bookkeeping is worried about point–by–point separation of costs, it is conceivable to check different types of wastages or misfortunes.

Proof of Records : Cost bookkeeping makes examinations conceivable. Appropriate support of costing records

Helps in Planning : It gives different costing information to examinations which thusly helps the administration in planning future lines of activity.

Ascertainment of Periodic Profit or Loss : Cost bookkeeping gives information to periodical Profit and Loss Account. Satisfactory costing records give the administration such information as might be important for planning of Profit and Loss Account and Balance Sheet at such interims as might be wanted by the administration.

Costing as a guide to Creditors : Financial specialists, banks and other cash loaning foundations have a stake in the accomplishment of the business concern are in this manner profited monstrously by the establishment of a proficient arrangement of costing. They can base their judgment about the gainfulness and future possibilities of the undertaking on the costing records.

Costing as a guide to workers : Workers have an essential enthusiasm for their boss' undertaking wherein they are utilized. They are profited by various ways by the establishment of an effective arrangement of costing. They are profited, through nonstop business and higher compensation by method for motivations, extra plans, and so on.

1.3.4 Functions of cost Accounting :

Cost bookkeeping focuses on efficient account of costs and examination of the equivalent to find out the expense of every item produced, or administration rendered by an association. Data with respect to cost of every item or administration would empower the administration to realize where to conserve on costs, how to fix costs, how to boost benefits, etc. Along these lines, the fundamental destinations of cost bookkeeping are the accompanying.

- To dissect and characterize all use regarding the expense of items and activities.
- To land at the expense of creation of each unit, work, activity, procedure, division, or administration and to create cost standard.
- To show the administration any wasteful aspects and the degree of different types of waste, regardless of whether of materials, time, costs or in the utilization of apparatus, hardware, and instruments. Examination of the reasons for unacceptable outcomes may show therapeutic measures.
- To give information of periodic benefits, misfortune records and asset reports at such interims, for example week after week, month to month or quarterly as might be wanted by the administration during the money related year, for the entire business as well as by offices or individual items. Likewise, to clarify in detail the specific explanations behind benefit or misfortune uncovered altogether in the benefit and misfortune accounts.
- To uncover wellsprings of economies underway having respect to techniques, sorts of hardware, plan, yield and design. Day by day, Weekly, Monthly or Quarterly data might be important to guarantee brief valuable activity.
- To give real figures of expenses to examination with gauges and to fill in as a guide for future assessments or citations and to help the administration in their value fixing arrangement.

- To appear, where Standard Costs are readied, what the expense of generation should be and with which the genuine costs which are in the end recorded might be analysed.
- To introduce near cost information for various periods and different volume of yield and to give direction in the improvement of business. This is additionally useful in budgetary control.
- To record the relative generation aftereffects of every unit of plant and apparatus being used as a reason for inspecting its proficiency. A correlation with the exhibition of different kinds of machines may propose the need for substitution.
- To give a never–ending stock of stores and different materials so between time Profit and Loss Account and Balance Sheet can be set up without stock taking and minds stores, and changes are made at visit interims. Additionally, to give the premise to creation arranging and for maintaining a strategic distance from superfluous wastages or misfortunes of materials and stores.

To give data to empower the executives to settle on transient choices of different kinds, for example, citation of cost to extraordinary clients or during a droop, settle on or purchase choice, doling out needs to different items, and so on.

1.4 Concept of Financial, Cost and Management Accounting :

Both money related bookkeeping and cost bookkeeping are worried about orderly chronicle and introduction of monetary information. Budgetary bookkeeping uncovers benefits and misfortunes of the business all in all during a specific period, while cost bookkeeping appears, by examination and confinement, the unit expenses and benefits and misfortunes of various product offerings. The primary contrast between monetary bookkeeping and cost bookkeeping are abridged beneath.

- Money related records are kept to meet the necessities of the Companies Act, Income Tax Act and different statues. Then again cost records are commonly kept intentionally to meet the necessities of the administration. Be that as it may, presently the Companies Act has made it required to keep cost records in some assembling businesses.
- Money related bookkeeping stresses the estimation of benefit, while cost bookkeeping focuses on ascertainment of expenses and aggregates information for this very reason.
- Monetary bookkeeping targets shielding the interests of the business and its owners and others associated with it. This is finished by giving appropriate data to different gatherings, for example, investors or accomplices, present or planned banks and so on. Cost bookkeeping then again, renders data for the direction of the administration for legitimate arranging, activity, control, and basic leadership.

- Monetary records are worried about outer exchanges for example exchanges between the business worry on one side and outsiders on the other. These exchanges structure the reason for instalment or receipt of money. While cost accounts are worried about inner exchanges which do not shape the premise of instalment or receipt of money.
- The expenses are accounted for in total in monetary records however costs are broken into unit premise in cost accounts.
- Monetary records do not give data on the general efficiencies of different laborers, plants and hardware while cost accounts give significant data on the overall efficiencies of different plants and apparatus.
- In budgetary records stocks are esteemed at cost or market value whichever is less, though stocks are esteemed at cost in cost accounts.
- Monetary records unveil the net benefit and loss of the business all in all, while cost accounts reveal benefit or loss of every item, occupation, or administration. This empowers the administration to wipe out less gainful product offerings and expand the benefits by focusing on increasingly beneficial ones.
- Monetary bookkeeping gives working outcomes and budgetary position for the most part gives data through cost reports to the administration as and when wanted.
- Monetary records manage undeniable realities and figures, yet cost records manage raw numbers, however cost records manage statistical data points and somewhat with gauges.
- If there should arise an occurrence of monetary records pressure is on the ascertainment and presentation of benefits earned or misfortunes brought about in the business. Because of this explanation in monetary records, the exchanges are recorded, arranged, and broke down in an emotional way for example as per the idea of use. In cost accounts the accentuation is more on parts of arranging and control and consequently exchanges are recorded in a goal way.

1.4.1 Costing System :

A perfect arrangement of costing is what accomplishes the destinations of a costing framework and carries all points of interest of costing to the business. Coming up next are the primary basics of a perfect cost bookkeeping framework :

- **Effortlessness :** The arrangement of costing ought to be straightforward and plain with the goal that it might be handily seen even by an individual of normal knowledge. Cost bookkeeping framework includes nitty gritty examination of cost. To dodge entanglements in the strategy of cost ascertainment a detailed arrangement of costing ought to be stayed away from and each care must be taken to keep it as straightforward as could reasonably be expected.

- **Appropriateness to the Business :** The cost bookkeeping framework ought to be fit for embracing itself to the changing circumstances of business. It must be fit for extension or constriction relying on the necessities of the business.
- **Exactness :** The arrangement of cost bookkeeping must accommodate precision as far as both ascertainment of cost and introduction of cost information. Else it will end up being deceiving.
- **Likeness :** The records to be kept up must encourage examination over some undefined time frame. The past records must fill in as a premise to manage what is to come.
- **Affordable :** The expenses of generation costing framework must be less. It must bring about expanded advantage when contrasted with the costs acquired in introducing it.
- **Consistency :** The different structures and records utilized under costing framework must be uniform in size and nature of paper. printed structures must be utilized to keep away from delay in the arrangement of different reports. This additionally diminishes the pointless weight of administrative staff. Types of various hues can be utilized in various records or reports.
- **Compromise of Cost and Financial Accounts :** If conceivable the expense and monetary records ought to be interlocked into one interior bookkeeping plan. The arrangement of cost accounts must be equipped for accommodating with monetary records in order to check precision of the arrangement of records.
- **Expeditiousness :** A perfect costing framework is one which gives cost information in a logical structure to the administration. So, all the branches of an industry must dissect and record the applicable things of cost expeditiously to outfit cost data all the time to different degrees of the board. This aides in looking up the advancement of the business exercises all the time.
- **Value :** The premise of distributing overheads to items, divisions or employments must be reasonable and impartial.
- **Obligations and Responsibilities of the Cost Accountant :** Under a decent arrangement of cost bookkeeping the obligations and duties of the cost bookkeeper ought to be plainly characterized. The cost bookkeeper ought to approach all works and offices.

1.4.2 Setting up Cost Accounting System :

At the start it is to be comprehended that a typical cost bookkeeping framework cannot be introduced for a wide range of business undertakings.

The cost bookkeeping framework relies on the idea of business or industry and the item. Before an appropriate arrangement of cost bookkeeping is introduced it is important to embrace a starter examination to know the plausibility of introducing cost bookkeeping framework to such business exercises. While presenting an arrangement of cost bookkeeping it ought to be borne as a primary concern that cost bookkeeping framework must suit the business. This implies the framework must be basic and it must prompt investment funds through the control of cost, i.e., materials, work, and overheads. For the effective working of the costing framework, the accompanying conditions are fundamental :

1. The obligations and duties of cost bookkeeper must be clear.
2. There must be a productive arrangement of material control in business or industry.
3. A sound and all–around structured strategy for wage instalment must be set up in business or industry.
4. Printed structures must be utilized for speedy assemblage of different kinds of cost reports.
5. The presence of sound reason for assortment of overheads and a reason for its distribution to different creation divisions.

Coming up next are the paramount to be considered before introducing a cost bookkeeping framework :

- **Nature of Business :** The nature of a business infers the length of its reality, position in the business or production line, the pace of development and arrangement of the board and so forth. The idea of business fills in as the reason for planning the cost records in regard of straightforwardness, need and speculation engaged with introducing cost bookkeeping framework.
- **Hierarchical Factors :** The issue of introducing cost bookkeeping is to some degree troublesome if there should be an occurrence of a current business association when contrasted with new business. In any case, the current set up of the business association ought to be least upset should the need emerge. To fix up duty to the administrators, it might be important to bunch the offices. The authoritative variables to be considered are size and kind of association, the degrees of the board, assignment and duty, centralisation and decentralization, departmentalisation, accessibility of present–day office types of gear, and number of supervisory or administrative staff.
- **Bookkeeping Aspects :** The components to be considered in regard of bookkeeping are number of budgetary records, existing structures, registers utilized in business and number of duplicates required in business exercises.

- **Territory of Control :** The zones where cost control is to be practiced is to be distinguished with the goal that every administrator may make a move important to his business exercises. On the off chance that material and work control possesses noteworthy territory of control, it must be given highest need for practicing authority over materials and work.
- **Item Price :** The cost or scope of items fabricated and sold additionally decide the technique for costing to be chosen. As needs be cost or scope of items must be examined as far as size, models, styles, advertise zone, contenders and whether the items are made to client's detail or for stocking and selling.
- **Announcing :** The cost bookkeeping framework to be introduced must guarantee recurrence and promptitude in detailing cost information to the administration. It should likewise be called attention to that duplication of detailing is to be maintained a strategic distance from. Further, just that data which is significant for the administration in a specific setting alone ought to be accounted for.
- **Selling and Distribution :** The central elements to be considered with respect to appropriation process are the warehousing offices, inside and outer vehicle, showcase review and other pertinent measures, terms and states of offer and acquisition of requests from clients.
- **Utilization of Electronic Data Processing :** In current time, it has become a typical practice to utilize electronic information preparing supplies and PCs. Right now, is basic to guarantee that the hardware addresses the issues of the framework however not the other route round.
- **Specialized Considerations :** Technical contemplations that impact the establishment of cost accounts are size of manufacturing plant, stream of generation, presence of offices and research facilities, limit of machines and types of gear, cost control systems, inner vehicle, and so on.
- **Consistency :** The act of receiving uniform costing encourages interfirm correlation among different firms having a place with a similar industry of processing plant. Further, it additionally has the advantage of embracing normal costing practice if a holding organization has number of auxiliaries.

Check Your Progress :

1. ____________ helps in ascertaining costs beforehand.

   (A) Financial accounting (B) cost accounting

   (C) Management accounting (D) None of these

2. The scope of cost accounting includes ___________ and ___________

   (A) Cost ascertainment, cost presentation, cost control

   (B) tax planning, tax accounting, financial accounting

   (C) presentation of accounting information, creation of policy, day–to day operation

   (D) none of the above

3. Cost accounting discloses ___________

   (A) The Financial position

   (B) profit/loss of a product, job, or service

   (C) effect and impact of cost on business

   (D) none of these

4. ___________ aids in price fixation.

   (A) Financial accounting (B) cost accounting

   (C) management accounting (D) none of these

5. Service costing is used in industries producing ___________ .

   (A) Products (B) service

   (C) both A & B (D) none of these

1.5 Let Us Sum Up :

Accounting systems take economic events and transactions and processes the data into information helpful to managers. They provide information for five broad purposes : formulating over all strategies and long–term plans, Resource allocation decisions, Cost planning and control, Performance measurement and reporting requirements. Cost Accounting measures, analyses, and reports financial and nonfinancial information relating to the costs of acquiring or using resources in an organization

1.6 Answers for Check Your Progress :

1. B **2.** A **3.** B **4.** B **5.** B

1.7 Glossary :

1. **Cost Accounting** – An area of accounting that involves measuring, recording, and reporting product costs.
2. **Cost Accounting System** – Manufacturing cost accounts that are fully integrated into the general ledger of a company.
3. **Cost Behaviour Analysis** – The study of how specific costs respond to changes in the level of business activity.

1.8 Assignment :

Prepare detailed notes on the cost accounting process. Also, note the advantages and disadvantages of costing system.

1.9 Activities :

Explain the main objectives of cost accounting system.

1.10 Case Study :

Prepare a detailed framework for putting in place a comprehensive cost accounting system in a firm of your choice.

1.11 Further Readings :

1. Cost Accounting : Concepts and Methods – N.K. Agarwal and Deepali Jain

Unit 2

CONCEPT OF FINANCIAL, COST AND MANAGEMENT ACCOUNTING

: UNIT STRUCTURE :

2.0 Learning Objective :

- To understand the concept of financial accounting
- To understand the concept of management accounting
- To study the difference between management accounting and cost accounting
- Features, Advantages and Disadvantages of Management Accounting
- Characteristics of Management accounting
- Uses of Management accounting.

2.1 Introduction :

Accounting can no longer be considered a mere language of business. The need for maintaining the financial chastity of business operations, ensuring the reliability of recorded experience resulting from these operations and conducting a frank appraisal of such experiences has made accounting a prime activity along with such other activities as marketing, production, and finance. Accounting may be broadly classified into two categories – accounting which is meant to serve all parties external to the operating responsibility of the firms and the accounting, which is designed to serve internal parties to take care of the operational needs of the firm. The first category, which is conventionally referred to as "financial accounting", looks to the interest of those who have primarily a financial stake in the organisation's affairs – creditors, investors, employees etc. On the other hand, the second category of accounting is primarily concerned with providing information relating to the conduct of the various aspects of a business–like cost or profit associated with some portions of business operations to the internal parties viz., management. This category of accounting is divided into "management accounting" and "cost accounting"

2.2 Financial Accounting Overview :

Financial accounting is the most typical type of accounting that individuals and businesses come across. When financial accountants work with individuals, they help them to prepare and file returns, reduce their tax burdens and teach good financial management. When financial accountants work with businesses, they use standard rules and processes to perform various functions including :

- Creating end of year financial reports.
- Producing balance sheets and profit / loss reports.
- Providing summaries and details of how the business is performing financially.
- Reporting the financials of the business to executives.
- Reporting the financials of the business to external stakeholders such as stock owners, the IRS, and other government bodies.

2.2 Cost Accounting Overview :

Cost accounting is based on analysing current and future business processes to work out how much those processes are currently costing or will cost in the future. Cost accounting uses specific tools and techniques to analyse business data and provide the following types of information :

- The cost of employing individuals and teams (i.e., payroll and benefits).
- The current or potential costs of projects and programmes.

- The amount of money that individual parts of the business are projected to use.
- Recommendations for making the business more cost–effective.
- Understanding the end–to–end cost of providing products and services.

2.3.1 Difference between Financial Accounting and Cost Accounting :

Both financial and cost accounting are the branches of accounting whose main object is to provide information by recording the business transactions systematically and scientifically so that it may serve the purpose of the management for policy formulation and controlling and to provide necessary protection to the outsiders. Both are based on double entry system and their roles are supplementary.

The ordinary trading account is a locked storehouse of most valuable information, to which cost system is the key. In case of financial accounting stress is on the ascertainment and presentation of profits earned or losses incurred in the business. Due to this reason, in financial accounting the transactions are recorded, classified and analysed in a subjective manner, i.e., according to the nature of expenditure.

They do not provide the information on the relative effectiveness of products, processes, human resources, equipment's and other factors of production. The provision of accounting and financial data at macro level does not provide tools for in–depth analysis for performance in terms of cost efficiency. Thus, financial accounting treats costs very broadly, while cost accounting does this in much greater detail.

In order to illustrate this fact, let us examine the following two statements :

Under Financial Accounting	**₹**
Materials	150000
Wages	70000
Other Expenses	50000
Total Cost	**270000**
Sales	300000
Profit (10% of sales)	**30000**

This reveals an apparently satisfactory profit of ₹ 30,000 which represents 10% of sales. However, the information is too general to be of great use to management, who needs to know the profit or loss of each product so that policy decision can be made.

With this end in view and assuming that three products A, B and C were manufactured, cost accounting records could reveal a position something like the following :

Particulars	Product A (₹)	Product B (₹)	Product C (₹)	Total (₹)
Materials	48000	37000	65000	150000
Wages	15000	25000	30000	70000
Other expenses	15000	18000	17000	50000
Total Cost	78000	80000	112000	270000
Sales	102400	108000	89600	300000
Profit	24400	28000	–22400	30000
Profit (%)	23.8	25.9	–	10

The statement clearly reveals to management that products A and B are obtaining approximately 24% and 26% profit, but product C is pulling down the total profit to 10%.

Thus, management may :

(a) Investigate thoroughly product C to find out possible economies,

(b) Stop production of C,

(c) Increase selling price of C,

(d) Produce C as a loss leader, i.e., produce and sell in the hope of encouraging consumers also to buy A and B provided there are no changes in plant capacity, plant utilisation, volume of sales etc. The cost accountant points out the facts and where possible, suggests remedies; management must make the final decision on policy.

For example, if course (b) were followed, the overhead which had been absorbed by Product C, may have to be absorbed by Products A and B or if course (c) were followed, market research may have to be conducted to determine consumer reactions.

Some of the other differences between financial accounting and cost accounting include :

- Financial accountants generally report their findings to both internal parties (managers and executives) and external parties (stockholders, IRS) whilst cost accountants only report their findings internally.
- Financial accounting is primarily a reporting and controlling business function whilst cost accounting is a function aimed at making the business more efficient through driving change.
- Cost accounting is normally used to help the business make tactical decisions to improve business processes whilst financial accounting helps the business to understand its overall financial performance.
- Financial accounting provides standard reports, normally in a predefined format that can be used by many different areas to understand the financial responsibilities of the business. Reports from cost accounting are normally designed to provide information

in extremely specific areas and to allow managers and executives to make decisions as a result.

- Cost accountants need to understand the details of business processes including inputs, outputs, and resources. Financial accountants need to understand cash flow, tax liabilities, turnover, profit margins and the like.

Both cost accountants and financial accountants perform vital functions for a business. Both types of accounting can help to manage risk and increase understanding of the finances of a business and how to improve them. Ultimately, both types of accountant are essential for the ongoing health of an organization.

2.3.2 Features of Financial Accounting :

Money measurement : In financial accounting only transactions in monetary terms are considered. Transactions not expressed in monetary terms do not find any place in financial accounting, howsoever important they may be from business point of view.

Historical in nature : Financial accounting considers only those transactions which are of historical nature i.e. the transaction which have already taken place. No futuristic transactions find any place in financial accounting, howsoever important they may be from business point of view.

Compulsory to maintain : Financial accounting is a legal requirement. It is necessary to maintain the financial accounting and prepare financial statements there from. It is also obligatory to get these financial statements audited.

Stakeholders : Financial accounting is for those people who are not part of decision–making process regarding the organization like investors, customers, suppliers, financial institutions etc. Thus, it is for external use.

Financial position : It discloses the financial status and financial performance of the business.

Final report : Financial statements which are based on financial accounting are interim reports and cannot be the final ones.

Vary accounting policies : The process of financial accounting gets affected due to the different accounting policies followed by the accountants. These accounting policies differ mainly in two areas : Valuation of inventory and Calculation of depreciation.

2.3.3 Advantages of Financial Accounting :

- Have information about the results of economic operations.
- Know the financial position and cash flows.
- Identify what the organization's assets are
- Report timely the situation of the company.

- Render accounts to third parties.
- Monitor expenses and income corresponding to each period that is evaluated.

2.3.4 Disadvantages of Financial Accounting :

- Subject to fraud
- No discussion of non–financial issues
- Not verified
- No predictive value
- Dependence on historical costs
- Inflationary effects
- Intangible assets not recorded
- Based on specific time period
- Not always comparable across companies

2.4 Cost Accounting Vs. Management Accounting :

The key difference between Cost Accounting vs Management accounting is that Cost accounting is gathering and analysing the information related to cost which provides only the quantitative information to the users of the reports whereas Management Accounting is the preparation of the financial as well as non–financial information i.e., it involves both quantitative and qualitative information.

❖ **Management Accounting :**

Management accounting relates to the provision of appropriate information for decision–making, planning, cost control and performance evaluation. Management accounting turns data into information, knowledge, and wisdom about a business entity's operations. This is one step further than cost accounting. Management accounting works to know the reasons of profit or loss and studies the factors which influence efficiency to assist in decision making. Therefore, cause and effect is an important feature of management accounting.

2.4.1 Differences between Cost Accounting and Management Accounting :

Management accounting and Cost accounting differ from one another.

Management Accounting	Cost Accounting
1. It assists the management in respect of policy making, planning and controlling the execution of plans.	1. It assists the management in respect of cost reduction and cost control.
2. It is a recent development.	2. It is developed before management accounting.

3. It utilizes the information of both financial accounts and cost accounts.	3. It does not utilize the information of management accounts.
4. It employs ratio accounting, fund flow analysis and cash flow analysis.	4. It does not employ ratio accounting, fund flow analysis and cash flow analysis.
5. It gives more emphasis for the future.	5. It gives less emphasis for the future.
6. There is no rigid rules to prepare management accounting records.	6. The ICWAI has prepared rules relating to preparation and maintenance of cost accounting records.
7. The reports of the management accounting are not subject to statutory audit.	7. The reports of the cost accounting are subject to statutory audit.
8. Only internal parties are using the reports of the management accounting.	8. Both internal and external parties are using the reports of the cost accounting.
9. Management accounting has a wider scope.	9. The scope of cost accounting is not wide.
10. Cost of product or service cannot be fixed with the help of management accounting records.	10. The cost of product or service can be fixed with the help of cost accounting records.
11. It is evaluating the performance of the management as an institution.	11. It does not provide for the evaluation of the performance of management.
12. It is concerned with the impact of each element of cost.	12. It does not consider the impact of each element of cost.
13. It is concerned with both short range and long range planning.	13. It is more concerned with short range planning.
14. It analyses and interprets the available accounting information.	14. There is no such analysis and interpretation of available accounting information under cost accounting system.
15. It uses both qualitative and quantitative information.	15. It uses only quantitative information.

2.4.2 Advantages of Management Accounting :

- It helps to increase the efficiency of all functions of management
- It helps in target–fixing, decision–making, price–fixing, selection of product–mix and so on
- Forecasting and Budgeting help the concern to plan the future and financial activities

- Various tools and techniques provide reliability and authenticity to carry out the business functions
- It is useful in controlling wastage and defects
- It helps in complete communication between all levels of management
- It helps in controlling the cost of production thus increasing the profit percentage
- It is proactive–analyses the governmental policies and socio–economic scenario which helps to assess the external environmental impacts on the organization

2.4.3 Disadvantages of Management Accounting :

- It is concerned with financial and cost accounting. If these records are not reliable, it will affect the effectiveness of management accounting.
- Decisions taken by the management accountant may or may not be executed by the management.
- It is very expensive. Only big concerns can adopt this method of accounting.
- New rules and regulations are to be framed, hence there is a possibility of opposition from the employees.
- It is only in the developing stage.
- It provides only data and not decisions.
- It is a tool to the management and not an alternative of management.

2.4.4 Characteristics of Management Accounting :

Following are the characteristic features of management accounting :

- First and foremost, characteristic is that it provides the necessary information to the management. It might be any data– numbers, gross profit, net profit, comparative financial statements, profit, and loss account etc.,
- It is purely analytical
- The interpretations help the management in timely decision–making
- It adopts a selective technique to arrive at the results
- Helps to chart–out the future course of action
- Also helps to know the present financial condition of the firm and the respective implications on the stake holders.

2.4.5 Uses of Management Accounting :

- **Productivity :** To explain the use of management accounts and management information systems in performance management, you only need to collect and evaluate data about employee output relative to hours or payroll. If you track production and find that, on average, it takes about 15 minutes of labour to produce one unit you sell, you can use this information to evaluate outcomes when you change variables.

For example, if you purchase a new piece of labour–saving equipment, you can track productivity before and after you begin using it to determine how much effect it has on your payroll and your bottom line.

- **Sales trends :** By using management accounting, you can evaluate in detail which products and accounts are earning you the most money. Sales figures can help you to pin down whether your products are attracting a particular demographic and whether it's advantageous to market particular products at specific times and at targeted places. This management accounting information gives you the tools you need to target marketing efforts and pinpoint your production numbers.
- **Financial planning :** Management accounting helps you to pay your bills and keep your business afloat. By understanding how much money you have available and how much cash you can expect to have during upcoming periods, you can make strategic decisions about when to borrow money and when to make long–term investments. Planning these moves carefully can save you the stress of running out of working capital and it can save you money on interest and late fees.

Check Your Progress :

1. Basic objective of cost accounting is ___________.

   (A) tax compliance (B) tax audit

   (C) cost ascertainment (D) profit analysis

2. In how many ways cost classification can be done ?

   (A) Three ways (B) Two ways

   (C) Four ways (D) Many ways

3. The purpose of management accounting is to ___________.

   (A) Help banks make decisions

   (B) Past orientation

   (C) Help investors make decision

   (D) Help managers make decisions

4. Management accounting assists the management ___________.

   (A) In planning, direction, and control

   (B) Only in planning

   (C) Only in direction

   (D) Only in control

5. Financial Accounting furnishes data on
   (A) Income and cost for the managers
   (B) Financial conditions of the institutions
   (C) Company's tax liability for a particular year
   (D) All the above

2.5 Let Us Sum Up :

Management accounting focuses on all accounting aimed at informing management about operational business metrics. It uses information relating to costs of products or services purchased by the company. Budgets are often used to quantify the decisions made in operational planning. Management accountants use performance reports to note variances between actual results from budgets. The main difference between management accounting and financial accounting is financial accounting is the collection of accounting data to create financial statements, while management accounting is the internal processing used to account for business transactions.

2.6 Answers for Check Your Progress :

1. C **2.** D **3.** D **4.** A **5.** D

2.7 Glossary :

1. **Accounting :** The process of identifying, measuring, and communicating financial information about an entity to permit informed judgements and decisions by users of the information.
2. **Financial Accounting :** A term usually applied to external reporting by a business where that reporting is presented in financial terms.
3. **Management Accounting :** Reporting accounting information within a business, for management use only.

2.8 Assignment :

Study a company and identify their cost accounting and management accounting practices.

2.9 Activities :

Identify the financial accounting practices of any listed company.

2.10 Case Study :

What are the differences in the cost accounting, management accounting and financial accounting practices between an Indian company and a foreign company ?

2.11 Further Readings :

1. Cost and Management Accounting – M.N. Arora – Latest edition

Unit 3

ELEMENTS AND CLASSIFICATION OF COST

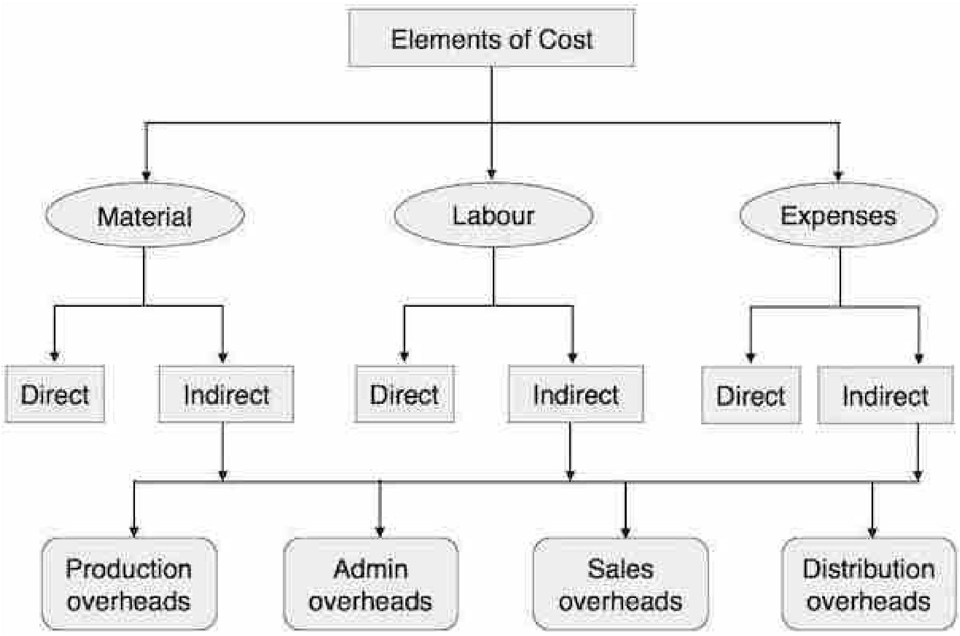
: UNIT STRUCTURE :

3.0 Learning Objectives :

- Understand the classification of costing
- To understand Material costing
- To learn about Labour costing
- To understand about Expenses costing
- Advantages of Cost Classification
- Disadvantages of Cost Classification

3.1 Introduction :

Cost is the value of an activity or asset. Generally, this value is determined by the cost of the resources that are expended to complete the activity or produce the asset. Although money and time are sometimes thought of as resources, they only implement or constrain the use of physical resources. The final activity or asset produced depends on what can be "afforded" given the money and time allocated to the project. Resources can be separated into four elements : equipment, materials, labour, and overhead :



❖ **Components of Costs :**

A **'component of cost'** may be defined as the cumulative or aggregate of different elements of cost. By aggregating or grouping the various elements of cost, the following components or types of cost are obtained :

(a) **Prime Cost :** Prime cost is the aggregate of direct material cost, direct labour cost and direct expenses. Prime Cost is also known as 'Flat Cost', 'First Cost' or 'Direct Cost'.

(b) **Factory Cost :** Prime cost–plus factory overhead (or works overhead) is known as factory cost. Thus, factory cost is the aggregate of direct material cost, direct labour cost, direct expenses, and factory overhead. Factory cost is also known as 'Works Cost', 'Production Cost' or 'Manufacturing Cost'.

(c) **Office Cost :** Factory cost plus office and administrative overhead is known as 'Office Cost'. Office cost is also known as 'Gross Cost' or 'Cost of Production'.

(d) **Total Cost :** Total cost is made up of cost of production plus selling and distribution overhead. Thus, total cost includes all the elements of cost or all the items of expenditure till the commodity has been finally sold Total cost is also known as 'Selling Cost' or 'Cost of Sales'.

3.2 Materials Costing :

What is 'Material' ? The material here means all kinds of materials which are used to produce a product or service. The material may be the basic raw material and all other materials such as components, fuel, lubricants, packing material, other consumables etc. Normally, the direct material is confused with materials, but material includes both direct and indirect materials.

Now what is the material cost ? Material cost means the cost of acquiring the material. It clarifies one thing that material cost does not only mean the cost of purchasing the material from the supplier. On the contrary, material cost includes all expenses which are directly attributed to the acquisition of any material.

Materials are an especially important part of business. Normally you think of material as the physical composition of the asset. However, the value of the asset may also include the cost elements of scrap material or manufacturing spares, construction form work and expendable safety items, and the cost of transporting the material to the work site. Generally, a distinction can be made between direct and indirect material cost :

Material cost constitutes a major proportion of the total cost of the product. All products are made up of one or many materials. So, the accurate determination of material cost may be direct material cost or indirect material is essential.

Whenever a product/component is manufactured out of a material some portion of it goes as waste/scrap in the form of chips or risers etc. In addition to this some components/parts may not meet the final specifications essentially needed such as surface finish, dimensions and surface hardness etc. and are therefore rejected in the final inspection process, thus leading to scrap.

- **Direct material cost :**

Direct material cost means the cost of materials which can be identified with and allocated to cost centres or cost units e.g., the cost of wood in case of furniture, cost of cotton in case of cotton yarn, cost of yarn in case of cloth, cost of iron in case of machinery etc. The main feature of direct materials is that these enter and form part of the finished product.

It includes all type of raw material issued, raw material purchased, transferred from one cost center to another cost center, primary packing material.

- **Indirect material cost :**

It refers to the material cost which cannot be allocated but can be apportioned to or absorbed by cost centers or cost units. These are the materials which cannot be traced as part of the product and their cost is distributed among the various cost centers or cost units on some equitable basis. Examples of indirect materials are coal and fuel for generating power, cotton waste, lubricating oil and grease used in maintaining the machinery, materials consumed for repair and maintenance work, dusters and brooms used for cleaning the factory, stores used in maintenance of machinery, building, etc., stores used by service departments, material which have exceptionally low cost.

Procedure for Estimation of Material Cost :

The procedure for estimation of material cost is as follows :

1. Break up the final product into simple parts so that their areas and volumes can be calculated easily.

2. Neglect small fillets and rounded comers but take into consideration scrap involved. Suitable approximations whenever necessary may be adopted.
3. By applying the formulas of mensuration calculate area and volume of each part.
4. In order to determine the volume of the product, the volumes of all parts calculated above in step 3, are added.
5. In order to calculate weight of the material constituting the product, multiply the product volume by the density of the material of which the product is made.
6. Lastly determine the material cost by multiplying the cost per unit weight to the weight of material. Following table gives the densities of some materials used in production required for estimation of weight of material.

3.3 Labour Costing :

Often, we think of labour as the value of the work needed to complete the activity or asset, i.e., the worker's labour in painting the building or soldering an electrical contact. Labour also includes the work of the engineer who prepares the design, the foreman supervising the field work, or the technician that maintains the wave soldering equipment. Also, here a distinction can be made between direct and indirect contributions to the project :

- **Direct labour :**

It refers to labour cost which can be identified with and allocated to cost centers or cost units. It includes the remuneration paid for converting the raw material into finished products or for altering the construction, composition or condition of the product manufactured by an undertaking e.g., wages paid for spinning yarn in case of spinning mill, wages paid for weaving cloth in case of cloth mill, wages paid to a mason for construction of building by a building contractor etc. In case of a service concern, direct labour cost refers to the wages paid to those who directly carry out or operate the service e.g., wages paid to the driver and conductor of a bus in case of the transport business.

- **Indirect labour :**

It refers to the labour cost or wages which cannot be allocated but can be apportioned to or absorbed by cost centers or cost units e.g., salary paid to factory manager, salary paid to factory supervisor or foreman, salary paid to general manager or sales manager etc.

It also includes supporting activities, engineering, supervision, etc.

Factors affecting labour costs :

There are many factors that need to be considered by a business when deciding how much to pay employees. The starting point will always be the amount that is paid by other businesses in the area for similar grades of employees but, at the same time, the wider economic implications of supply and demand will affect wage rates.

The factors to consider include :

- wage rates paid by other local businesses
- comparisons with national average wage rates
- the national living wage rate imposed by government
- any government incentives to take on additional employees, such as young people or the long–term unemployed
- local employment conditions – high unemployment in the area will drive down wage rates; conversely low unemployment, and especially a shortage of skilled labour, will increase wage rates
- housing and transport costs in the locality
- the impact of interest rate changes, and exchange rates (eg against the euro) on business confidence
- for a new business, it might be prudent to choose to locate in an area of high unemployment – in addition to lower wage rates, there may be government incentives in the form of reduced rents and rates, training and other grants.

3.4 Overheads Costing :

Overhead costs refer to all indirect expenses of running a business. These ongoing expenses support your business but are not linked to the creation of a product or service.

Calculating overhead costs is not just important for budgeting but also determining how much the business should charge for a service or product to make a profit. For example, if you have a service–based business, then apart from the direct costs of providing the service, you will also incur overhead costs such as rent, utilities and insurance. Example of an Overhead Cost ? While overhead costs are not directly linked to profit generation, they are still necessary as they provide critical support for the profit–making activities. The overhead costs depend on the nature of the business. For example, a retailer's overhead costs will be widely different from a freelancer.

Some examples of overhead costs are :

- Rent
- Utilities
- Insurance
- Office supplies
- Travel
- Advertising expenses
- Accounting and legal expenses

- Salaries and wages
- Depreciation
- Government fees and licenses
- Property taxes

Overhead costs can include fixed monthly and annual expenses such as rent, salaries and insurance or variable costs such as advertising expenses that can vary month–on–month based on the level of business activity.

Some organizations also split up these costs into manufacturing overheads, selling overheads and administrative overhead costs. While administrative overhead includes costs front office administration and sales, manufacturing overhead is all of the costs that a manufacturing facility incurs, other than direct costs.

Direct costs required to create products and services, such as direct labor and materials, are excluded from overhead costs.

Businesses have to take into account both overhead costs as well as the direct expenses to calculate the long–term product and service prices. Doing so allows the business to earn profits on a long–term basis.

Production or manufacturing overheads

In the world of manufacturing–as competition becomes more intense and customers demand more services–it is important that management not only control its overhead but also understand how it is assigned to products and ultimately reported on the company's financial statements. We view overhead as two types of costs and define them as follows :

- **Manufacturing overhead :**

Manufacturing overhead (also referred to as factory overhead, factory burden, and manufacturing support costs) refers to *indirect* factory–related costs that are incurred when a product is manufactured. Along with costs such as direct material and direct labour, the cost of manufacturing overhead must be assigned to each unit produced so that Inventory and Cost of Goods Sold are valued and reported according to generally accepted accounting principles.

Manufacturing overhead includes such things as the electricity used to operate the factory equipment, depreciation on the factory equipment and building, factory supplies and factory personnel (other than direct labour). How these costs are assigned to products has an impact on the measurement of an individual product's profitability.

- **Nonmanufacturing overheads :**

Nonmanufacturing costs (sometimes referred to as "administrative overhead") represent a manufacturer's expenses that occur apart from the actual manufacturing function. In accounting and financial terminology, the nonmanufacturing costs include Selling, General and Administrative (SG&A) expenses, and Interest Expense. Since accounting principles do not consider these expenses as product costs, they are not assigned to inventory or to the cost of goods sold. Instead, nonmanufacturing costs are simply reported as expenses on the income statement at the time they are incurred.

Nonmanufacturing costs include activities associated with the Selling and General Administrative functions. Examples include the compensation of nonmanufacturing personnel; occupancy expenses for nonmanufacturing facilities (rent, light, heat, property taxes, maintenance, etc.); depreciation of nonmanufacturing equipment; expenses for automobiles and trucks used to sell and deliver products; and interest expenses. (Note that *factory* administration expenses are considered part of manufacturing overhead.)

Although nonmanufacturing costs are not assigned to products for purposes of reporting inventory and the cost of goods sold on a company's financial statements, they should always be considered as part of the total cost of providing a specific product to a specific customer. For a product to be profitable, its selling price must be greater than the sum of the product cost (direct material, direct labour, and manufacturing overhead) plus the nonmanufacturing costs and expenses.

Costs should be classified according to the major functions for which the elements are used into the following major functions :

Administrative expenses

Administrative expenses include most expenses that are part of your operating budget. To be classified as an administrative expense, the expense must be a regular business expense that aids the business rather than a single department, such as sales or production. Thus, an executive's salary would be an administrative expense, while a salesperson's salary would not. Administrative expenses are typically ongoing and not tied to a single limited–purpose business function.

Examples of Administrative Expenses

Executive salaries and benefits are covered under administrative expenses, as are fees you pay to independent contractors such as attorneys and accountants. Supplies such as paper and software, as well as rent, utilities, professional memberships, and recurring service fees are also classified as administrative expenses. If you have to pay licensing fees for your business, pay for regular inspections or adjust your business practices to comply with a new ordinance, these costs are also administrative expenses.

Accounting for Administrative Expenses

In accounting statements, businesses typically record administrative expenses for the accounting period in which the expense was incurred, not the period during which the expense was paid. Because many administrative expenses are not purchases but recurring payments, you may need to retain bank statements or pay stubs to keep track of your administrative expenses.

Administrative Expenses and Tax Deductions

Most administrative expenses are tax–deductible. The Internal Revenue Service allows businesses to deduct most business expenses that are directly related to the operation of the business. This includes administrative expenses such as subscriptions, employee salary and benefit packages, fees paid to professional service providers, office supplies and professional membership dues.

Selling Expenses

Selling expenses are the costs which are incurred by the sales department of an organization for selling companies products or providing services; this is mainly related to distributing, marketing & selling. This cost is not directly related for production or manufacturing of any product or delivery of any services, so it is categorized as an indirect cost.

Selling expenses are generally listed before general & administrative expenses in operating expenses section because creditors & investors are more interested in the cost which is directly contributing in increasing sales hence they are given more priority as compared to general & administration expenses.

Below is the list of examples of Selling expenses

- Logistics Expenses
- Insurance Expenses
- Shipping Expenses
- Advertising Expenses
- Wages & Salaries of Sales Employees
- Selling Commissions

There are certain industries for which advertising is the backbone of their survival, as in sustainability of that industry is dependent on their selling & marketing strategies, in that case, companies are required to spend heavily on selling expenses. Example, Pepsi & coca–cola have very tough competition hence if one of them comes up with creative advertisement the other company is also pushed to incur such expenses forcefully to keep up their market share.

How to Calculate Selling Expenses ?

To calculate selling expenses we simply have to add all sales–related expenses which are not directly related to the production process; it can be fixed or variable. Salary payables to sales staff come in fixed expenses however commissions payable is derived based on sales so that can be considered as variable expenses.

Research and development expenses

The term R&D or research and development refers to a specific group of activities within a business. The activities that are classified as R&D differ from company to company, but there are two primary models. In one model, the primary function of an R&D group is to develop new products; in the other model, the primary function of an R&D group is to discover and create new knowledge about scientific and technological topics for the purpose of uncovering and enabling development of valuable new products, processes, and services. Under both models, R&D differs from the vast majority of a company's activities which are intended to yield nearly immediate profits or immediate improvements in operations and involve little uncertainty as to the return on investment (ROI). The first model of R&D is generally staffed by engineers while the second model may be staffed with industrial scientists. R&D activities are carried out by corporate and governmental entities.

R&D's Role

New product design and development is more often than not a crucial factor in the survival of a company. In an industry that is changing fast, firms must continually revise their design and range of products. This is necessary due to continuous technological change and development as well as other competitors and the changing preference of customers. Without an R&D program, a firm must rely on strategic alliances, acquisitions, and networks to tap into the innovations of others.

3.5 Advantages of Cost Classification :

- **Effective Cost Control :** Profits can also be increased through effective cost control and cost reduction. Classification of costs into fixed and variable elements helps management to control costs effectively as fixed costs are incurred by management decisions and can be controlled only by the top management. Further, variable costs may be controlled even at the lower levels of management
- **Fixation of Selling Prices :** Profits could be maximised either by reduction and control over costs or by increasing the sales value through increase in sales volume or prices. Fixation of proper selling prices is thus very important for the management
- **Marginal Costing and Break–Even Analysis :** The basic assumption of marginal costing, breakeven analysis and cost–volume profit analysis is that all elements of cost can be segregated into fixed and variable. Hence, for the use of marginal costing and break–even techniques, the classification of costs as fixed and variable is very essential
- **Budgetary Control :** For the preparation of flexible budgets and effective budgetary control, this classification is a pre–requisite. The flexible budget is designed to change in accordance with the level of activity and hence the cost behaviour is very important.
- **Proper Absorption of Overheads :** The analytical study of the behaviour of costs also helps in the proper absorption of overheads as the method to be adopted for the absorption depends upon the nature of overhead.

- **Helpful in Decision–Making :** The classifications of cost into fixed and variable elements helps management in taking many decisions such as make or buy decisions, selection of a proper product mix, capacity decision, operate or close down decisions, etc. Thus, this classification is very essential for not only ascertainment of cost but also for profit planning, cost control and decision–making

3.6 Disadvantages of Cost Classification :

- Cost Classification is Unnecessary.
- Cost Classification System cannot be adopted by Small Business Concerns.
- Cost Classification System is Very Costly.
- Cost Classification Results are Misleading.

Check Your Progress :

1. Material, Labour and Expenses are the three important ___________ of cost.

   (A) Methods (B) Elements (C) Techniques

2. ___________ cost is the cost of commodities supplied to an undertaking.

   (A) Material (B) Labour (C) Expenses

3. Direct Labour Cost is also known as ___________.

   (A) Indirect Labour (B) Indirect Wages

   (C) Direct Wages

4. The expenses which cannot be directly identified with a particular unit or cost centre is known as ___________.

   (A) Indirect Labour (B) Indirect material

   (C) Indirect expenses

5. The aggregate of indirect material, indirect labour, and indirect expenses in termed as ___________.

   (A) Material Cost (B) Overheads

   (C) Labour Cost

3.7 Let Us Sum Up :

Cost classification is the logical process of categorising the different costs involved in a business process according to their type, nature, frequency, and other features to fulfil accounting objectives and facilitate economic analysis. Cost refers to the value sacrificed with the aim of gaining something in return. Every business process involves some cost. It is the basis of profit determination for an organisation. Knowing about the different expenses facilitate the procedure of cost accounting in an organization.

A particular cost can be allocated under multiple categories. For instance, salary paid to an employee is a labour cost as well as a fixed cost. Moreover, the different elements of cost classification are linked to each other in one or the other way.

3.8 Answers for Check Your Progress :

1. B **2.** A **3.** C **4.** C **5.** B

3.9 Glossary :

1. **Raw Materials :** A raw material, also known as unprocessed material, or primary commodity, is a basic material that is used to produce goods, finished products, energy, or intermediate materials that are going to be part of future finished products.
2. **Labour :** Labour is the amount of physical, mental, and social effort used to produce goods and services in an economy
3. **Overhead Expenses :** Overhead expenses are other costs not related to labour, direct materials, or production. They represent more static costs and pertain to general business functions, such as paying accounting personnel and facility costs. These costs are generally ongoing regardless of whether a business makes any revenue.

3.10 Assignment :

Explain the elements of cost classification of any company listed on the stock exchange.

3.11 Activities :

Prepare detailed notes on different elements of cost classification.

3.12 Case Study :

Take any product manufactured by a company and identify the different elements of cost involved in the overall production.

3.12 Further Study :

1. Cost and Management Accounting – M.N. Arora – Latest edition

Unit 4 TECHNIQUE OF COSTING, COST CENTRE, AND COST UNIT

: UNIT STRUCTURE :

4.0 Learning Objective :

- To understand the techniques of costing
- Marginal Costing, Advantages and Disadvantages
- Direct Costing, Advantages and Disadvantages
- Absorption or Full costing
- Components of Absorption Costing
- Characteristics of Absorption Costing.

4.1 Introduction :

There are different methods of costing for different industries. The method of costing to be used in a particular concern depends upon the type of manufacturing and nature of industry.

In addition to the methods of costing, there are certain techniques of costing, which are used along with any of the method. These techniques serve the special purpose of managerial control and policy.

Some of the methods of costing are : 1. Job Costing 2. Contract Costing 3. Cost Plus Costing 4. Batch Costing 5. Process Costing 6. Operation Costing 7. Unit Costing 8. Operating Costing 9. Departmental Costing 10. Multiple Costing.

4.2 Techniques of Costing :

Besides the methods of costing, following are the types of costing techniques which are used by management only for controlling costs and making some important managerial decisions. As a matter of fact, they are not independent methods of cost finding such as job or process costing but are basically costing techniques which can be used as an advantage with any of the methods discussed above.

Some of the techniques of costing are : 1. Budgetary Control 2. Standard Costing 3. Marginal Costing 4. Lifestyle Costing 5. Target Costing 6. Activity Based Costing.

4.3 Marginal Costing :

Marginal costing is a technique of costing in which allocation of expenditure to production is restricted to those expenses which arise as a result of production, e.g., materials, labour, direct expenses and variable overheads. Fixed overheads are excluded in cases where production varies because it may give misleading results. The technique is useful in manufacturing industries with varying levels of output. The concept of marginal costing is practically applied in the following situations :

Evaluation of Performance : The evaluation of the performance of various departments or products can be evaluated with the help of marginal costing which is based on contribution generating capacity.

Profit Planning : This technique through the calculation of P/V Ratio helps the management to plan the activities in such a way that the profit can be maximised.

Fixation of Selling Price : The technique of marginal costing assists the management to fix the price in such a way so that prices fixed can cover at least the variable cost.

Make or Buy decision : Marginal cost analysis helps the management in making or buying decision.

Optimizing Product Mix : To maximise profits and increase sales volume it is necessary to decide an optimized mix or proportion in which various products of a company can be sold.

Cost Control : Marginal Costing is a technique of cost classification and cost presentation which enable the management to concentrate on the controllable costs.

Flexible Budget preparation : As the marginal costing particularly classifies costs as fixed and variable costs which facilitates the preparation of flexible budgets.

4.3.1 Features of Marginal Costing :

The main features of marginal costing may be summed up as :

(i) This technique is used to ascertain the marginal cost and to know the impact of variable costs on the volume of output.

(ii) All costs are classified on the basis of variability into fixed cost and variable cost. Semi–variable costs are segregated into fixed and variable costs.

(iii) Marginal (i.e., variable) costs are treated as the cost of the product or service. Fixed costs are charged to Costing Profit and Loss Account of the period in which they are incurred.

(iv) Stock of finished goods and work–in–progress are valued on the basis of marginal costs.

(v) Selling price is based on marginal cost–plus contribution.

(vi) Profit is calculated in the usual manner. When marginal cost is deducted from sales it gives rise to contribution. When fixed cost is deducted from contribution it results in profit.

(vii) Break–even analysis and cost–volume profit analysis are integral parts of this technique.

(viii) The relative profitability of products or departments is based on the contribution made available by each department or product.

4.3.2 Advantages of Marginal Costing :

The advantages claimed for marginal costing are :

(i) The technique is simple to understand and easy to operate because it avoids the complexities of apportionment of fixed costs which, is really, arbitrary.

(ii) It also avoids the carry forward of a portion of the current period's fixed overhead to the subsequent period. As such cost and profit are not vitiated. Cost comparisons become more meaningful.

(iii) The technique provides useful data for managerial decision–making.

(iv) There is no problem of over or under–absorption of overheads.

(v) The impact of profit on sales fluctuations are clearly shown under marginal costing.

(vi) The technique can be used along with other techniques such as budgetary control and standard costing.

(vii) It establishes a clear relationship between cost, sales and volume of output and breakeven analysis.

(viii) It shows the relative contributions to profit which are made by each of a number of products and shows where the sales effort should be concentrated.

(ix) Stock of finished goods and work–in–progress are valued at marginal cost, which is uniform.

4.3.3 Limitations of Marginal Costing :

Marginal costing suffers from the following limitations :

(i) Segregation of costs into fixed and variable elements involves considerable technical difficulty.

(ii) The linear relationship between output and variable costs may not be true at different levels of activity. In reality, neither the fixed costs remain constant nor do the variable costs vary in proportion to the level of activity.

(iii) The value of stock cannot be accepted by taxation authorities since it deflates profit.

(iv) This technique cannot be applied in the case of contract costing where the value of work–in–progress will always be high.

(v) This technique also cannot be used in the case of cost–plus contracts unless fixed costs and profits are considered.

(vi) Pricing decisions cannot be based on contribution alone.

(vii) The elimination of fixed costs renders cost comparison of jobs difficult.

(viii) The distinction between fixed and variable costs holds good only in the short run. In the long run, however, all costs are variable.

(ix) With the increased use of automatic machinery, the proportion of fixed costs increases. A system which ignores fixed costs is, therefore, less effective.

(x) The technique need not be considered to be unique from the point of cost control.

4.4 Direct Costing :

The practice of charging all direct costs to operations, processes or products and leaving all indirect costs to be written off against profits in the period in which they arise is termed as direct costing. The technique differs from marginal costing because some fixed costs can be considered as direct costs in appropriate circumstances.

Applications of Direct Costing

Direct costing can be used very effectively to get valuable information regarding prospective changes in production costs which will come up as a result of some management action. A few good examples of applications of direct costing include :

Equipment updating

If management is looking to upgrade old machinery and equipment or purchase of modern machinery, direct costing can give an idea how this machine will affect their direct cost. A new machine may be costly but overall, it could reduce direct cost of production by decreasing labour, loss of material and better performance.

Price Setting

Another important use of direct costing could be a determination of lowest possible cost that must be charged to customers or clients in order to remain at break even.

Profitability Analysis

Direct costing can be applied for the determination of profitability of various clients by deducting direct cost of their purchase price. One can find the contributions of various clients towards company's profits and overhead and comparison can be easily made.

Budgeting

Direct costing also help in creating a budgeting system by using it to change budget variable costs to match the volumes of actual sale achieved.

4.4.1 Advantages of Direct Costing :

The advantages of direct costing have generally been well recognized by top CFOs, production managers, marketing managers, and cost analysts. Direct costing overcomes the principal problem of absorption costing, that is, the distortion of the time relationship of "sales", "cost of goods sold", and "net income". Following are the principal advantages of direct costing :

1. Operations Planning :

The plan of operations, or master budget plan, covers all aspects of future operations designed to reach an established profit goal. Direct costing facilitates the compilation of profit–planning data, which cost departments have always developed–often at a great expenditure of time and effort, long before the advent of the present direct costing structures. The readily available data on variable cost and contribution margin permits quick answers to the scores of cost decisions that management must make each day, such as the installation of a new machine or special cost center. Reliable estimates of unitized variable costs and total fixed costs can be readily provided by direct costing.

If variable costs are ₹ 14 per unit, which is expected to be 70% of the unit sales price of ₹ 20, in line with similar products, and the total fixed costs are ₹ 45,000, the following quick feasibility computation can be made. The unit sales are projected to be 20,000 per year.

	Per Unit	Total Amount	Percent
Sales (20,000 units)	₹ 20	₹ 400,000	100.00%
Variable costs	₹ 14	₹ 280,000	70.00%
Contribution margin	₹ 6	₹ 120,000	30.00%
Fixed costs		₹ 45,000	11.20%
Net operating income		₹ 75,000	18.80%

The key to the above computation is the variable cost of ₹ 14. The product would have to sell at ₹ 20, in accordance with the general pricing policy of variable cost being 70% of selling price (₹ 14 / 70% = ₹ 20). The marketing department estimates that annual sales would be approximately 20,000 units. With ₹ 400,000 sales, the net operating income would be ₹ 75,000, or 18.8% of sales. The project would be worth exploring further, since the net operating income percentage comfortably exceeds the break–even point analysis.

2. Cost–Volume–Profit Analysis :

A great many applications involving break–even analysis or cost–volume analysis are continually used by management in the day–to–day operations of a manufacturing company. Most managerial decisions are cost–related, and an understanding of these relationships is essential.

There are simple computations to determine the break–even point after the contribution margin and fixed costs are known. The break–even point is the sales volume at which there will be neither a profit nor a loss. Great many applications involving break–even analysis or cost–volume analysis are continually used by management in the day–to–day operations of a manufacturing company. Most managerial decisions are cost–related, and an understanding of these relationships is essential.

There are simple computations to determine the break–even point after the contribution margin and fixed costs are known. The break–even point is the sales volume at which there will be neither a profit nor a loss. Below this level a loss will occur; above this level a profit will be earned. The break–even point is where the total contribution margin is equal to the total fixed expenses.

3. Management Decisions :

An adequate direct cost system will, of necessity, have to provide for the proper segregation of fixed and variable costs. Mixed costs will have been separated into fixed and variable components, and thus a convenient system is provided for accumulation and evaluation of costs. Forecasting of costs and contribution margins, flexible budget analysis, relationship of costs to sales volume and sales price, and many other cost relationships can be readily studied. The direct cost income statement will enable management to see and understand the effect that period costs have on profits and will facilitate better decision making.

4. Product Pricing :

Marketing department managers have been using variable costing in setting selling prices for many years. The understanding of contribution margin and sales pricing is one of the first things they must learn if they are to be successful.

Retailers know they must add a given percentage to cost to arrive at selling price. The contribution margin (sales minus variable costs) must be large enough to cover all fixed expenses such as salaries, rent, and taxes and also provide a reasonable income and an adequate return on investment. Of course, retailers cannot arrive at unrealistic selling prices because their competitors may have lower selling prices. The law of supply and demand will come into operation. If the price is too high, customers will not buy, and the inventory will not move. Therefore, retailers will have to lower the selling price by reducing their rate of mark–up; and if the final return is to be maintained, they will have to reduce variable and/or fixed costs–a difficult task, at best.

5. Management Control :

The reports based on direct costing are far more effective for management control than those based on absorption costing. First, the reports are more directly related to the profit objective or budget for the period. Deviations from standards are more readily apparent and can be corrected more quickly.

The variable cost of sales changes in direct proportion with volume. The distorting effect of production on profit is avoided, especially in a period following high production when substantial amounts of fixed costs are carried in inventory over to the next period. A marked increase in sales in the period after high production under absorption costing will have a significant negative impact on the net operating profit as inventories are liquidated.

Direct costing can help to pinpoint responsibility according to organizational lines; individual performance can be evaluated on reliable and appropriate data on the basis of current period activity. Operating reports can be prepared for all segments of the company, with costs separated into fixed and variable and the nature of any variance clearly shown. The responsibility for costs and variances can then be more readily attributed to specific individuals and functions, from top management on down.

4.4.2 Disadvantage of Direct Costing :

Although direct costing has many applications, still there are some limitations. One is ignorant of indirect costs. Therefore, the use of direct costing is not highly advisable for calculating long–term profitability. Ignoring huge indirect costs could lead to inaccurate results of long–term costing and pricing decisions. Following are the principle demerits of direct costing :

- **External reporting :** Direct costing is prohibited for the reporting of inventory costs under both generally accepted accounting principles and international financial reporting standards. This means that you cannot report the cost of inventory as though it only includes direct costs; you must also include a proper allocation of indirect costs. If you used direct costing for external reporting, then fewer costs would be included in the inventory asset on the balance sheet, resulting in more costs being charged to expense in the current period.
- **Increasing costs :** Direct costing is sometimes targeted at whether to increase production by a specific amount in order to accept an additional customer order. For the purposes of this specific decision, the analyst usually assumes that the direct cost of the decision will be the same as the historical cost. However, the cost may actually increase. For example, if a machine is already running at 80% of capacity and a proposed decision will increase its use to 90%, this incremental difference may very well result in a disproportionate increase in the maintenance cost of the machine. Thus, be aware that a specific direct costing scenario may contain costs that are only relevant within a narrow range; outside of that range, costs may be substantially different.
- **Indirect costs :** Direct costing does not account for indirect costs, because it is designed for short–term decisions where indirect costs are not expected to change. However, all costs change over the long term, which means that a decision that can impact a company over a long period of time should address long–term changes in indirect costs. Consequently, if a company uses an ongoing series of direct cost analyses to drive its pricing decisions, it may end up with an overall pricing structure that is too low to pay for its overhead costs.
- **Relevant range :** A direct costing analysis is usually only valid within the constraints of the current capacity level. It requires a more sophisticated form of direct costing analysis to account for changes in costs as sales volumes or production volumes increase.

Direct costing is an excellent analysis tool. It is almost always used to create a model to answer a question about what actions management should take. It is not a costing methodology for constructing financial statements – in fact, accounting standards specifically exclude direct costing from financial statement reporting. Thus, it does not fill the role of a standard costing, process costing, or job costing system, which contribute to actual changes in the accounting records. Instead, it is used to extract pertinent information from a variety of sources and aggregate the information to assist management with any number of tactical decisions. It is most useful for short–term decisions, and least useful when a longer–term time frame is involved – especially in situations where a company must generate sufficient margins to pay for a large amount of overhead.

Though useful, direct costing information is problematic in situations where incremental costs may change significantly, or where indirect costs may be pertinent to the decision.

4.5 Absorption or Full Costing :

The practice of charging all costs both variable and fixed to operations, products or processes is termed as absorption costing.

Absorption costing is defined as a process of cost accounting that is used for valuing inventory. The cost of finished goods as per the absorption method includes the cost of

- Fixed manufacturing overhead
- Variable manufacturing overhead
- Direct labour
- Direct materials

This is a method that enables a company to gather and collect all the manufacturing costs and assigning them to the product so that they are included in the final cost price of the product. Absorption costing is a necessity for a company as it is needed for income tax reporting and financial reporting.

4.5.1 Components of Absorption Costing :

Absorption costing is a tool that helps to determine the end–to–end cost of producing a service or a product. It offers an accurate view of the costs that occur to produce an inventory. It includes variable and fixed costs that are needed for manufacturing a product.

Direct costs like material costs and indirect costs, like overhead costs, are also included in inventory pricing. The components of absorption costing are.

1. **Direct costs :** These expenses are directly related to the manufacturing process of a product and include raw material costs, wages of staff, and overhead expenses.
2. **Fixed costs :** These are overhead expenses that remain the same regardless of the fact how much more or less an organization is selling, for y7instance lease of the building and salaries.
3. **Variable overhead costs :** These are the indirect expenses that occur while operating an entity that can fluctuate because of manufacturing activities; for example, the extra staff is hired to increase the output as there is an increase in demand.

4.5.2 Types of Absorption Costing :

There are three main types of absorption costing.

1. **Job order costing :** The cost calculation is allocated to the product or services in LOTS and batches.

2. **Activity–based costing :** The cost calculation is allocated to finished goods from cost items. It is important for small entities that do not have financial reserves and cannot bear the loss.

3. **Process costing :** The cost calculation is assigned to a product due to the lack of LOTS or batches.

4.5.3 Characteristics of Absorption Costing :

The characteristics of absorption costing are explained in simple terms as follows –

1. **Direct and indirect costs :** Absorption costing is popularly known as full cost method as it takes into consideration all the costs that are associated with a product or a service. It includes both direct and indirect costs, although the direct costs vary with production level, whereas the indirect cost does not change.

2. **Direct costs are allocated :** One of the main characteristics of absorption costing is that the direct costs are allocated directly to the product.

3. **Indirect costs are absorbed :** The costs that are incurred are added as overhead costs, and then the overhead is charged go the products with the help of absorption rate. This is done because you cannot trace and allocate the indirect cost to a product; hence, ultimately it is absorbed.

4. **Absorption rate :** Overhead or indirect costs are absorbed in absorption costing with the help of a fair absorption rate that is based on unit produced, labour hours, and machine hours.

5. **Administration expenses are not absorbed :** The administrative cost is shown in the financial statement as operating expenditure. In absorption costing, you can add production expenses, and as administration expenses are not a part of the production, it is dealt with separately.

4.5.5 Advantages of Absorption Costing :

The numerous advantages of absorption costing are described as follows –

- The absorption costing method complies with GAAP and is recognized by ASB in India, ASG in the United Kingdom and FASB in the United States of America for preparing external reports.
- It is in tandem with matching accounting concepts that makes it necessary to match costs with revenues for a specific accounting period.
- It is now easy to calculate net and gross profits separately in the income statement.
- The technique recognizes fixed costs, and thus the pricing ensures all the costs are covered.

- Absorption costing helps a firm to calculate and showcase the actual profit calculation even during seasonal sales and production.
- The allocation of fixed factory overheads to cost centers makes management aware of the cost.
- It is a recognized and accepted accounting tool for stock valuation and preparing external reports.
- You do not need to separate the costs into variable and fixed if you have adopted the absorption costing method.
- The absorption method shows efficient as well as inefficient utilization of resources by indicating over–absorption or under–absorption of factory overheads.
- The stock is not undervalued if you use absorption costing process.
- This accounting tool is used in preparing the valuation of inventory.
- The managers are more aware and responsible because of this process.

4.5.6 Disadvantages of Absorption Costing :

Absorption costing has several disadvantages, and some of them have been described below –

- Treats fixed manufacturing overheads as product cost, and this ultimately increases the output costs. Hence it becomes a bit difficult to make useful decisions with its help.
- It is not a tool for planning functions as it cannot control the cost. The manager should not be accountable for a cost that is not in his power.
- The cost volume profit relationship is not taken into account as the manager has put his onus on the total cost.
- It is a matter of debate between accountants that fixed costs are period costs. They do not have any future advantages and hence should not be added to the cost of inventory and product.
- The mangers can show inflated profit and not the real one as he can easily increase the operating income of a particular period by boosting the production even if there is no actual demand for that product.

There is no distinction between variable and fixed costs in absorption costing. An organization cannot prepare a flexible budget without taking into account this distinction.

4.6 Uniform Costing :

A technique where standardized principles and methods of cost accounting are employed by a number of different companies and firms is termed as uniform costing. Standardization may extend to the methods of costing, accounting classification including codes, methods of defining costs and charging depreciation, methods of allocating or apportioning overheads to cost centers or cost units. The system, thus, facilitates inter–firm comparisons, establishment of realistic pricing policies, etc.

Uniform costing is not a particular method of costing. It is adoption of common accounting principles and in some cases common methods by member companies in the same industry so that their cost figures may be comparable. Uniform costing can be defined as the 'use by several undertakings of the same costing principle and practices.

In other words, it is a technique or method of costing by which different firms of a field or industry apply similar costing system to produce cost data which have maximum comparability. Standard costs may be developed, and cost–control is secured in firm through mutual comparison.

Relative efficiency and inefficiencies in production may be identified and suitable steps may be suggested to control and reduce the cost. The objectives of uniform costing are to standardize accounting methods and to assist in determining suitable prices of products of firms which adopt this method.

4.6.1 Objectives of a Uniform Costing System are :

(a) It provides reliable data for making inter–unit comparisons of cost performances.

(b) It helps to arrive at the cost of production for the industry on a common basis acceptable to all individual units or firm of the industry.

(c) It provides data to compare the cost of production and the production efficiencies between one firm and others.

(d) It ensures that the product prices are based on authentic costing data.

Application of Uniform Costing (Scope) :

Uniform costing may be applied in two different situations.

(a) Common Control and Management : Uniform costing may be applied when number of units or firm producing similar goods and services are under a common control or controlled by the same group of management.

(b) Trade Associations : Uniform costing may be adopted by firms or units which are related to a trade association. Different firm may form an association through which they may adopt common costing method and practice.

Requisites of Uniform Costing :

Uniform costing can be adopted if certain pre–conditions exist. The success of a uniform costing system depends primarily on the cooperation extended by different units or firm towards the working of the system. Every unit should agree to supply required accounting and costing information without reservation to a central body formed by them for implementation of the uniform costing scheme. This body has to correlate, analyse and consolidate the information received from the different units.

Following are pre–requisites of uniform costing :

(a) Firms or units adopting uniform costing must be ready to provide and share accounting and costing information freely.

(b) They should adopt a common system of costing regarding classification, distribution, and absorption of costs. They must agree on a common technique of costing e.g., absorption costing, standard costing or marginal costing.

(c) The firms must use a common terminology and procedure for cost ascertainment and cost control.

(d) There should not be any restriction from the Government in adopting uniform costing.

(e) A central body or proper organisation must be set up for preparing comparative statistics for the use of member units participating in the uniform costing.

(f) Above all, the most important is that units or firms must have mutual trust, confidence, and cooperation.

Key Factors :

The success of uniform costing depends on certain key factors which would be peculiar to each unit. These factors are uniformity in method of production, the size of organisation and accounting method. The Method of Production of units should be uniform. Besides similarity in output, the types of machinery used should be identical. The difference in the type of machinery used will create variation in the efficiency and therefore in costs.

There may be some other varying factors in production. Unless these factors are levelled out by giving weightage on an equitable basis the object of uniform costing will not by served. The Size of Organisation of participating units should not be different. If production capacities of units are widely different, they cannot follow the same principles and practices.

The Accounting Method of different member units should be identical. If the accounting method is different, the information needed for uniform costing may not be available within reasonable time and frequency without unnecessary delay.

Check Your Progress :

1. Absorption costing is also known as ___________.
2. Marginal costing is also known as ___________.
3. Marginal cost is nothing but the ___________ in total cost due to change in the output.

4. ___________ costing is considered as a modern technique of cost control based on the basic principles of uniformity and equality.
5. Uniform costing refers to the use by several undertakings of the same costing ___________ and practices.

4.7 Let Us Sum Up :

Marginal cost is the change in the total cost when the quantity produced is incremented by one. That is, it is the cost of producing one more unit of a good. Planned cost is a key for effective cost control which is not provided by historical cost concepts. The standard costing system was developed to overcome the drawbacks of the historical costing system. Since historical costing deals only with the actual costs incurred, it is not an effective device of cost control.

Standard costing tells us what the cost of the product should be and if the actual cost exceeds the projected cost, the standard costing system can point to the reason of deviation.

Absorption costing also referred to as "full absorption costing" or "full costing" is an accounting method designed to capture all of the costs that go into manufacturing a specific product.

4.8 Answers for Check Your Progress :

1. Total costing **2.** Variable Costing **3.** Change

4. Uniform **5.** Principles

4.9 Glossary :

1. **Marginal Costing :** Marginal costing is the accounting system in which variable costs are charged to cost units and fixed costs of the period are written off in full against the aggregate contribution.
2. **Absorption Costing :** Absorption costing refers to a method of costing to account for all the costs of manufacturing. The management uses this method to absorb the costs incurred on a product. The costs include direct costs and indirect costs.
3. **Uniform Costing :** Uniform costing is the application of the same accounting and costing principles, methods or procedures uniformly by various undertakings in the same industry.

4.10 Assignment :

Prepare a detailed note on the costing methods following by any organization.

4.11 Activities :

Identify five firms of the same sector and compare their costing techniques.

4.12 Case study :

Explain the drawbacks of a costing method with reference to any organization you have visited. Give reasons for the same.

4.13 Further Readings :

1. Methods and Techniques of Costing – M. E. Thukaram Rao

BLOCK SUMMARY

In this block you have learn the various implication and importance of costing for the real–world scenarios. It also guides you towards the definition, nature, and scope of cost accounting from the managerial perspective. This block also focuses on the understanding of the classification of costing and how it is useful for future managers. It comprises different techniques of costing like marginal costing, absorption costing and direct costing. Block also teach you the basic concept of cost analysis as well as the technique of uniform costing. It contains the various definition and understanding of cost and their effect into various business process.

BLOCK ASSIGNMENT

Short Questions :

1. Define the term Costing ?
2. What is meant by Cost Accounting ?
3. How do you define the term Cost Accountancy ?
4. State the three most important need for Cost Accounting ?
5. What are the advantages of Cost Accounting ?

Long Questions :

1. Write a brief note on classification of costing
2. Explain marginal costing process in detail
3. What are the advantages and disadvantages of absorption costing ?
4. Explain in the brief the different components of costing

❖ **Enrolment No. :** ____________

1. How many hours did you need for studying the units ?

Unit No.	1	2	3	4
No. of Hrs.				

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	☐	☐	☐	☐	____________
Language and Style	☐	☐	☐	☐	____________
Illustration used (Diagram, tables etc)	☐	☐	☐	☐	____________
Conceptual Clarity	☐	☐	☐	☐	____________
Check your progress Quest	☐	☐	☐	☐	____________
Feed back to CYP Question	☐	☐	☐	☐	____________

3. Any other Comments

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Dr. Babasaheb
Ambedkar
OpenUniversity

BBAR-502

Cost Accounting

BLOCK-2 MATERIALS AND RELATED ASPECTS

BLOCK 2 : MATERIALS AND RELATED ASPECTS

Block Introduction

In this block we will understand the fundamental concepts of materials and some very important concepts such features and importance of materials will be covered. Second Unit of the block contain the objectives of material control, its necessity, and advantages. Third Unit consists of different elements of costing like concept of EOQ and ABC. Forth Unit comprises of different techniques of issue of material like FIFO, LIFO and Average.

Block Objectives

After learning this block, you will be able to understand :

- The meaning, Scope, and Importance of Material.
- Objectives of Material Control.
- Functions of Material Control.
- Necessity and advantages of Material Control
- Concept of EOQ and ABC.
- Concept of Issue of Material.
- FIFO, LIFO and Average
- Advantages of Material Issue
- Limitations of Material Issue

Block Structure

Unit 1	:	Definition of Inventory, Material and Materials Control
Unit 2	:	Objectives of Material Control, Necessity and Advantages
Unit 3	:	Economic Order Quantity Concept and ABC inventory analysis
Unit 4	:	Material Issues : FIFO, LIFO, and Average Cost Method

Unit 1

DEFINITION OF INVENTORY, MATERIAL AND MATERIALS CONTROL

: UNIT STRUCTURE :

1.0 Learning Objectives :

- Low Prices :
- Lower Inventories :
- Reduction in Real Cost :
- Regular Supply :
- Procurement of Quality Materials :
- Efficient handling of Materials :
- Enhancement of firm's goodwill :

1.1 Introduction :

Materials control refers to managerial activities relating to giving instructions or directions to ensure maintaining adequate quality and quantity of materials for uninterrupted production process with the objective of minimizing material cost per unit. Both materials control and inventory control are not one and the same.

Materials control is a wider term, which includes inventory control. Moreover, cost of production, planning of materials, purchase procedure, transportation and usage control are parts of materials control.

Inventory control is confined to the techniques of maintaining stocks at desired levels whether they are raw materials, work in progress or finished goods with the primary objective of minimizing the cost.

1.2 Definition of Inventory and Material :

Inventory is a very expensive asset that can be replaced with a less expensive asset called 'information'. In order to do this, the information must be timely, accurate, reliable, and consistent. When this happens, you carry less inventory, reduce cost and get products to customers faster.

Materials are a very important part of business. It is generally used in manufacturing concerns, refers to as raw materials used for production. Materials account for majority part of cost of goods produced. Generally, a material can be classified as direct material and indirect material :

Direct Materials : Materials, cost of which can be directly attributable to the end product for which it is being used, in an economically feasible way. Direct materials constitute a significant part for manufacturing of goods. Uninterrupted supply of materials of acceptable quality and in required quantity as and when required by the production department is a pre–requisite for carrying out production activities uninterruptedly, because the non–availability of materials will bring the entire production activities to a standstill.

Indirect Materials : The materials which are not directly attributable to a particular final product are Indirect materials. These materials generally do not form part of the finished product however they are required for the smooth running of the production process.

1.3 Meaning of Material Control, Objective of Material Control, Requirements of Material Control :

Material control is the systematic control and regulation of purchase, storage and usage of materials in such a way as to maintain an even flow of production and at the same time avoiding excessive investment in materials. Efficient material control reduces loses and wastages of materials.

Material control is planning of determining what to indent, so that purchasing and storing cost are minimum without affecting production or sales. Lack of control over material leads to excessive consumption and wastage as workers are liable to become careless with irrational supply of materials

Objectives of Material Control

The objectives of Material Control are the following

Uninterrupted supply for production : Primary objective is to control cost of material ensuring that no activity, particularly production, suffers from interruption for want of materials. It is required that constant availability of all materials required for production, howsoever small its cost may be.

Optimization of Material Cost : Ensuring that all the materials are acquired at the lowest possible price without compromising with the quality that is required and considering other relevant factors like reliability in respect of delivery, etc.

Reduction in Wastages : Avoiding unnecessary losses and wastages that may arise from deterioration in quality due to defective or long storage or from obsolescence. It may be noted that losses and wastages in the process of manufacturing are a concern to production department.

Adequate Information : Maintenance of proper records to ensure that reliable information is available for all items of materials and stores that not only helps in detecting losses and pilferages but also facilitates proper production planning

Completion of production on time : Proper material management is very necessary for fulfilling orders on time. This adds to the goodwill of the business.

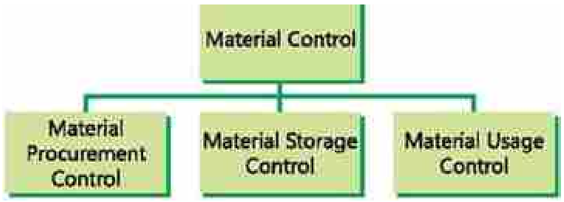
Requirements of Material Control :

Requirements of material control can be summarized as follows :

- Proper co–ordination of all departments involved viz. finance, purchasing, receiving inspection, storage, accounting, and payment.
- Determining purchase procedure to see that purchases are made, after making suitable enquires, at the most favorable terms to the business.
- Use of standard forms for placing the order, noting receipt of goods, authorizing issue of the materials, etc.
- Preparation of budgets concerning materials, supplies and equipment to ensure economy in purchasing and use of materials.
- Operation of a system of internal check so that all the transactions involving materials, supplies and equipment purchases are properly approved and automatically checked.
- Storage of all the materials and supplies in a well designated location with proper safeguards.
- Operation of a system of perpetual inventory together with continuous stock checking so that it is possible to determine at any time the amount and value of each kind of material in stock
- Operation of a system of stores control and issue so that there will be delivery of materials upon requisition to departments in the right amount at the time they are needed.
- Development of system of controlling accounts and subsidiary records which exhibit summary and detailed material costs at the stage of material receipt and consumption.
- Regular reports of materials purchased, issue from stock, inventory balances, obsolete stock, goods returned to vendors, and spoiled or defective units.

1.4 Elements of Material Control, Material control Procedure :

Material control is a systematic control over the procurement, storage and usage of material so as to maintain even flow of material.



Material control involves efficient functioning of the following operations :

Purchasing of materials

Receiving of materials

Inspection of materials

Storage of materials

Issuing materials

Maintenance of inventory records

Stock audit

Material procurement Procedure

Material procurement procedure can be understood with help of following diagram. Documents required and the departments who initiate these documents are shown sequentially.

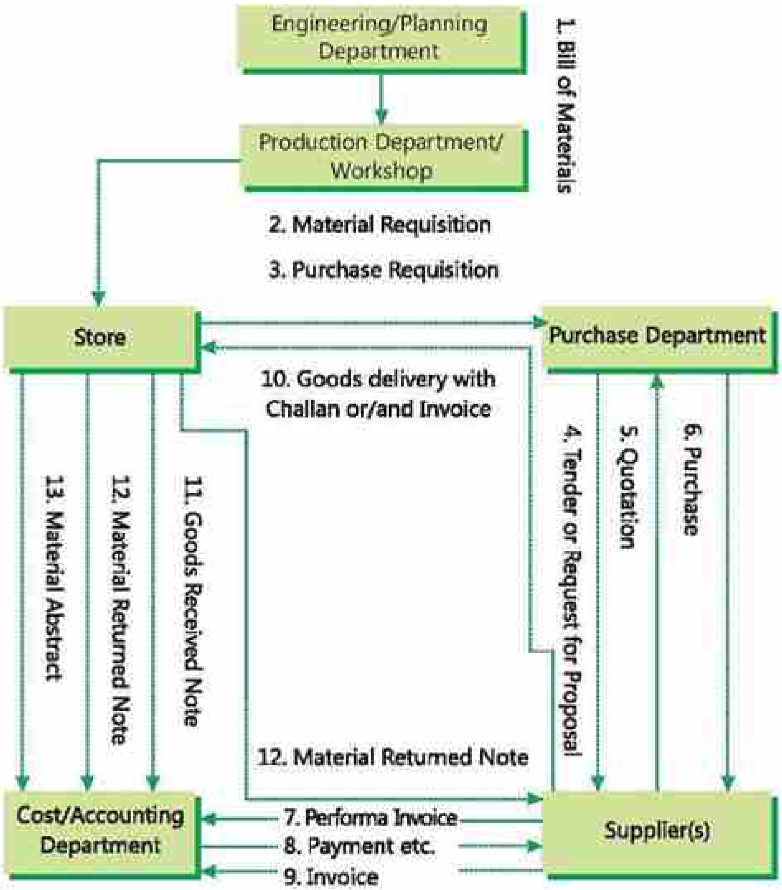


Diagram: Material Procurement Procedure

Bill of Materials

It is also known as Materials Specification List or Materials List. It is a detailed list specifying the standard quantities and qualities of materials and components required for producing a product or carrying out any job. The materials specification list is prepared by the product development team commonly known as engineering or planning department in a standard form. This is shared with other concerned department like Marketing, Production, Store and Cost/ Accounting department.

Material Requisition Note

It is also known as material requisition slip. It is a voucher of authority used to get materials issued from store. Generally, it is prepared by the production department and materials are withdrawn on the basis of material requisition list or bill of materials. If no material list has been prepared, it is desirable that the task of the preparation of material requisition notes be left to the planning department or by the department requires the materials. The note is shared with Store and Cost/Accounting department

Purchase Requisition

This is a document which authorises the purchase department to order for the materials specified in the note. Since the materials purchased will be used by the production departments, there should be constant co–ordination between the purchase and production departments. A purchase requisition is a form used for making a formal request to the purchasing department to purchase materials. This form is usually filled by the storekeeper for regular materials and by the departmental head for special materials (not stocked as regular items).

At the beginning a complete list of materials and stores required should be drawn up, which should be reviewed periodically for any addition or deletion. On the basis of standing order, once an item is included in the standard list, it becomes the duty of the purchase department to arrange for fresh supplies before existing stocks are exhausted. Any change in the consumption pattern should be informed to the purchase department for necessary action form their end.

For control over buying of regular store materials, Inventory control system is to determine stock levels to be maintained and the number of quantities to be ordered. In respect of special materials, required for a special order or purpose, it is desirable that the concerned technical department should prepare materials specifications list specifying the quantity, size and order for the materials.

Purchase requisition note may either be originated by the stores department in connection with regular materials or by the production planning or other technical departments in respect of special materials.

Request for proposal/Inviting quotation

After receipt of duly authorised purchase requisition from the store department or other departments, role of purchase department comes into play. If a concern can afford or the size of the concern is big enough, there should be a separate purchase department for all purchases to be made on behalf of all other departments. Such a department is bound to become expert in the various matters to be attended to, for e.g., units of materials to be purchased and licenses to be obtained, transport, sources of supply, probable price, etc.

Material purchase department is confronted with issues like What to purchase, when to purchase, at what price to purchase, etc. To overcome these questions, purchase department make an enquiry into the market for required material. Some organisations follow the open and transparent purchase policy and invite quotations from the interested vendors. This process is called Tender Notification of Invitation of Tender.

Selection of Quotation

After invitation of tender from the vendors, interested vendors who are fulfilling all the criteria mentioned in the tender notice send their price quotation to the purchase department. On the receipt of quotations, a comparative statement is prepared. For selecting material suppliers, the factors which the purchase department keeps in its mind are–price, quantity, quality offered, time of delivery, mode of transportation, terms of payment, reputation of supplier, etc.

Preparation and execution of purchase orders

Having decided on the best quotation that should be accepted, the purchase manger or concerned officer proceeds to issue the formal purchase order. It is a written request to the supplier to supply specified materials at specified rates and within a specified period. Generally, copies of purchase order are given to Store or order indenting department receiving department and cost accounting department. A copy of the purchase order with relevant purchase requisitions, is held in the file of the department to facilitate the follow–up of the delivery and also for approval of the invoice for payment

Receipt and inspection of materials

After execution of purchase order, necessary adjustment is made to receive the delivery of materials. After receipt of materials along with relevant documents or/ and invoice, store department arrange to inspect the materials for its conformity with purchase order. After satisfactory inspection, materials are received, and Goods Received Note is issued. If some materials are not found in good condition and/or are not in conformity with the purchase order, they are returned back to the vendor along with a Material Returned Note.

(A) **Goods Received Note :** If everything is in order and the supply is considered suitable for acceptance, the receiving department prepares a Receiving report or material inward note, or goods received note. Generally, it is prepared in quadruplicate, the copies being distributed to purchase department, store or order indenting department, receiving department and accounting department.

(B) Material Returned Note : Sometimes materials have to be returned to suppliers after these have been received in the factory. Such returns may occur before or after the preparation of the receiving report. If the return takes place before the preparation of the receiving report, such material obviously would not be included in the report and hence not shown in the stores ledgers. In that case, no adjustment in the account books would be necessary. But if the material is returned after its entry in the receiving report, a suitable document must be drawn up in support of the issue so as to exclude from the Stores of material account the value of the materials returned back. This document usually takes the form of Material Returned Note.

Passing Bills for payment

The invoice received from the supplier is sent to the accounts section to check authenticity and mathematical accuracy. The quantity and price are also checked with reference to goods received note and the purchase order respectively. The accounts section after checking its accuracy finally certifies and passes the invoice for payment.

Check Your Progress – 1 :

1. ___________ are fixed to control inventory.

   (A) Maximum Level (B) Minimum Level

   (C) Re–Order Level (D) Inventory Levels

2. ___________ indicates maximum stock to be maintained.

   (A) Maximum Level (B) Minimum Level

   (C) Re–Order Level (D) Danger Level

3. Request to the supplier to supply material is an ___________ .

   (A) Re–order (B) Purchase Order

   (C) Sale invoice (D) None of the above

4. Goods received note is prepared by ___________.

   (A) Purchase (B) Stores (C) Finance (D) Sales

5. ___________ is decided on the basis of ordering cost and carrying cost.

   (A) EOQ (B) Maximum Stock Level

   (C) Minimum Stock Level (D) Average Stock Level

1.5 Let Us Sum Up :

Materials constitutes major portion of the total cost of the product. Supplies are also used for the manufacture of product. Both materials and supplies are collectively called as stores. The finished goods are termed as stock. Commodities that are supplied to an undertaking to be utilized in the manufacturing process or to be transformed into products are called "Materials".

The terms materials and stores are sometimes used interchangeably, but they are not identical. Stores is a wider term and covers items like sundry supplies, maintenance stores, tools, jigs, equipment besides material consumed in production. The raw materials and supplies are equivalent to cash. Hence, the management should exercise control over the materials and stores

1.6 Answers for Check Your Progress :

1. (D) **2.** (A) **3.** (B) **4.** (B) **5.** (A)

1.7 Glossary :

1. **Material Control :** It is the systematic control over the procurement, storage and usage of materials to maintain even flow of materials and avoiding at the same time excessive investment in inventories.
2. **Material Requisition Note :** Document used to authorize and record the issue of materials from store
3. **Purchase Requisition Note :** Document is prepared by the storekeeper to initiate the process of purchase
4. **Purchase Order :** It is a written request to the supplier to supply certain specified materials at specified rates and within a specified period
5. **Goods Received Note :** This document is prepared by receiving department which unpacks the goods received and verify the quantities and other details
6. **Material Transfer Note :** This document is prepared when the material is transferred from one department to another
7. **Material Return Note :** It is a document given with the goods being returned from factory back to stores.

1.8 Assignment :

What are the objectives of material control ?

1.9 Activities :

In small groups discuss the importance and disadvantages of material control

1.10 Case Study :

Identify a company of your interest and study their material control process.

1.11 Further Readings :

1. Cost accounting : Concepts and Methods – N K Agrawal and Deepali Jain

Unit 2 VALUATION OF MATERIAL RECEIPTS

: UNIT STRUCTURE :

2.0 Learning Objective :

- Understand the concept of valuation of material
- Treatment of Discounts and Subsidy
- Treatment of Duties and taxes
- Treatment of penalties and charges
- Bin Cards, Stock control cards

2.1 Introduction :

One of the main objectives of cost accounting is to ascertain accurate costs. Accuracy of costs depends upon knowing the cost of materials consumed and the labor used to produce a particular product.

Material is the most important element of cost. For this reason, it should be valued and charged to cost units properly.

Valuation of materials can be studied from two main vantage points :

Valuation of materials purchased/received

Valuation of materials issued

2.2 Definition of Valuation, Treatment of Discounts and Subsidy, Treatment of Duties and Taxes :

Definition of Valuation :

After the procurement of materials from the supplier, actual material cost is calculated. Ascertainment of cost of material is known as valuation of materials. Cost of material includes cost of purchase net of trade discounts, rebates, duty draw–back, input credit availed, etc. and other costs incurred in bringing the inventories to their present location and condition. Invoice of material purchased from the market sometime contain items such as trade discount, quantity discount, freight, duty, insurance, cost of containers, taxes, cash discount etc.

Treatment of Discounts and subsidy :

Treatment of discounts and subsidy associated with purchase of materials is tabulated as below.

Sr. No.	Items	Treatment
i.	Trade Discount	Trade discount **is deducted** from the purchase price if it is not shown as deduction in the invoice.
ii.	Quantity Discount	Like trade discount quantity discount is also shown as deduction from the invoice. It **is deducted** from the purchase price if not shown as deduction.
iii.	Cash Discount	Cash discount is not deducted from the purchase price. It is treated as interest and finance charges. It is ignored.
iv.	Subsidy / Grant / Incentives	Any subsidy/ grant/ incentive received from the Government or from other sources is deducted from the cost of purchase

Treatment of Duties and Taxes

Treatment of duties and taxes associated with purchase of materials is tabulated as below.

Sr. No.	Items	Treatment
i.	Road Tax / Toll Tax	Road tax/ Toll tax if paid by the buyer then it **is included** with the cost of purchase.
ii.	Integrated Goods and Service Tax (IGST)	Integrated Goods and Service Tax (IGST) is paid on interstate supply of goods and provision of services and collected from the buyers. It **is excluded** from the cost of purchase if credit for the same is available. Unless mentioned specifically it should not form part of cost of purchase.

iii.	State Goods and Service Tax (SGST)	State Goods and Service Tax (SGST) is paid on intra-state supply and collected from the buyers. It **is excluded** from the cost of purchase if credit for the same is available. Unless mentioned specifically it should not form part of cost of purchase.
iv.	Central Goods and Service Tax (CGST)	Central Goods and Service Tax (CGST) is paid on manufacture and supply of goods and collected from the buyer. It **is excluded** from the cost of purchase if the input credit is available for the same. Unless mentioned specifically CGST is not added with the cost of purchase.
v.	Basic Customs Duty	Basic Custom duty is paid on import of goods from outside India. It **is added** with the purchase cost.

2.3 Treatment of Penalty and Charges, Treatment of Other Expenditure, Material Storage & Records :

Treatment of penalty and charges associated with purchase of materials is tabulated as below.

Sr. No.	Items	Treatment
i.	Demurrage	Demurrage is a penalty imposed by the transporter for delay in uploading or offloading of materials. It is an abnormal cost and **not included** with cost of purchase
ii.	Detention charges / Fine	Detention charges/ fines are imposed for non- compliance of rule or law by any statutory authority. It is an abnormal cost and **not included** with cost of purchase
iii.	Penalty	Penalty of any type is **not included** with the cost of purchase.

Other expenditures

Treatment of other expenditures associated with purchase of materials is tabulated as below.

Sr. No.	Items	Treatment
i.	Insurance Charges	Insurance charges are paid for protecting goods during transit. It **is added** with the cost of purchase.
ii.	Commission or brokerage paid	Commission or brokerage paid is **added** with the cost of purchase.

iii.	Freight inwards	It **is added** with the cost of purchase as it is directly attributable to procurement of material.
iv.	Cost of containers	Treatment of cost of containers are as follows : • Non-returnable containers: The cost of containers is **added** with the cost of purchase of materials. • **Returnable Containers :** If on return of containers cost of containers is returned then in this case cost of containers is not added with the cost of purchase. • If the amount of refund on returning the container is less than the amount paid then only short fall is added with the cost of purchase.
v.	Shortage	Shortage in materials are treated as follows : **Shortage due to normal reasons :** Good units absorb the cost of shortage due to normal reasons. Losses due to breaking of bulk, evaporation, due to unavoidable conditions etc. are the reasons of normal loss. **Shortage due to abnormal reasons :** shortage arises due to abnormal reasons such as material mishandling, pilferage, due to avoidable reasons are not absorbed by the good units. Losses due to abnormal reasons are debited to costing profit and loss account.

Illustration 1 :

An invoice in respect of a consignment of chemicals A and B provides the following information :

Particulars	Amount in ₹
Chemical X 20000 kgs @ ₹ 10 per kg	2,00,000
Chemical Y 16000 kgs @ ₹ 13 per kg	2,08,000
Basic Custom Duty (Credit is not allowed)	40,800
Railway freight	4,500
Total Cost	**4,53,300**

A shortage of 1000 kgs in chemical X and 600 kgs in Chemical Y is noticed due to normal breakages. You are required to determine the rate per kg of each chemical, assuming a provision of 2% for further deterioration.

Solution :

Computation of effective quantity of each chemical available for use

Particulars	**Chemical X (kgs)**	**Chemical Y (kgs)**
Quantity purchased	20,000	16,000
Less : Shortage due to normal breakages	1,000	600
	19,000	15,400
Less : Provision for deterioration @ 2%	380	308
Quantity available	18,620	15,092

Statement showing the computation of rate per kg of each chemical

Particulars	**Chemical X (kgs)**	**Chemical Y (kgs)**
Purchase price	2,00,000	2,08,000
Add : Basic Customs Duty @ 10%	20,000	20,800
Add : Railway Freight (in the ratio of quantity purchased i.e., 5 : 4)	2,500	2,000
Total Cost (A)	2,22,500	2,30,800
Quantity Available (See working) (B)	18,620	15,092
Rate per kg (A/B)	**11.95**	**15.29**

Illustration 2 :

At what price per unit would Part No. B 23 be entered in the Stores Ledger, if the following invoice was received from a supplier.

Invoice	**Amount in ₹**
500 units of Part No. B 23 @ ₹ 10	5,000
Less : 15% discount	(750)
	4,250
Add : SGST @ 12%	510
	4,760
Add : Packing charges (10 non–returnable boxes)	100
	4,860

i. A 2 percent cash discount will be given if payment is made in 30 days

ii. Documents substantiating payment of SGST is enclosed for claiming Input credit

Solution :

Statement showing computation of cost per unit

Invoice	Amount in ₹
Net purchase price	4,250
Add : Packing charges (10 non–returnable boxes)	100
	4,350
No of units purchased	500 units
Cost per unit	8.7

Notes : ***(i) Cash discount is treated as interest and finance charges hence; it is not considered for valuation of material ii) Input credit is available for SGST paid; hence it will not be added to purchase cost.***

Material Storage & Records

Proper storing of materials is of primary importance. It is not enough only to purchase material of the required quality. If the purchased material subsequently deteriorates in quality because of bad storage, the loss is even more than what might arise from purchase of bad quality of materials. Apart from preservation of quality, the store– keeper also ensure safe custody of the material. It should be the function of store–keeper that the right quantity of materials always should be available in stock.

Record of stores may be maintained in two forms :

iii. Bin Cards

iv. Stock Control Card

2.4 Bin Cards, Stock Control Cards :

It is a quantitative record of inventory which shows the quantity of inventory available in a particular bin. Bin refers to a box/ container/ space where materials are kept. Card is placed with each of the bin (space) to record the details of material like receipt, issue and return. It is maintained by store department.

Advantages :

There would be fewer chances of mistakes being made as entries are made at the same time as goods received or issued by the person actually handling the materials.

Control over stock can be more effective, in as much as comparison of the actual quantity in hand at any time with the book balance is possible. Identification of the different items of materials is facilitated by reference to the Bin Card

Disadvantages :

Store records are dispersed over a wide area.

The cards are liable to be smeared with dirt and grease because of proximity to material and also because of handling materials.

People handling materials are not ordinarily suitable for the clerical work involved in writing Bin Cards.

Stock Control Cards

It is also a quantitative record of inventory maintained by stores department for every item of material. In other words, it is a record which shows the overall inventory position in store. Recording includes receipt, issue, return, in hand and order given.

Advantages :

Records are kept in a more compact manner so that reference to them is facilitated.

Records can be kept in a neat and clean way by men solely engaged in clerical work so that a division of workers between record keeping and actual material handling is possible.

As the records are at one place, it is possible to get an overall idea of the stock position without the necessity of going round the stores.

Disadvantages :

On the spot comparison of the 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 the case of bin cards, as the Stock Control Cards are housed in cabinets or trays.

Check Your Progress :

1. Which of the following shall not be deducted from the purchase price if it is not shown as deduction in the invoice.

   (A) Trade Discount (B) Quantity Discount

   (C) Cash Discount (D) None of the above

2. Which of the following cost is included in the valuation of materials

   (A) Penalty and Charges

   (B) Road Tax

   (C) Goods and Service Tax if input tax credit is available

   (D) None of the above

3. Material Requisition Note

   (A) Authorises and records the issue of material of use

   (B) Records the return of unused material

   (C) Records the transfer of materials from one store to another

   (D) A classified record of materials, issues, returns and transfers

4. ___________ shows the stock position at the bin.

   (A) EOQ (B) ABC

   (C) Bin Card (D) None of the above

5. The most important element of cost is ___________.

   (A) Material (B) Overheads

   (C) Labour (D) Chargeable Exp.

2.5 Let Us Sum Up :

After the procurement of materials from the supplier actual material cost is calculated. Ascertainment of cost of material purchased is called valuation of materials of material receipts. Cost of material includes cost of purchase net of trade discounts, rebates, duty draw–back, input credit availed, etc. and other costs incurred in bringing the inventories to their present location and condition.

Invoice of material purchased from the market sometime contain items such as trade discount, quantity discount, freight, duty, insurance, cost of containers, taxes, cash discount etc.

2.6 Answers for Check Your Progress :

1. C **2.** B **3.** A **4.** A **5.** A

2.7 Glossary :

1. **Bin Card :** A prime entry record of the quantity of stocks, kept on in/out/balance, held in designated storage areas.
2. **Stock Control Card :** A record of the quantity of stocks, kept on in/out/balance, held in designated storage areas.

2.8 Assignment :

Distinguish clearly between Bin cards and Stores ledger

2.9 Activities :

In small groups discuss ways to improve the stores ledgers accounting process

2.10 Case Study :

Identify a company of your choice and study their stores ledgers process.

2.11 Further Readings :

1. Cost accounting : Concepts and Methods – N K Agrawal and Deepali Ja

Unit 3

ECONOMIC ORDER QUANTITY CONCEPT AND ABC INVENTORY ANALYSIS

: UNIT STRUCTURE :

3.0 Learning Objectives :

- Concept of Material Control, Reorder stock level, Reorder Quantity, EOQ, Stock Levels
- Concept of Material Control – Relative Classification, Advantages of ABC Analysis, Material Control, Two Bin System
- Importance of Establishment of system of budget, Perpetual inventory records, continuous stock verification, Advantages of stock verification

3.1 Introduction :

Economic order quantity (EOQ) is the ideal order quantity a company should purchase to minimize inventory costs such as holding costs, shortage costs, and order costs. This production–scheduling model was developed in 1913 by Ford W. Harris and has been refined over time. The formula assumes that demand, ordering, and holding costs all remain constant

ABC analysis is an inventory management technique that determines the value of inventory items based on their importance to the business. ABC ranks items on demand, cost and risk data, and inventory mangers group items into classes based on those criteria. This helps business leaders understand which products or services are most critical to the financial success of their organization.

3.2 Material Control, Reorder Stock Level, Reorder Quantity, EOQ, Stock Levels :

There are several methods for material control. Management may employ various methods of Inventory control to have a balance. Management may adopt the following basis for Inventory control :

1. By Setting Quantitative levels
2. On the basis of Relative classification
3. Physical Control

By Setting Quantitative Levels

Material control by setting quantitative levels can be made in following manner :

i. Re–Order stock level : When to order
ii. Re–order Quantity : How Much to order
iii. Maximum Stock level : How much to stock at maximum
iv. Minimum Stock level : How much to stock at least level
v. Average Stock level : Stock normally maintained
vi. Danger Stock level : Kept for emergency purpose
vii. Buffer Stock level : To mitigate sudden demand

Re–order Stock Level

Re–order stock level (ROL) lies between minimum and the maximum levels in such a way that before the material ordered is received into the stores, there is sufficient quantity on hand to cover both normal and abnormal consumption situations. In other words, it is the level at which fresh order should be placed for replenishment of stock.

It is calculated as :

ROL = Maximum Consumption X Maximum Re–Order Period

Where,

Maximum consumption = The maximum rate of material consumption in production activity

Maximum re–order period = The maximum time to get order from supplier to the stores

This can alternatively be calculated as :

ROL = Minimum Stock Level + (Average Rate of consumption X Average Re–order period)

Where,

Minimum Stock Level = The level that must be maintained all the time

Average Rate of Consumption = Average rate of material consumption in production activity. It is also known as normal consumption/usage

Average Re–order period = Average time to get an order from supplier to the stores. It is also known as normal period.

Reorder period is also known as lead time

Re–order Quantity

Re–order quantity is the quantity of materials for which purchase requisition is made by the store department. While setting the quantity to be re–ordered, consideration is given to the maintenance of minimum level of stock, re–order level, minimum delivery time and the most important the cost. Hence, the quantity should be where, the total of carrying cost and ordering cost be at minimum. For this purpose, an economic order quantity should be calculated. For this purpose, an economic order quantity (EOQ) should be calculated

Economic Order Quantity

The size of an order for which total of ordering and carrying cost are at minimum.

Ordering Cost : The costs which are associated with the purchase or order of materials. It includes cost to invite quotations, documentation works like preparation of purchase orders, employee cost directly attributable to the procurement of material, transportation and inspection cost etc.

Carrying Cost : The costs for holding/ carrying of inventories in store. It includes the cost of fund invested in inventories, cost of storage, insurance cost, obsolescence etc

The economic order quantity (EOQ) is calculated as below :

$$\sqrt{\frac{2 \times \text{Annual Requirement (A)} \times \text{Cost per order (O)}}{\text{Carrying Cost per unit per annum (C)}}}$$

Where,

A = Annual Consumption (in Units) in a year

O = Ordering and Receiving Cost per order

C = Cost of carrying annual inventory per unit on annual basis.

Assumptions underlying Economic Order Quantity (EOQ)

The calculation of economic order of material to be purchased is subject to the following assumptions

i. Ordering cost per order and carrying cost per unit per annum are known and they are fixed.

ii. Anticipated usage of material in units is known.

iii. Cost per unit of the material is constant and is known as well.

iv. The quantity of material ordered is received immediately i.e. the lead time is zero

Minimum Stock Level

It is the lowest level of material stock, which must be maintained in hand at all times, so that there is no stoppage of production due to non–availability of inventory.

It is calculated as below :

Minimum Stock Level = Re–order Stock Level – (Average Rate of consumption X Average Re–order period)

Maximum Stock Level

It is the highest level of quantity for any material which can be held in stock at any time. Any quantity beyond this level cause extra amount of expenditure due to engagement of fund, cost of storage, obsolescence etc.

It is calculated as below :

Maximum Stock Level = Re–order Stock Level + Re–order quantity – (Minimum

Rate of consumption X Minimum Re–order period)

Where, Re–order quantity may be Economic Order Quantity

Average stock level

This is the quantity of material that is normally held in stock over a period. It is also known as normal stock level.

It can be calculated as follows :

Average Stock Level = Minimum Stock Level + ½ Re–order quantity

Alternatively, it can be calculated as below :

$$\text{Average Stock Level} = \frac{\text{Minimum Stock Level} + \text{Maximum Stock Level}}{2}$$

Danger Level

It is the level at which normal issues of the raw material inventory are stopped and emergency issues are only made

It can be calculated as follows :

Danger Level = Average Consumption x Lead time for emergency purpose

Minimum consumption may be used where average consumption is not available

Buffer Stock Level

Some quantity of stock may be kept for contingency to be used in case of sudden order; such stock is known as buffer stock.

3.3 Material Control – Relative Classification, Advantages of ABC Analysis, Material Control, Two Bin System :

Material control on the basis of relative classification can be classified as ABC analysis. This system exercises discriminating control over different items of inventory on the basis of the investment involved. Usually, the items are classified into three categories according to their relative importance, namely, their value and frequency of replenishment during a period.

(i) 'A' Category : This category of items consists of only a small percentage i.e., about 10% of the total items handled by the stores but require heavy investment about 70% of inventory value, because of their high prices or heavy requirement or both. Items under this category can be controlled effectively by using a regular system which ensures neither over–stocking nor shortage of materials for production. Such a system plans its total material requirements by making budgets. The stocks of materials are controlled by fixing certain levels like maximum level, minimum level and re–order level.

(ii) 'B' Category : This category of items is relatively less important; they may be 20% of the total items of material handled by stores. The percentage of investment required is about 20% of the total investment in inventories. In the case these items, as the sum involved is moderate, the same degree of control as applied in 'A' category of items is not warranted. The orders for the items, belonging to this category may be placed after reviewing their situation periodically.

(iii) 'C' Category : This category of items does not require much investment; it may be about 10% of total inventory value but they are nearly 70% of the total items handled by store. For these categories of items, there is no need of exercising constant control.

Orders for items in this group may be placed either after six months or once in a year after ascertaining consumption requirements. In this case the objective is to economies on ordering and handling costs.

Advantages of ABC Analysis

The advantages of ABC Analysis are as follows :

(i) Continuity in production : It ensures that, without there being any danger of interruption of production for want of materials or stores, minimum investment will be made in inventories of stocks of materials or stocks to be carried.

(ii) Lower cost : The cost of placing orders, receiving goods and maintaining stocks is minimised specially if the system is coupled with the determination of proper economic order quantities.

(iii) Less attention required : Management time is saved since attention need be paid only to some of the items rather than all the items as would be the case if the ABC system was not in operation.

(iv) Systematic working : With the introduction of the ABC system, much of the work connected with purchases can be systematized on a routine basis to be handled by subordinate staff.

Material Control – Physical Control

The method of material control by way of physical control can be made in following ways :

i. Two Bin System

ii. Establishment of system of budgets

iii. Perpetual inventory records and continuous stock verification

iv. Continuous stock verification

Two Bin System

Under this system each bin is divided into two parts – one, smaller part, should stock the quantity equal to the minimum stock or even the re–ordering level, and the other to keep the remaining quantity. Issues are made out of the larger part; but as soon as it becomes necessary to use quantity out of the smaller part of the bin, fresh order is placed. "Two Bin System" is supplemental to the record of respective quantities on the bin card and the stores ledger card.

3.4 Establishment of System of Budget, Perpetual Inventory Records, Continuous Stock Verification, Advantages of Stock Verification :

To control investment in the inventories, it is necessary to know in advance about the inventories requirement during a specific period usually a year. The exact quantity of various types of inventories and the time when they would be required can be known by studying carefully production plans and production schedules. Based on this, inventories requirement budget can be prepared. Such a budget will discourage the unnecessary investment in inventories.

Perpetual inventory records and continuous stock verification

Perpetual inventory represents a system of records maintained by the stores department. It in fact comprises : (a) Bin Cards and (b) Stores ledger.

The success of perpetual inventory depends upon the following

i. The Stores Ledger – (showing quantities and amount of each item).

ii. Stock Control cards (or Bin Cards).

iii. Reconciling the quantity balances shown by (i) & (ii) above.

iv. Checking the physical balances of a number of items every day systematically and by rotation.

v. Explaining promptly the causes of discrepancies, if any, between physical balances and book figures.

vi. Making corrective entries where called for after step (v) and

vii. Removing the causes of the discrepancies referred to in step (v)

Advantages of perpetual inventory

The main advantage of perpetual inventory are as follows.

i. Physical stocks can be counted, and book balances adjusted as and when desired without waiting for the entire stock–taking to be done.

ii. Quick compilation of Profit and Loss Account (for interim period) due to prompt availability of stock figures.

iii. Discrepancies are easily located, and thus corrective action can be promptly taken to avoid their recurrence.

iv. A systematic review of the perpetual inventory reveals the existence of surplus, dormant, obsolete and slow–moving materials, so that remedial measures may be taken in time.

v. Fixation of the various stock levels and checking of actual balances in hand with these levels assist the Storekeeper in maintaining stocks within limits and in initiating purchase requisitions for correct quantity at the proper time.

Continuous stock verification

The checking of physical 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. The stock verification may be done by internal audit department but are independent of the store and production staff. Stock verifications are done at appropriate interval of time without prior notice. The element of surprise, which is essential for effective control of the system.

Advantages of continuous stock taking

The advantages of continuous stock–taking are :

i. Closure of normal functioning is not necessary.

ii. Stock discrepancies are likely to be brought to the notice and corrected much earlier than under the annual stock–taking system

iii. The system generally has a sobering influence on the stores staff because of the element of surprise present therein.

iv. The movement of stores items can be watched more closely by the stores auditor so that chances of obsolescence buying are reduced.

v. Final Accounts can be ready quickly. Interim accounts are possible quite conveniently.

Check Your Progress :

1. Which of these is not a Material control technique :
   (A) ABC Analysis
   (B) Fixation of raw material levels
   (C) Maintaining stores ledger
   (D) Control over slow–moving and non–moving items
2. Economic order quantity is that quantity at which the cost of holding and carrying inventory is :
   (A) Maximum and equal
   (B) Minimum and equal
   (C) It can be maximum or minimum depending upon case to case.
   (D) Minimum and unequal
3. ABC analysis is an inventory control technique in which :
   (A) Inventory levels are maintained
   (B) Inventory is classified into A, B, and C categories with A being the highest quantity, and lowest value.
   (C) Inventory is classified into A, B, and C Categories with A being the lowest quantity, the highest value
   (D) Either B or C.
4. Re–order level is calculated as :
   (A) Maximum consumption x Maximum re–order period
   (B) Minimum consumption x Minimum re–order period
   (C) 1/2 of (Minimum + Maximum consumption)
   (D) Maximum level – Minimum level
5. Which one out of the following is not an inventory valuation method ?
   (A) FIFO (B) LIFO
   (C) Weighted Average (D) EOQ

3.5 Let Us Sum Up :

The economic order quantity (EOQ) is a company's optimal order quantity for minimizing its total costs related to ordering, receiving, and holding inventory. The EOQ formula is best applied in situations where demand, ordering, and holding costs remain constant over time.

One of the important limitations of the economic order quantity is that it assumes the demand for the company's products is constant over time.

3.6 Answers for Check Your Progress :

1. C **2.** B **3.** C **4.** A **5.** D

3.7 Glossary :

1. **Minimum Level** – It is the minimum quantity, which must be retained as stock
2. **Maximum Level** – It is the maximum limit upto which stock can be stored at any time
3. **Re–Order Level** – It is the level of quantity, when reached, the order needs to be placed
4. **Danger Level** – It is the level at which normal issue of material is stopped, and only emergency materials are issued.
5. **Economic Order Quantity** – The size of an order for which total of ordering and carrying cost are minimum
6. **ABC Analysis** – Items are classified into 3 categories viz. A, B and C category.

3.8 Assignment :

(1) Two components, A and B are used as follows :

Normal Usage	50 per week each	
Maximum Usage	75 per week each	
Minimum Usage	25 per week each	
Re–order quantity	A : 300	B : 500
Re–order period	A : 4 to 6 weeks	B : 2 to 4 weeks

Calculate for each component (a) Re–ordering level, (b) Minimum Level, (c) Maximum Level (d) Average Stock level

(2) The complete Gardener is deciding on the economic order quantity for two brands for lawn fertilizer. Grow More and Nature's Manure. The following information is collected :

	FETILIZER	
	Grow More	**Nature's Manure**
Annual demand	2,000 bags	1,280 bags
Relevant Ordering cost per purchase order	₹ 1,200	₹ 1,400
Annual relevant carrying cost per bag	₹ 480	₹ 560

(i) Compute EOQ for Grow More and Nature's Manure

(ii) For the EOQ, what is the sum of the total annual relevant ordering costs and total annual relevant carrying costs for Grow More and Nature's Manure ?

(iii) For the EOQ, compute the number of deliveries per year for Grow More and Nature's Manure

3.9 Activities :

In small groups discuss the advantages and disadvantages of EOQ and ABC analysis

3.10 Case Study :

Analyse the EOQ system of any listed company

3.11 Further Readings :

1. Cost accounting : Concepts and Methods – N K Agrawal and Deepali Jain

Unit 4 MATERIAL ISSUES : FIFO, LIFO, AND AVERAGE COST METHOD

: UNIT STRUCTURE :

4.0 Learning Objective :

- Meaning and Methods of Pricing of Issues.
- Advantages, Disadvantages and Example of FIFO Method.
- Advantages, Disadvantages and Example of LIFO Method.
- Advantages, Disadvantages and Example of Simple Average Price Method.
- Advantages, Disadvantages and Example of Weighted Average Price Method.

4.1 Introduction :

Against authorized requisitions made, materials are assigned to various jobs for production department. The respective production departments are then debited with the amount of the material issued to them. Here, the matter of concern is what should be the price of material issued. As the price of material changes frequently. Starting from the date of their procurement to the date of the issue. So, selection of price needs a pricing policy which also facilities in preparation of Costing records.

Historical cost and market price are usually the two criteria for setting up a material pricing policy to record the issue of materials.

4.2 Valuation of Material, Specific Price Method, Advantages of Specific Price Method, Disadvantages of Specific Price Method :

There are several methods for valuation of material. The accountant should select the proper method based on the following factors :

1. The frequency of purchases, price fluctuations and its range.
2. The frequency of issue of materials, relative quantity etc.
3. Nature of cost accounting system
4. The nature of business and type of production process
5. Management policy relating to valuation of closing stock Following are some important methods, which are commonly used

Specific Price Method

This method is useful, especially when materials are purchased for a specific job or work order, and as such these materials are issued subsequently to that specific job or work order at the price at which they were purchased

To use this method, it is necessary to store each lot of material separately and maintain its separate account.

Advantages of Specific price method

- The cost of materials issued for production purposes to specific job represent actual and correct costs
- This method is best suited for non–standard and specific products.

Disadvantages of specific price method

- This method is difficult to operate, especially when purchases and issues are numerous

4.3 First in First Out Method, Advantages of First in First Out Method, Disadvantages of First in First Out Method, Last in First out Method, Advantages of Last in First Out Method, Disadvantages of Last in First Out Method :

It is a method of pricing the issues of materials, in the order in which they are purchased. In other words, the materials are issued in the order in which they arrive in the store or the items longest in stock are issued first. Thus, each issue of material only recovers the purchase price which does not reflect the current market price.

This method is considered suitable in times of falling price because the material cost charged to production will be high while the replacement cost of materials will be low.

Lot No.	Date	Quantity Kg	Rate	Amount
1	5–Jan	500	2.00	1000.00
2	15–Jan	350	2.20	770.00
3	21–Jan	600	1.90	1140.00

Material Issued :

10–Jan : 300 units

18–Jan : 450 units

21–Jan : 500 units

Material Issued

Date	Quantity Kg	Lot No.	Rate	Amount
10–Jan	300	1	2.00	600.00
18–Jan	200	1	2.00	400.00
18–Jan	250	2	2.20	550.00
23–Jan	100	2	2.20	220.00
23–Jan	400	3	1.90	760.00

But, in the case of rising prices, if the method is adopted, the charge to production will be low as compared to the replacement cost of materials. Consequently, it would be difficult to purchase the same volume of material (as in the current period) in future without having additional capital resources.

Advantages of FIFO method

- It is the simple to understand and easy to operate
- Material cost charged to production represents actual cost with which the cost of production should have been charged
- In the case of falling prices, the use of this method gives better results.
- Closing stock of material will be represented very closely at current market price.

Disadvantages of FIFO method

- If the prices fluctuate frequently, this method may lead to clerical error.
- Since each issue of material to production is related to a specific purchase price, the costs charged to the same job are likely to show a variation from period to period
- In the case of rising prices, the real profits of the concern being low, may not be adequate to meet the materials purchase demand at the current market price.

Last in first out (LIFO) method

It is a method of pricing the issue of materials. This method is based on the assumption that the items of the last batch purchased are the first to be issued. Therefore, under this method the prices of the last batch are used for pricing the issues, until it is exhausted, and so on. If, however, the quantity of issue is more than the quantity of the latest lot than earlier (lot) and its price will also be taken into consideration.

During inflationary period or period of rising prices, the use of LIFO would help to ensure that the cost of production determined on the above basis is approximately the current one. This method is also useful specially when there is a feeling that due to the use of FIFO or average methods, the profits shown and tax paid are too high.

Example :

Purchased Material

Lot No.	Date	Quantity Kg	Rate	Amount
1	5–Jan	500	2.00	1000.00
2	15–Jan	350	2.20	770.00
3	21–Jan	600	1.90	1140.00

Material Issued :

10–Jan : 300 units

18–Jan : 450 units

21–Jan : 500 units

Material Issued

Date	Quantity Kg	Lot No.	Rate	Amount
10–Jan	300	1	2.00	600.00
18–Jan	350	2	2.20	770.00
18–Jan	100	1	2.00	200.00
23–Jan	500	3	1.90	1140.00

Advantages of LIFO method

- The cost of materials issued will be either nearer to and or will reflect the current market price. Thus, the cost of goods produced will be related to the trend of the market price of materials. Such as trend in price of materials enables the matching of cost of production with current sales revenues.
- The use of the method during the period of rising prices does not reflect undue high profit in the income statement as it was under the first in first out or average method. In fact, the profit shown here is relatively lower because the cost of production considers the rising trend of material prices.

- In the case of falling prices profit tends to rise due to lower material cost, yet the finished products appear to be more competitive and are at market price.
- Over a period, the use of LIFO Helps to iron out the fluctuations in profit
- In the period of inflation LIFO will tend to show the correct profit and thus avoid paying undue taxes to some extent.

Disadvantages of the LIFO method

- Calculation under LIFO system becomes complicated and cumbersome when frequent purchases are made at highly fluctuating rates.
- Costs of different similar batches of production carried on at the same time may differ a great deal.
- In time of falling prices, there will be need for writing off stock value considerably to stick to the principle of stock valuation.
- This method of valuation of material is not acceptable to the income tax authorities.

4.4 Simple Average Price Method, Advantages of Simple Average Price Method, Disadvantages of Simple Average Price Method, Weighted Average Price Method, Advantages of Weighted Average Price Method, Disadvantages of Weighted Average Price Method :

Simple Average Price Method :

Under this method, materials issues are valued at average price, which is calculated by dividing the total of rates at which different lot of materials are purchased by total number of lots. In this method quantity purchased in each lot is ignored.

Example : During the month of May, a company has made four purchases as follows :

1st May, 200 units @ ₹ 10 each

8th May, 100 units @ ₹ 14 each

15th May, 180 units @ ₹ 11 each

25th May, 70 units @ ₹ 15 each

The issue price under Simple average price method would be calculated as below

(₹ 10 + ₹ 14 + ₹ 11 + ₹ 15)/4 = ₹ 12.5 each

Advantages of simple average price method

This method is simple to use for an entity which orders materials in a lot of standard quantity, as only price per lot is taken to calculate average price

In a stable price environment, this method gives a price which approximates to the current market price

Disadvantages of simple average price method

This method does not provide right stock valuation when standard quantity for purchase in a lot is not specified.

When price of materials fluctuates and the entity choses to customize the order quantity, in this situation price under this method may differ substantially from current market price.

Weighted Average price method :

Under this method, the weightage is given to quantities also along with price. Under this method, issue price is calculated dividing sum of products of price and quantity by total number of quantities. This method is useful in case when quantity purchased under each lot is different and price fluctuates frequently.

Example : During the month of May, a company has made four purchases as follows :

1st May, 200 units @ ₹ 10 each

8th May, 100 units @ ₹ 14 each

15th May, 180 units @ ₹ 11 each

25th May, 70 units @ ₹ 15 each

The issue price under Weightage average price method would be calculated as follows :

(₹ 10 x 200 units) + (₹ 14 x 100 units) + (₹ 11 x 180 units) + (₹ 15 x 70 units)

(200 + 100 + 180 + 70) units

6430 / = ₹ 11.69 each

550 units

Advantages of weighted average price method

It smoothens the price fluctuations if at all it is due to material purchases

Issue prices need not be calculated for each issue unless new lot of materials is received.

Disadvantages of weighted average price method

Material cost does not represent actual cost price and therefore, a profit or loss will arise out of such a pricing method.

It may be difficult to compute since every time lot received would require re–computation of issue prices.

Check Your Progress :

1. When material prices fluctuate widely, the method of pricing that gives absurd results is

   (A) Simple average price (B) Weighted average price

   (C) Moving average price (D) None of the Above

2. When prices fluctuate widely, the method that will smooth out the effect of fluctuations is

   (A) Simple average price (B) Weighted average price

   (C) First in first out method (D) None of the above

3. In case of rising prices (inflation), FIFO method will :

   (A) Provide the lowest value of closing stock and profit

   (B) Provide the highest value of closing stock and profit

   (C) Provide the highest value of the closing stock but lowest value of profit

   (D) Provide the highest value of profit but lowest value of closing stock

4. In case of rising prices (inflation), LIFO will :

   (A) Provide the lowest value of closing stock and profit

   (B) Provide the highest value of closing stock and profit

   (C) Provide the highest value of closing stock but lowest value of profit

   (D) Provide the highest value of profit but lowest value of closing stock

5. In which of following methods of pricing, costs lag behind the current economic values ?

   (A) Last–in–first out price (B) First–in–first out price

   (C) Replacement price (D) Weighted average price

4.5 Let Us Sum Up :

Weighted average method is preferred where prices do not change frequently as it spreads the input more frequently.

In case of rising prices of purchase if production cost are lower and stock value are higher in the FIFO method, revised by the LIFO method. Weighted and simple average methods both spread the rising purchase cost between production and closing stock, weighted average method equitably, simple average is erratically.

Complete cost of receipts will be covered while the issue of closing stock when FIFO. LIFO weighted average method is used, whereas while use of simple average method gain, or loss will be created.

Given that prices change frequently weighted average method involves more calculations and may not produce an exact unit price. FIFO and LIFO methods would be preferable since no calculations are necessary to establish the issue prices throughout the year.

4.6 Answers for Check Your Progress :

1. (A) **2.** (B) **3.** (B) **4.** (A) **5.** (B)

4.7 Glossary :

1. **First in First Out Method :** The materials received first are to be issued first when material requisition is received.
2. **Last in First Out Method :** The materials purchased last are to be issued first when material requisition is received
3. **Simple Average Method :**

$$\text{Material issue price} = \frac{\text{Total of unit price of each purchase}}{\text{Total Nos of purchase}}$$

4. **Weighted Average Method :** This method gives due weightage to quantities purchased and the purchase price to determine the issue price.

$$\text{Weighted average price} = \frac{\text{Total Cost of materials in stock}}{\text{Total quantity of materials}}$$

4.8 Assignment :

The following information is extracted from the store's ledger Material X

Opening Stock : NIL

Purchases :

Apr 1 – 100 @ ₹ 1 per unit

Apr 15 – 100 @ ₹ 2 per unit

Issues :

Apr 20 – 60 for Job A

Apr 22 – 60 for Job B

Calculate the value of closing stock using First in first out method, Last in first out method and Weighted average method

4.9 Activities :

In small groups discuss the pros and cons of FIFO, LIFO and average method

4.10 Case Study :

Identify a company which practices LIFO method and analyze it.

4.11 Further Readings :

1. Cost accounting : Concepts and Methods – N K Agrawal and Deepali Jain

BLOCK SUMMARY

In this block you have learnt the various implication and importance of material costing for the real–world scenarios. It also guides you towards the definition, nature, and scope of material cost accounting from the managerial perspective. This block also focuses on the understanding of the classification of material costing and how it is useful for future managers. It comprises different techniques of material valuation like EOQ and ABC analysis. Block also teach you the basic concept of material valuation as well as the technique of FIFO, LIFO and Average Stock. It contains the advantages and disadvantages of different methods.

BLOCK ASSIGNMENT

Short Questions :

1. What do you mean by material valuation ?
2. What are the functions of material control ?
3. Explain the advantages of material control ?
4. What are the disadvantages of material control ?
5. What are the limitations of EOQ ?

Long Questions :

1. Write a brief note on different methods of material valuation.
2. Explain the advantages and disadvantages of FIFO and LIFO method.
3. Explain the concept of ABC analysis in detail.
4. Explain in the brief the limitations of material issue methods.

❖ **Enrolment No. :** ☐

1. How many hours did you need for studying the units ?

Unit No.	1	2	3	4
No. of Hrs.				

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	☐	☐	☐	☐	________
Language and Style	☐	☐	☐	☐	________
Illustration used (Diagram, tables etc)	☐	☐	☐	☐	________
Conceptual Clarity	☐	☐	☐	☐	________
Check your progress Quest	☐	☐	☐	☐	________
Feed back to CYP Question	☐	☐	☐	☐	________

3. Any other Comments

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Dr. Babasaheb
Ambedkar
OpenUniversity

BBAR-502

Cost Accounting

BLOCK-3 LABOUR COSTING AND OVERHEADS

BLOCK 3 : LABOUR COSTING AND OVERHEADS

Block Introduction

In this block we will understand the fundamental concepts of Labour costing and some very important concepts such features and importance of overhead costing will be covered. Second Unit of the block contain the labour turnover and related issues. In addition to this, this unit will also cover different methods of wage payment and their thought process. Third Unit consists of classification of overheads and the different techniques of segregation will also be addressed. Fourth Unit comprises of basis of apportionment and re apportionment of overheads.

Block Objectives

After learning this block, you will be able to understand :

- The meaning, Scope, and Importance of Labour Costing.
- Objectives of Labour Accounting.
- Functions of Labour Accounting.
- Labour Turnover and Related Issues.
- Methods of Wage Payment.
- Classification of Overheads.
- Techniques of segregation.
- Basis of Apportionment.
- Re Apportionment of Overheads.
- Advantages of apportionment of overheads.

Block Structure

Unit 1

CONCEPT OF DIRECT AND INDIRECT LABOUR, LABOUR COST ACCOUNTING

: UNIT STRUCTURE :

1.0 Learning Objectives :

- To understand the concept of Labour costing
- To understand the various components of labour costing
- To learn the different methods of labour costing
- To learn how to calculate direct labour cost
- To understand how to calculate indirect labour cost

1.1 Introduction :

For many companies, particularly in–service industries, labour costs are a substantial component of overall costs. Labour costs can be especially difficult to manage due to fluctuations in revenues and low economies of scale. An important objective for small businesses should be to have flexibility in their labour costs to account for both slow periods and busy periods.

One option for managing labour costs is to cut staff. For small businesses, the owner may be very close with the employees and may have had some of the employees with her from the early days of the company. Letting people go can be a difficult choice. Additionally, cutting staff could mean that the company will be left shorthanded when business picks up.

Temporary staff are sometimes used by small businesses to create greater flexibility when dealing with labour costs. When the company is busy, temporary employees can be hired and then released at the end of the temporary employment period. Additionally, temporary employees can often be compensated at a lower rate than long–term employees, thereby creating additional labour cost savings.

The employees of a small business are often more in tune with the company's present situation than the employees of a larger organization. Based on this understanding, small business employees may be willing to take a voluntary reduction in their hours to help the company make ends meet, because they know that their employment ultimately depends on the health of the company.

1.2 Meaning, Definition and Need for Labour Costing :

Labour cost or total labour cost is the total expenditure borne by employers for employing staff. Total labour cost consists of employee compensation (including wages, salaries in cash and in kind, employers' social security contributions)

The labour costs is the total cost of all labour used in a business. It is one of the most substantial operating costs. These are particularly important in any business which experience heavy human resource labour costs : construction, manufacturing, and other industries which have partially or non–automated operations. These costs include two main subcategories. The direct labour costs is summarized as the cost of labour which is used directly to make products. Meanwhile, the indirect labour costs is simply explained as the cost of labour which is used to support or make direct labour more efficient.

Labour cost is a second major element of cost. Under the present political conditions with a restive labour in organised industry, it is very difficult to reduce labour cost. Therefore, proper control and accounting for labour cost is one of the most important problems of a business enterprise. But control of labour cost presents certain practical difficulties unlike the control of material cost.

The human element in labour makes difficult the control of labour cost whereas materials, being inanimate in nature, could be subjected to a rigid control. Labour is the most perishable commodity and as such should be effectively utilised immediately.

Labour, once lost, cannot be recouped, and is bound to increase the cost of production. On the other hand, materials, being durable, can be used as and when required and can be stored without having to incur immediate loss.

1.2.1 Concept of Direct Labour :

In accounting, direct labour (DL) costs are the costs associated with paying workers to make a product or provide a service. The workers must be clearly involved in producing the product or providing the service. Direct labour costs are one of the costs associated with producing a product or providing a service. Furthermore, direct labour costs contrast with indirect labour costs. Indirect labour costs are costs associated with workers who are necessary, but they are not directly involved with making the product or providing the service.

Examples of direct labour costs include the following :

- In a manufacturing setting, wages paid to workers in an assembly line.
- In a service setting, wages paid to workers in the kitchen of a restaurant.
- In production, processes in which direct labour is an appropriate cost driver, allocate indirect costs to the cost of units of output via DL hours. Then, allocate indirect costs to the units of output using a cost driver rate. For example, it could be ?2 per hour of direct labour, or ?0.40 per hour of direct labour, depending on the specifics of the production process.
- Direct labour is a typical cost driver for allocating indirect costs to units of output from a production process. But as production processes have become more automated over time, using DL is no longer as common as it once was. As a result, other cost drivers are frequently used to allocate indirect costs in a production process or in providing services to customers.

1.2.2 How to Calculate Direct Labour Cost :

Clearly, understanding how to calculate direct labour cost is a must for your business. But what does the direct labour cost formula look like in action ?

Let us say you own a marketing agency, and you are trying to calculate your direct labour costs for an upcoming client campaign. You plan to put a graphic designer, a copywriter, and a coordinator onto the project–and because it is a big project, you want each member of the team to dedicate 50 hours in the upcoming week to manage the campaign launch.

Step 1 : Determine costs for hours worked.

First, you will need to determine how much you will pay your team in wages.

Let us say your graphic designer and copywriter are salaried employees who each make ₹ 75,000 per year, while your coordinator is a non–exempt employee who is paid ₹ 20 per hour.

Because the graphic designer and copywriter are exempt employees, their wages would be their regular rate of pay for the week.

Graphic designer wage costs : ₹ 75,000 / 52 weeks = ₹ 1,442.31

Copywriter wage costs : ₹ 75,000 / 52 weeks = ₹ 1,442.31

Because the coordinator is a non–exempt employee, you will also have to factor in overtime costs for any hours worked over 40 hours in a week–so, in this case, 10 hours of overtime (at 1.5 times their regular rate of pay).

Coordinator regular wage costs : ₹ 20 x 40 hours = ₹ 800

Coordinator overtime wage costs : ₹ 30 x 10 hours = ₹ 300

Coordinator total wage costs : ₹ 1,100

Step 2 : Determine additional labour costs.

Once you have determined the cost of wages, it is time to factor in additional labour costs, including payroll taxes, insurance, and other benefits.

Let us say you pay ₹ 600 in payroll taxes each month for your graphic designer and copywriter, ₹ 350 each month for your coordinator, and ₹ 300 in benefits for each employee each month (which includes health insurance, life insurance, and a retirement contribution).

To calculate the costs for this project, you would need to break down each of those monthly costs into a weekly cost (since the project is slated to last a week) :

Graphic designer and copywriter : ₹ 900 (payroll taxes plus benefits) x 12 months = ₹ 10,800 / 52 weeks = ₹ 207.69 per week

Coordinator : ₹ 650 (payroll taxes plus benefits) x 12 months = ₹ 7,800 / 52 weeks = ₹ 150 per week

Step 3 : Calculate direct labour cost.

Once you have both the regular labour costs and additional labour costs for each employee, you can calculate the direct labour cost for the project.

Graphic designer : ₹ 1,442.31 (regular wages) + ₹ 207.69 (additional labour costs) = ₹ 1,650

Copywriter : ₹ 1,442.31 (regular wages) + ₹ 207.69 (additional labour costs) = ₹ 1,650

Coordinator : ₹ 1,100 (regular and overtime wages) + ₹ 150 (additional labour costs) = ₹ 1,250

Direct labour cost for the project : ₹ 1,650 + ₹ 1,650 + ₹ 1,250 = ₹ 4,550

Step 4 : Use direct labour costs to guide your decisions.

Once you have your direct labour costs, you can use those insights to guide your business decisions.

For example, let us say your client is offering you ₹ 10,000 to launch the campaign. That would mean your business would generate ₹ 5,500 in profit for a week–long project–and would likely mean you would want to continue working on similar projects with that client moving forward. But if your client is offering ₹ 4,000 for the launch, you would take a loss of ₹ 550–which would mean it likely would not be a project you would want to tackle.

Once you have your direct labour costs, you can also use them to create budgets for future projects. For example, if you know you are going to be launching a similar campaign at ₹ 10,000 per project every quarter, you can use these numbers to create financial projections for the rest of the year. And because direct labour costs take all labour costs into account (not just wages), those projections will be more accurate, and you will be able to better manage your annual budget, profits, and cash flow.

1.2.3 Concept of Indirect Labour :

The allocation of indirect labour determines who a company needs to hire to increase efficiency. Companies factor indirect labour costs into their budget if they need additional help outside of the production team. If a company outlines certain functions, they need help with, they are more likely to streamline business operations and achieve their goals. In this article, we explore what indirect labour is, why indirect labour is important to understand, the difference between indirect and direct labour and examples of indirect labour.

Indirect labour refers to employees who work on tasks that contribute to the company's performance outside of producing products and services. They work in areas such as the administrative, accounting and engineering departments. Companies consider indirect labour as part of their overhead costs because they are costs that go beyond one project or service.

Indirect labour is a crucial part of a company's success. Companies should understand the importance of indirect labour because they help calculate the company's profitability and aid with setting prices on products and services.

For instance, if a company hires an accountant, they oversee analysing reports that document financial transactions for the entire company. Once they document a company's transactions from all departments, they can determine if the company is performing well and can make recommendations on how to proceed with spending.

Accountants are indirect labour because they make decisions that affect the company's performance without creating products and services. The accountant's annual salary is the indirect labour cost for the employee who helps the organization identify how they will control spending going forward.

Knowing the importance of indirect labour allows a company to factor in overhead costs to their products and services. They can sum up all overhead costs and add to the cost per unit sold. This calculation aids companies in measuring the final cost charged to the customer. There may be an increase in a product's cost since you are adding overhead costs to the production cost. A company may need to charge more for a product so they can compensate for all indirect labour employees.

1.2.4 How to Calculate Indirect Labour :

Use these steps to calculate indirect labour costs :

Identify the number of hours employees worked.

Subtract time–off for each employee.

Multiply hourly employees' total hours worked by their hourly wage.

Add employees' annual salaries to your calculations.

1. **Identify the number of hours employees worked :** Find out the number of hours each indirect labour employee worked to begin your calculation. Noting the number of hours employees worked shows how much time they spent on tasks other than production. Accountants can look at their accounting software and records to find the number of hours employees worked in each department. They can separate employees who worked on production and in other departments to make an accurate calculation of the number of indirect labour hours.

2. **Subtract time–off for each employee :** Account for time off if paid time off is a part of the employee's compensation package. Factoring in paid time off ensures that they are not noting it as part of the hours an employee worked, which improves the accuracy of the calculation. Employees might have paid sick leave or get paid for training or conferences to attend on the company's behalf, which would also not be entered into the indirect labour calculation.

3. **Multiply hourly employees' total hours worked by their hourly wage :** Multiply the number of hours an hourly employee worked per year by their hourly wage. Making this calculation helps the company understand how much they pay in indirect labour for one employee. If the employee worked 1,715 total hours last year for ₹ 15 per hour, multiply 1,715 by 15, and you pay ₹ 25,725 per year for one employee. Make this calculation for all hourly employees to add it to your indirect labour costs.

4. **Add employees' annual salaries to your calculations :** Add up the annual salaries that the company pays to salaried employees. Companies must make sure they complete this step once they finish steps one through four so they can compare the total of indirect labour costs for hourly employees and salaried employees.

Once you conclude those steps, you can compare them to overhead costs to see if spending needs to be adjusted. Identify the number of salaried employees in the organization to find out how many salaries to add to the calculation you made for hourly employees.

Examples of indirect labour :

Here are examples of indirect labour :

Production manager : Production managers oversee a staff of employees to ensure all aspects of projects are on time. They provide employees clear instructions and expectations of the production process and the steps they need to finish their tasks. They can inform employees about adjustments to the scope of projects if customers communicate it to them.

Security : A security guard makes sure the workspace is safe for employees to perform their tasks. They can patrol around the building to identify suspicious activity and if it poses a threat to employees. They might work morning or evening shifts to keep 24–hour surveillance of the building.

Marketing : Marketing employees promote the company's products and services once they are launched to the public. They produce and publish content on their company's social media pages, and they optimize it so users can find it on search engine result pages (SERPs). Marketing professionals monitor the performance of engagement to see if they are reaching their target audience and adjust their company's marketing strategy based on the results they gathered.

Human resources : Human resources employees recruit, interview and hire employees for various departments. They determine the right payroll and benefits structure to compensate employees and coordinate with management on best practices to train and develop the performance of employees. Human resources can update the employee handbook to reflect company policy.

1.2.5 The Difference between Direct and Indirect Labour :

The difference between direct labour and indirect labour is that only labour involved in the hands–on production of goods and services is direct labour. All other labour is, by default, classified as indirect labour. This distinction is important from an accounting perspective, since the two types of labour are treated differently. The accounting is as follows :

Direct labour : This cost is charged to all units produced during the reporting period. The basis for charging the cost is the number of hours of labour used in the production process.

Indirect labour (factory) : This cost is assigned to a cost pool, from which it is allocated to the units produced during the reporting period. Depending on the level of allocation sophistication, several cost pools may be used, each of which has a separate allocation methodology. For example, a cost pool for real estate costs could accumulate factory rent, and then be allocated out based on the amount of square footage used. Meanwhile, another cost pool for maintenance costs could accumulate maintenance labour and equipment costs and be allocated based on machine hours used.

Indirect labour (administrative) : This cost is charged to expense in the period incurred. It never appears in the balance sheet as an asset.

The only type of labour that should be included in the direct labour classification is for those employees directly involved in the manufacturing process, such as people working on an assembly line or operating machinery. It does not include any support or supervisory staff, such as the factory janitorial, maintenance, administrative, and management employees.

Direct labour should vary in concert with the amount and types of units produced, since this type of labour is entirely variable. Indirect labour is much less likely to change with production volume, since it represents the overhead of a business that is needed to support any level of operations.

1.3 Characteristics of Labour :

Labour has the following peculiarities which are explained as under :

1. **Labour is Perishable :** Labour is more perishable than other factors of production. It means labour cannot be stored. The labour of an unemployed worker is lost forever for that day when he does not work. Labour can neither be postponed nor accumulated for the next day. It will perish. Once time is lost, it is lost forever.

2. **Labour cannot be separated from the Labourer :** Land and capital can be separated from their owner, but labour cannot he separated from a labourer. Labour and labourer are indispensable for each other. For example, it is not possible to bring the ability of a teacher to teach in the school, leaving the teacher at home. The labour of a teacher can work only if he himself is present in the class. Therefore, labour and labourer cannot be separated from each other.

3. **Less Mobility of Labour :** As compared to capital and other goods, labour is less mobile. Capital can be easily transported from one place to other, but labour cannot be transported easily from its present place to other places. A labourer is not ready to go too far–off places leaving his native place. Therefore, labour has less mobility.

4. **Weak Bargaining Power of Labour :** The ability of the buyer to purchase goods at the lowest price and the ability of the seller to sell his goods at the highest possible price is called the bargaining power. A labourer sells his labour for wages and an employer purchases labour by paying wages. Labourers have a very weak bargaining power because their labour cannot be stored, and they are poor, ignorant, and less organised.

   Moreover, labour as a class does not have reserves to fall back upon when either there is no work, or the wage rate is so low that it is not worth working. Poor labourers must work for their subsistence. Therefore, the labourers have a weak bargaining power as compared to the employers.

5. **Inelastic Supply of labour :** The supply of labour is inelastic in a country at a particular time. It means their supply can neither be increased nor decreased if the need demands so. For example, if a country has a scarcity of a particular type of workers, their supply cannot be increased within a day, month, or year. Labourers cannot be 'made to order' like other goods.

   The supply of labour can be increased to a limited extent by importing labour from other countries in the short period. The supply of labour depends upon the size of population. Population cannot be increased or decreased quickly. Therefore, the supply of labour is inelastic to a great extent. It cannot be increased or decreased immediately.

6. **Labourer is a Human being and not a Machine :** Every labourer has his own tastes, habits, and feelings. Therefore, labourers cannot be made to work like machines. Labourers cannot work round the clock like machines. After continuous work for a few hours, leisure is essential for them.

7. **A Labourer sells his Labour and not Himself :** A labourer sells his labour for wages and not himself. 'The worker sells work but he himself remains his own property'. For example, when we purchase an animal, we become owners of the services as well as the body of that animal. But we cannot become the owner of a labourer in this sense.

8. **Increase in Wages may reduce the Supply of Labour :** The supply of goods increases, when their prices increase, but the supply of labourers decreases, when their wages are increased. For example, when wages are low, all men, women and children in a labourer's family must work to earn their livelihood. But when wage rates are increased, the labourer may work alone, and his wife and children may stop working. In this way, the increase in wage rates decreases the supply of labourers. Labourers also work for less hours when they are paid more and hence again their supply decreases.

9. **Labour is both the Beginning and the End of Production :** The presence of land and capital alone cannot make production. Production can be started only with the help of labour. It means labour is the beginning of production. Goods are produced to satisfy human wants. When we consume them, production comes to an end ? Therefore, labour is both the beginning and the end of production.

10. **Differences in the Efficiency of Labour :** Labourer differs in efficiency. Some labourers are more efficient due to their ability,

training, and skill, whereas others are less efficient on account of their illiteracy, ignorance, etc.

11. **Indirect Demand for Labour :** The consumer goods like bread, vegetables, fruit, milk, etc. have direct demand as they satisfy our wants directly. But the demand for labourers is not direct, it is indirect. They are demanded to produce other goods, which satisfy our wants. So, the demand for labourers depends upon the demand for goods which they help to produce. Therefore, the demand for labourers arises because of their productive capacity to produce other goods.

12. **Difficult to find out the Cost of Production of Labour :** We can easily calculate the cost of production of a machine. But it is not easy to calculate the cost of production of a labourer i.e., of an advocate, teacher, doctor, etc. If a person becomes an engineer at the age of twenty, it is difficult to find out the total cost on his education, food, clothes, etc. Therefore, it is difficult to calculate the cost of production of a labourer.

13. **Labour creates Capital :** Capital, which is considered as a separate factor of production is, in fact, the result of the reward for labour. Labour earns wealth by way of production. We know that capital is that portion of wealth which is used to earn income. Therefore, capital is formulated and accumulated by labour. It is evident that labour is more important in the process of production than capital because capital is the result of the working of labour.

14. **Labour is an Active Factor of Production :** Land and capital are considered as the passive factors of production because they alone cannot start the production process. Production from land and capital starts only when a man makes efforts. Production begins with the active participation of man. Therefore, labour is an active factor of production.

1.4 Importance of Labour Cost Control :

1. **To Ensure Proper Utilization of Labour :** Labour cost control is important to make economic utilization of labour force in production process.

2. **To Maximize Output :** Labour cost control is important to obtain maximum quantity of output with the least amount of materials and other resources.

3. **To Ensure Better Quality :** Labour cost control helps to obtain better quality output with the least effort and time of workers.

4. **To Minimize Production Cost :** Labour cost control reduces the cost of production of products manufactured or services rendered.

5. **To Create Better Environment :** Labour cost control ensures the satisfaction of the workers by creating a good working environment in the factory.

6. **To Minimize Labour Turnover :** Labour cost control helps to adopt the fair system of wage payment and to minimize labour turnover.
7. **To Minimize Wastage :** Labour cost control is helpful in minimizing wastage of materials by workers, idle time, and unusual overtime work.
8. **To Ensure Safety :** Labour cost control is helpful to maintain safety working environment.
9. **To Assist the Management :** Labour cost control is important to keep complete records of the employees and to supply information to the management regarding availability, efficiency, utilization, and absenteeism of the workers.
10. **To Maximize Profit :** Labour cost control is very useful to increase the profitability and competitiveness of the organization.

Check Your Progress :

1. Direct labour means ___________.
   (A) labour which can be conveniently associated with a particular cost unit.
   (B) labour which completes the work manually
   (C) permanent labour in the production department
   (D) labour which is recruited directly and not through contractors.
2. Basic objective of labour cost accounting is ___________
   (A) tax compliance. (B) financial audit.
   (C) labour cost ascertainment. (D) profit analysis.
3. In account ting for labour cost :
   (A) Direct labour cost and indirect labour cost are charged to prime cost.
   (B) Direct labour cost and indirect labour cost are charged to overheads.
   (C) Direct labour cost is charged to prime cost and indirect labour cost is charged to overheads.
4. A manufacturing firm is very busy and is working overtime. The amount of overtime premium contained in direct wages would normally be classed as :
   (A) Part of prime cost (B) Factory overheads
   (C) Direct labour cost (D) Administrative overheads
5. Avoidable causes of labour turnover include the following except :
   (A) Redundancy (B) Low wages
   (C) Bad working conditions (D) Marriage

1.5 Let Us Sum Up :

Labour cost is an important value that finance, and accounting professionals calculate to determine the direct and indirect price that a company pays for labour.

The direct cost of labour includes the cost of wages and benefits for employees who are directly involved in producing the product or service commodity. The indirect cost of labour refers to amounts paid for employees that support the commodity but aren't directly involved in making it.

Understanding the cost of labour helps companies price products, and without an understanding of direct and indirect costs companies may find it challenging to arrive at the right cost of products. As a result, a deep understanding of labour cost and how to use it is beneficial for the economy.

1.6 Answers for Check Your Progress :

1. A **2.** C **3.** C **4.** B **5.** D

1.7 Glossary :

1. **Labour :** It is the amount of physical, mental, and social effort used to produce goods and services in an economy. ... In return, laborers receive a wage to buy the goods and services they do not produce themselves.
2. **Labour Costing :** The cost of labour is the total of all employee wages plus the cost of benefits and payroll taxes paid by an employer.
3. **Direct Labour Cost :** It refers to the salaries and wages paid to workers that can be directly attributed to specific products or services.

1.8 Assignment :

What are the items included in direct labour costs ? Explain in detail.

1.9 Activities :

Explain the implications of preparing and maintaining labour cost accounting system in an organisation.

1.10 Case Study :

What do you mean by Indirect labour ? Give examples for the same. Also explain the difference between direct labour and indirect labour.

1.11 Further Readings :

1. Simplified approach to labour laws – Dr. J.P.Sharma

Unit 2

LABOUR TURNOVER AND RELATED ISSUES, METHODS OF WAGE PAYMENT

: UNIT STRUCTURE :

2.0 Learning Objective :

- To learn about labour turnover and related issues
- To understand causes of Labour turnover
- To understand the effects of labour turnover
- To learn about the measures to control labour turnover
- To learn about wage payment system
- To understand various methods of wage payment system

2.1 Introduction :

Labour turnover refers to the movement of workers into and out of an organisation. Labour turnover has been a subject of manager concern and scholarly study for at least half a century because labour turnover rate is an index of the stability of workforce in an organization.

Labour turnover may be defined as the time–to–time changes in the number of the work force that result from the hiring, release, and replacement of employees. The simplest measure of labour turnover is the separation rate, generally defined as the number of separations per month per hundred of the average working forces. Separations include all quits, lay–offs and discharges.

Assume an average working force of 1000 employees for a month. If during this period 100 em-ployees had severed their relationship with the concern, then.

The formula for calculating labour turn–over as given by equation (a) above has certain limitations :

(i) It does not take seasonality into account.

(ii) It does not differentiate among the causes for labour turnover.

2.2 Cause of Labour Turnover :

The various causes of labour turnover within a firm can be subdivided into two heads :

(I) Avoidable Causes;

(II) Unavoidable Causes.

(I) Avoidable Causes :

(1) Redundancy : This could arise from the seasonal nature of the trade, shortage of imported raw materials, Government policy, lack of planning and foresight of higher management, technological unemployment, etc. Of these, the most important cause is the lack of planning and foresight.

(2) Dissatisfaction with remuneration : Low wages may force workers to look for higher wages elsewhere.

(3) Dissatisfaction with Job : If the workers are not satisfied with their current job, they may leave the job anytime.

(4) Bad working conditions : If there is a bad environment, improper ventilation and sanitation at the workplace, the workers may plan to leave a job.

(5) Working Hours : If the workers are dissatisfied with the working hours, they may think for leaving he job.

(6) Relationship with the supervisors : Unsympathetic and non–co–operative attitude of the supervisor and/or the management may force the workers to leave the job.

(7) Bad relationship with fellow workers : If the workers are not able to cope up with the fellow workers due to their personal attitudes, then he may leave the job.

(8) Lack of facilities : Lack of transport, accommodation, medical facilities, recreation, and other facilities may urge the worker to leave the job.

(II) Unavoidable Causes :

1. Change of Locality
2. Death, retirement etc., of workers.
3. Transport or housing problem in the firm's locality.
4. Unfit for the work.
5. Misconduct of workers.
6. Sickness, accident, etc., of workers.
7. Because of personal betterment.

2.2.1 Effects of Labour Turnover :

Effects of Labour Turnover depends upon the rate of labour turnover. Labour Turnover cannot be eliminated completely. There must be some labour turnover on account of unavoidable causes like retirement, death, etc. But high rate of Labour turnover is always unhealthy for the organization due to following reasons :

1. Constant changes in the workforce will affect the continuity of work. As a result, the overall production may be reduced.
2. The amount spent on selection and training of workers leaving the job will go waste. Further, to fill up the vacancies, management must spend money on selection and training of new workers. It increases the cost of production.
3. New recruit may need some time to learn the work and adjust himself with the new surroundings which may result in loss of productivity.
4. New recruit may need some time to learn the work and adjust himself with the new surroundings which may result in loss of productivity.

2.2.2 Measures to Control Labour Turnover :

The following measures may be adopted to minimize the labour turnover.

1. Appointing right man on the right job.
2. Fair and equal treatment of all workers throughout the organization.
3. Improvement of working conditions.
4. Provision of fair wages, allowances, and other monetary benefits.
5. Provision of proper training facilities to new as well as existing employees.
6. Provision of medical facilities to protect employees from sickness.
7. Provision of welfare activities.
8. Allowing workers participation in the management.
9. Adopting sound promotion and transfer policies.

2.3 Wage Payment System :

Wage payment system consists of the pay structures and the methods used to motivate and reward work force for their contribution to the goals of the organisation. Various systems of the wage payments have been developed in different industries and in different countries.

All of these systems may, however, be regarded as variants or combinations of different principles of time–rate system, piece–rate system, payment by results system, balance or debt system, and incentive rate system. These systems reflect the basic philosophy of a company and its management.

The various systems and methods of wage payment are :

1. Time Wage System 2. Piece Wage System 3. Incentive Rate System.

2.3.1 Time Wage System :

1. **Meaning of Time Wage :** Time Wage is based on the amount of time spent or the passage of time, e.g., hour, day, week, or month. Wage is measured based on unit of time, e.g., per day, per week or per month. It is also called salary and it is fixed for the specified time, i.e., income is not variable, and it does not depend at all on the performance or the amount of output given by the employee.

2. **Chief Features of Time Wage :**

    1. It is more widely used as it is very simple.
    2. It facilitates payroll function.
    3. Computation of earnings is quite easy.
    4. It provides guaranteed and secured income, thereby removing the fear complex of uncertainty and irregularity of income.

    A salaried employee has assured and regular income so that he can concentrate his attention on improvement in the quality and his workmanship. It is very suitable for pioneering work.

3. **Conditions Favouring Time Wage :** Time wage is preferable, and it is always a practical proposition under the following conditions :

    (i) Unit of output is not measurable, commodity is non–standardised, it is not uniform, and we have varieties of output. In short, the amount of output cannot be accurately measured, counted, and standardised.

    (ii) Volume of work is not always within the control of labour. Delays or interruptions in the work may be inevitable due to conditions of work, i.e., speed of work is set by the machine, e.g., assembly line of production in the automobile industry. In chemical industry, paper industry, we have process controlled operations and in such continuous process industries time wage is always preferable.

(iii) If speed of work is risky and we want to minimise risks of accidents.

(iv) When workers are new and learning the job or trade.

(v) When it is difficult to fix the unit of output, e.g., clerical work.

(vi) When quality of work assumes special importance.

(vii) When competitive conditions and cost control do not require precise advance knowledge of labour cost per unit of output.

(viii) When employees have little control over the quantity of out–put, e.g., automation or computer–controlled industry.

(ix) When supervision is good, and supervisors know what constitutes 'a fair day's work'.

4. Advantages of Time Wage :

1. Greater care and attention on quality and workmanship can be ensured.
2. Worker knows exactly the amount he is to get.
3. Sense of security of income regular and stable.
4. Conducive to harmony and better labour–management relations.

5. Disadvantages of Time Wage :

1. There is no close control over labour costs because we have unequal output by workers. In the absence of positive correlation between pay and output, wage east determination is very difficult no plan, no control over unit labour cost. This is the greatest weakness of time wage system.
2. Time wage system by itself offers no incentive for employees to put forth their best efforts, because there is no direct incentive to produce more, Effort and reward have no direct positive correlation. Hence, employee merit rating and incentive wage plans have to be adopted.
3. Time wage system is inequitable. All are paid equally irrespective of ability, skill, or experience. There is no encouragement for better performance. On the other hand, merit is discounted, and inefficiency is at a premium. All receive the same salary.
4. It is an unsound basis of wage payment. A worker loses initiative. Ambitious workers receive no monetary reward for their talents. Hence, it is unscientific and arbitrary.
5. It demands adequate, intensive, and strict supervision over workers. This will increase managerial cost. If the boss is absent, the employees just while away the time in gossiping.

2.3.2 Piece Wage System :

1. **Meaning of Piece Wage System :** It is based on the amount of work performed, i.e., based on output or productivity and not based on time spent. Piece work is one of the simplest and most used of all incentive plans. The standard is expressed in terms of certain sum of money for every unit produced, such as ₹ 2/– per piece or ₹ 4/– per kilo or ₹ 6/– per dozen.

   The earnings of the employee are directly proportional to his output or performance. It is called a 1 for 1 plan for each 1 per cent increase in production the worker is paid a 1 per cent increase in wages.

2. **Features of Piece Wage System (with base rate) :**

   1. It can offer direct connection between effort and reward. Hence, a worker has incentive to produce more. Merit, talent, skill, and efficiency all these are at a premium. Hence, it is the best method to ensure higher productivity.
   2. It can ensure adequate planning and close control over labour costs. Wage cost determination is easy. Labour cost per unit of output is measurable. Both these features are conscious by their absence under the time wage system, but they are duly available under the piece wage system.

   Hence, if the piece rate is fair and satisfactory to both parties, piece wage is undoubtedly superior to time wage and it is an ideal system of wage payment, because it is beneficial to all more wages, more profit, lower unit cost of labour, etc.

   Job evaluation can determine basic hourly rate, i.e., ₹ 10/– per hour. Standard time of three minutes per unit or 20 units per hour is set by industrial engineer. This is equal to ₹ 10/– = ₹ 0.50 per unit. If the guaranteed minimum wage is ₹ 10/– per hour and if the worker's output were less than 20 units, necessary to earn the minimum, he would still be paid ₹ 10/– per hour.

   But with straight piece work (without a guaranteed minimum) the worker would be paid purely based on output at the rate of 50 paise per unit. Under pure piece wage direct labour cost per unit to the employee is fixed. However, in a well– regulated piece wage system, a piece work plan has a guaranteed minimum which is also required under the Minimum Wages Act.

3. **Conditions Favouring Piece Wage System :** Piece wage system is eminently suitable under the following conditions :

   1. If the amount of work can be accurately measured, standardised, and counted.
   2. If productivity is closely related to skill and effort.
   3. If the unit cost of labour can be easily determined and controlled.

4. If there is no fear of unwarranted rate cutting by the management and employer realizes the distinct advantage of piece work.
5. If labour offers full co–operation.

4. Advantages of Piece Wage System :

1. Direct connection between effort and reward gives incentive to produce more.
2. It is simple and easy to understand.
3. It is fair in its rewards since earnings are directly proportional to output.
4. Cost accounting and control by management is facilitated as labour cost is constant for output easy estimate of labour cost and control over unit cost of labour. Under time wage, we have fluctuating output for the same wage.
5. Specialised industry with huge capital investment expects maximum output. Piece wage system is the best method to maximise output.
6. The worker is interested in higher efficiency. We have self–supervision, saving of time, etc. There is no need for elaborate inspection and strict supervision by the managerial group.

5. Disadvantages of Piece Wage System :

1. Danger of overwork in temptation to earn more. This leads to excessive fatigue, ill health, and risk of accident.
2. If quality is given top preference, it is an ineffective method.
3. In the absence of mutual confidence, fixation of piece wage rate is difficult.
4. Under piece wage system we require a lot of supervision to maintain the quality and standard of work. Workers are tempted to ignore quality.

With all the drawbacks, a well–regulated piece wage system (with guaranteed minimum base rate of compensation) is undoubtedly superior to the pure time wage system.

Piece Rate must be based upon :

1. Work study.
2. Time and motion study.
3. Job evaluation technique.

It should be neither too high nor too low.

2.3.3 Incentive Rate System :

Wage incentive refers to performance linked compensation paid to improve motivation and productivity. It is the monetary inducements offered to employees to make them perform beyond the acceptance standards.

According to the National Commission of Labour "wage incentives are extra financial motivation. They are designed to stimulate human effort by rewarding the person over and above the time rated remuneration, for improvements in the present or targeted results".

Objectives of Wage Incentive Schemes :

(i) To use wage incentives as a useful tool for securing a better utilisation of manpower, better productivity scheduling and performance control, and a more effective personnel policy.

(ii) To improve the profit of a firm through a reduction in the unit costs of labour and materials or both.

(iii) To increase a worker's earning without dragging the firm into a higher wage rate structure regardless of productivity.

(iv) To avoid additional capital investment for the expansions of production capacity.

Principles of a Good Wage and Salary Administration :

a. Simple and easy to understand.

b. Union management agreement.

c. Time standard must be fixed.

d. Reward must be proportional to the effort.

e. Complaints and grievances must be properly attended to.

f. The plans should not change frequently and must be tried out continuously for some length of time.

g. Equity and fairness.

h. Workers must be made to understand the plan.

i. Method study must precede time standard.

j. There must be a min guaranteed payment.

Advantages of Incentive Plans :

Wage incentive plans benefit not only the employees but also the employers.

a. Wage incentive plans provide an opportunity for hardworking and ambitious workers to earn more.

b. It encourages employees to be innovative. They come out with more efficient ways of doing work by overcoming the problems related to productivity and wasteful practice.

c. Incentive plans help to improve discipline and industrial relations. Effective incentive plan helps in minimizing absenteeism, accidents etc.

d. The self–motivation on the part of the workers to work hard and improve performance so as to earn monetary rewards will reduce the cost of supervision.

e. The scientific work study undertaken before introducing the incentive plans helps in improving workflow, work methods etc.

f. The employees are encouraged to work as a team with mutual co–operation as their activities is interdepen-dent, and any obstruction on the part of a worker can affect the output and rewards.

g. According to the National Commission on Labour, "wage incentive is the cheapest, quickest and surest means of increasing productivity."

Limitations :

a. Jealousy and conflicts among workers may arise when some workers earn more than others.

b. Unless strict check and inspections are maintained, quality may come under stake in the enthusiasm among workers to increase productivity.

c. In the absence of a ceiling on incentive earnings, some workers may spoil their health.

d. Strict vigilance becomes necessary to ensure that workers do not disregard safety regulation.

e. The cost and time of clerical work increases in introducing and administrating the incentive plans.

f. Whenever production flow is disrupted due to the fault of management, workers insist on compensation.

2.3.4 Types of Wage Incentive Plans :

Following are the types of wage incentive plans.

They can be diagrammatically represented as below :

1. Straight Piece Rate Plan :

Under the straight piece rate plan workers are paid based on their output. For example, if the piece rate is ₹ 4 per piece of the product, then a worker who turns out 40 pieces/day earns ₹ 160 (₹ 4 x 40) as his wage for that day. Whereas another employee who produces 32 pieces/ day earns ₹ 128 (₹ 4 x 32 pieces). Hence a fast worker earns more compared to the slow worker.

Advantages :

i. Motivates the workers to increase their output.

ii. Simple and easy to understand.

iii. improve productivity.

Disadvantages :

i. No guaranteed minimum wage. This makes workers insecure.

ii. Great disparity of earning between slow and fast workers.

iii. Wastage might increase.

iv. Quality of production may suffer as the workers concentrate on quantity.

v. Interpersonal relationship suffers due to jealousy and competition to earn more.

vi. Enforced idleness like electricity failure or machine breakdown, adversely affect earning of workers.

2. Standard Piece Rate with Guaranteed Minimum Wage :

Here the minimum guaranteed wage is fixed on hourly basis. A worker gets the minimum fixed wage/day plus the incentive for the number of pieces produced. To illustrate this, assume that there is 8 hours' shift the piece rate is ₹ 4 and a minimum fixed wage of ₹ 16/ hours (₹ 16 x 8 hours = ₹ 128 per day). The standard time/piece is 15 min.

Now, there are two workers A and B. (If worker A produces 25 prices/day then he earns : ₹ 128 (min. guaranteed wage) + ₹ 100 (₹ 4 x 25 pcs) = ₹ 228/ day

If worker B produces 40 pieces / day, then he earns ₹ 128 (min. guaranteed wage) + ₹ 160 (40 pieces x ₹ 4) = ₹ 228/ day)

Advantages :

i. Min. guarantee improves sense of security.

ii. Disparity between slow and faster workers is reduced.

Disadvantages :

i. Demotivate faster worker.

ii. Slow workers get higher piece rate viz Rs. 5.12 (128/ 25).

3. Differential Piece Rates :

The shortcoming of the above–mentioned incentive plans has given way Differential piece rates. The differential piece rates are classified under two heads viz. Individual incentive plans and Group incentive plans.

Individual Incentive Plans :

The different plans here are discussed below :

(a) Halsey Plan :

The features of this plan are :

a. Min. wage is guaranteed.

b. Additional bonus is provided to workers who.

Wage and Salary Administration complete the job in less than the "standard time". Bonus is a certain proportion to the time saved. This proportion is fixed at 50% in this plan.

The total wage is calculated as :

$T \times R + 50\% (S - J) \times R$

Where J – time taken.

R – Rate of wage

S – Standard time

50% – The bonus percentage.

Illustration :

S = 10 hours, J = 8 hours; R = ₹ 5 / Hr; Bonus = 50%

$\Phi = 8 \times 5 + (50/100) \times (10 - 8) \times 5$

Φ = ₹ 45.

Advantages :

i. Guaranteed min. wage exists.

ii. Simple and easy.

iii. Dispensed with time consuming and costly process of work study.

iv. Management share a part of bonus on time saved.

Disadvantages :

i. Workers get only half of the benefit of their efficiency.

ii. If the worker's rush through the job to save time, the quality may suffer.

iii. Workers object management in sharing bonus on time saved.

iv. Sufficient incentive is not provided to fast workers.

(b) Rowan Plan :

This is a modified form of Hasley Plan, developed by James Rowen of England. The Rowan Plan pays more than the Halsey Plan. This is possible if a worker completes the task in half the standard time of the task. If more than 50% time is saved, then the bonus he earns decreases.

Therefore, Total wage = J x R + [J x R x (Time saved/std. time))

Illustration :

S = 10 hours; J = 8 hours; R = ₹ 5 / hrs.

$\Phi = 8 \times 5 + [8 \times 5 + (2/10))$

Φ = ₹ 48

Advantages :

i. Minimum guaranteed wage exists.

ii. Both the employees and the workers share the benefits of time saved.

iii. The efficient workers get bonus at diminishing rate if they save more than 50% of the standard time. This checks over–speeding.

Disadvantages :

i. Incentive provided for fast worker is not sufficient.

ii. Workers dislike management sharing bonus of time saved.

(c) Gantt plan :

This plan was developed by Henry L. Gantt. Here standard time for every task is fixed through time and motion study. Minimum time wage is guaranteed to all workers.

A worker who fails to complete the task within the standard time receives wages for actual time spent at the specified rate. Workers who achieve or exceed the standard get extra bonus varying between 20% to 50% of the hourly rate for the time allowed for the task.

Illustration :

(S) Suppose the standard time fixed for the job is 8 hours and (T) time rate is ₹ 10 hours and the rate of bonus is 25%, then a worker who completes the job in 10 hours will be paid ₹ 10 x 8 = ₹ 80. On the other hand the worker who completes the job in 6 hours will be paid ₹ 100 (₹ 80 + 25% of ₹ 80).

Advantages :

i. Minimum guarantee exists.

ii. Fast worker is paid bonus at higher rate proportional to their output.

iii. Standard worker is paid 20% bonus.

iv. Part of bonus is shared by the organisation.

Disadvantages :

i. Sharing of bonus by organisation is resentment.

ii. Disunity among the slow and the fast workers.

Check Your Progress :

1. ___________ is the rate of change in the working staff of a concern during a definite period.
2. Change of line for betterment is the ___________ cause of labour turnover.
3. Unfair methods of production is the ___________ cause of labour turnover.
4. Retrenchment due to seasonal trade is the ___________ of labour turnover.
5. Delay in production is the ___________ of labour turnover.

2.4 Let Us Sum Up :

Labour turnover can be through resignation, retirement, unsuitability, change in circumstances, dismissal or attrition and varies from region to region and industry to industry. It is considered as an essential parameter to measure employee retention

The high percentage in terms of labour turnover denotes that the employees are leaving the company quickly and their duration is not stable whereas low labour turnover signifies only a small number of workforces has entered and left the firm in the fiscal year.

Labour turnover can be internal as well as external. The former is when labour leaves on position and is shifted to another in the same company, and the latter is when he has to go from his current job and join another organisation.

2.5 Answers for Check Your Progress :

1. Labour Turnover **2.** Personal **3.** Avoidable

4. Un–avoidable **5.** Cause

2.6 Glossary :

1. **Labour Turnover :** Labour turnover is concerned with movements of individuals into jobs (hiring's) and out of jobs (separations) over a particular period.
2. **Wage Payment Systems :** Wage Payment Systems are the different methods adopted by organizations by which they remunerate labour.
3. **Incentive :** a thing that motivates or encourages someone to do something.

2.7 Assignment :

Explain the main reasons behind labour turnover. How can labour turnover be avoided.

2.8 Activities :

Explain the different wage payment systems in detail.

2.9 Case Study :

Visit an organisation or factory in your locality. Identify the wage payment system followed by them. Explain the advantages and disadvantages of the wage payment system followed by them.

2.10 Further Readings :

1. The management of Labour Turnover – Stephen Bevan

Unit 3 CLASSIFICATION OF OVERHEADS, TECHNIQUE OF SEGREGATION

: UNIT STRUCTURE :

3.0 Learning Objective :

- To learn about overheads
- To understand the classification of overheads
- To understand the classification of overheads – element wise and controllability wise
- To understand the classification of overheads – behaviour wise
- To learn about the advantages of classification of overheads
- To understand the methods of segregation of semi variable overhead

3.1 Introduction :

Overhead is the cost of material, labour, and expenses, which cannot be easily identified with any, job, or process.

The costs, which cannot be identified or linked or attributed or allocated to the cost, centre or cost unit are termed as overhead. Therefore, overhead is the aggregate of indirect material cost, indirect wages, and costs of indirect service.

Small amounts can be traced into a specific unit of production included in the overhead. The treatment of costs as overhead is the purely judgment of the management.

In nutshell, overhead is the mix of indirect materials, indirect wages, and expenses.

3.2 Importance of Overheads :

After the industrial revolution, most of the companies prefer to produce the products in mass production. For which, the companies bought expensive machinery and equipment. It led to increase in indirect expenses rather than direct expenses. In the case of handicraft methods of production also, the costs, which can be traced directly to the product, may be only material and labour.

Moreover, there is a need of appointing some more persons other than workers to carry on the production operation. They are supervisors, engineers, clerks, accountants, maintenance men and the like.

In some companies, modern methods of production may be followed. If so, they may appoint staff specialists for economic operation of production. As a result, the cost of product is reduced. Whenever new methods of production followed and increased the production level, automatically the proportion of overhead cost may be increased.

In India, many large companies have established automatic and semi–automatic plants for the purpose of mass production. In these industries, certainly, the overheads are considerably increased. This is undesirable in developing countries like India. If these industries are producing basic materials, which are necessary for agriculture or products of household, there is a possibility of increasing cost of production.

Hence, such increasing cost of production should be controlled through well–devised cost accounting system and cost control system.

3.2.1 Classification of Overheads :

Classification of Overheads is the process of grouping of indirect costs based on common characteristics and clear objectives.

All overhead expenses are grouped together under common heads and are further classified according to their fundamental differences.

Suitable classification of overheads is of utmost importance, so that overhead costs can be classified and appropriately used by the management to exercise better control, to plan the future activities in advance and to take important decisions in time.

Overhead can be classified based on :

1. Element
2. Controllability

3. Behaviour
4. Nature
5. Variability
6. Normality
7. Function.

Some of the types of overheads are :

1. Indirect Materials
2. Indirect Labour
3. Indirect Expenses
4. Controllable Overheads
5. Uncontrollable Overheads
6. Fixed Overheads
7. Variable Overheads
8. Semi–Variable Overheads
9. Normal Overheads
10. Abnormal Overheads
11. Manufacturing Overhead
12. Administrative Overhead
13. Selling Overhead
14. Distribution Overhead.

3.2.2 Classification on the Basis of Element :

i. Indirect Materials : Indirect materials are not exclusively incurred for a particular product, job, or cost centre. Indirect materials do not form part of the body of finished products. It cannot be identified with a product, job, or cost centre. Indirect materials cannot be allocated but can only be apportioned over products or cost centres.

They are – stores consumed in repairs and maintenance, lubricants, cotton waste, stationery, packing materials, normal loss of materials, tools for general use etc. Some materials of small value may be directly identified with a product but for convenience and economy in accounting they are treated as indirect materials e.g., sewing threads in garments, rivets, glues, washers, bolts, nuts etc.

ii. Indirect Labour : Wages paid to workers who are not engaged in conversion of raw materials into finished products is indirect labour cost. They cannot be allocated to a product but can be apportioned over products or cost centres. They are – works manager's salary, foremen's salary, salary to people working in general office, sales department, stores department, labour department, security department etc.; leave pay, and employer's contribution to P.F, ESI, and labour welfare expenditures.

iii. **Indirect Expenses :** All indirect expenses other than indirect materials and indirect labour are classified as indirect expenses. They are rent, rates, insurance, taxes, advertisement, depreciation, lighting etc.

3.2.3 Classification on the basis of Controllability :

i. **Controllable Overheads :** These overheads come under the influence of the management. The management can at its discretion either increase or reduce these expenditures. All direct expenses and some overheads are controllable.

ii. **Uncontrollable Overheads :** These overheads do not come under the influence of manage-ment. These are mostly determined by external factors. They are rent, insurance, tax, etc.

Controllability–wise classification is not rigid or permanent. They may change depending upon variation in corporate policies, level of activity and length of time. Expenditure may be uncontrollable in short periods but may be controllable in the long run.

3.3 Classification on the Basis of Behaviour :

i. **Fixed Overheads :** Expenses which remain constant in total irrespective of changes in volume of activity are called fixed overheads. They do not change when volume of production changes within the present capacity. Even if there is no production these expenses are incurred. They are – rent, insurance, office salary, security staff salary, etc.

These expenses are incurred in relation to time factor. So, they are called time cost or period cost. These expenses are mostly uncontrollable.

Fixed overheads in total will change if rate of these expenses is revised like, salary scale, rate of premium, rent charges etc. Fixed overheads per unit will change in inverse proportion to changes in production volume. When production increases fixed overheads are borne by larger number of units and fixed overheads per unit will decrease as the amount of expenses is borne by larger number of units and vice versa.

ii. **Variable Overheads :** Variable overheads change in total in direct proportion to changes in volume of production. If production increases variable overheads also increase proportionately. If production decreases variable overheads will also decrease in the same proportion. Variable overheads per unit will be same at all levels of production.

But practically variable overheads per unit at lower level of production will be more. Variable overheads per unit will be lower at higher levels of production due to economy in large scale production. As variable overheads are related to production, they are also called product cost or production cost.

iii. Semi–Variable Overheads : There are certain expenses which are partly variable and partly fixed. They have the characteristics of both fixed and variable costs. They are supervisor salary, telephone charges and electricity. Semi–variable expenses are further classified into two groups.

They are :

a. Some semi–variable expenses change in relation to change in production level, but they change less than proportionately to changes in production e.g. – repairs & maintenance, store handling etc.

b. Some semi–variable expenses remain stable within a certain range of production, then increases to next level when production range increases to next level. So semi–variable expenses are also called stage costs or step costs.

3.3.1 Classification of Overheads – According to Nature, Variability, Control and Normality

There are various methods of classifying grouping overheads which depends on the objectives of classification.

Generally, the overheads may be classified according to :

1. Nature
2. Variability
3. Control, and
4. Normality.

1. Classification According to Nature : Under this method, the classification is made according to the nature and source of the expenditure.

Based on the nature of overheads, expenses are classified into :

i. Indirect Material,

ii. Indirect Labour and

iii. Indirect Expenses.

i. Indirect Materials – Material cost which cannot be allocated to a particular unit and does not form a part of finished product, but which are to be apportioned to or absorbed by cost centres or cost units. Examples are fuel, lubricants, cotton waste, tools for general use, etc.

ii. Indirect Labour – Indirect labour are those which cannot be allocated to a particular unit of cost, but which are to be apportioned to or absorbed by cost centres or cost units. Examples are Overtime, idle time wages, wages of foreman, maintenance, and repair work wages, leave pay, employer's contribution to ESI, etc.

iii. Indirect Expenses – Expenses which cannot be allocated but which are to be apportioned to or absorbed by cost centers or cost units are indirect expenses. For example, power, welfare, deprecation, insurance, canteen, taxes, rates and rent etc.

2. **Classification According to Variability :** Expenses are also classified based on variability or behaviour. Different overhead costs behave in different ways when volume of production changes.

One the basis of variability, overheads may be classified into :

i. Fixed overhead

ii. Variable overhead, and

iii. Semi–fixed or semi–variable overhead.

i. Fixed Overhead : Fixed overheads also known as period cost remain unaffected or fixed in total amount and do not vary with changes in the volume of output. These expenses accrue over a period of time and are also known as period cost. These expenses remain constant even if the output changes. Examples are rent and rates, managerial salaries, building depreciation, postage, stationery, legal expenses etc.

ii. Variable Overhead : This is the cost which, in aggregate, tends to vary in direct proportion to changes in the volume of output. In other words, it changes in the same ration in which output changes. Total variable cost tends to vary directly with the volume of output while it is likely to remain fixed per unit at all the levels of output. Examples are indirect materials, indirect labour, salesman's commission, power, light, fuel, etc.

iii. Semi–Variable Overhead : This overhead is partly fixed and partly variable. In other words, costs vary in part with the volume of production and in part they are constant, whatever be the volume of production. Semi variable or semi fixed overheads may remain constant at certain level of output while they vary at other levels, but not in the proportion of changes in the output. Example – supervisory salaries, depreciation, repairs, and maintenance etc.

3. **Classification According to Control :** According to this, cost is classified into controllable cost and uncontrollable cost Controllable costs are those which can be controlled by the management through the efficient use of resources like Idle Time wastages etc. uncontrollable cost on the other hand are those costs which is not under the control of management. All fixed expenses are uncontrollable costs.

4. **Classification According to Normality :** According to this classification costs are divided into normal overheads and abnormal overheads. Normal overheads are expected to be incurred in the process of output and generally are unavoidable. Normal cost is a part of production cost and is added to the cost of good units' Abnormal costs are those costs which are not expected to occur

in the process of production. They cannot be included in the cost of production and are transferred to costing profit and loss account.

3.3.2 Classification of Overheads – Function :

The overheads can be classified into in the following ways based on function wise classification.

1. **Production Overhead :** It is otherwise called as manufacturing overhead, works overhead and factory overhead. All the indirect expenses, which are incurred in the factory premises in connection with the production of any goods and services, are treated as production overhead. Factory rent, rates, lighting, heating, idle time wages, depreciation of factory, building, plant and machinery, canteen expenses and the like are some of the examples of production overhead.

2. **Administration Overhead :** The term administration refers to the formulation of policy, direction, control, and management of affairs. The general functional expenses are included in the administration overhead. In other words, administrative services are necessary for the effective operation of any business. Hence, such service expenses are treated as administration overhead. The printing and stationary for administration, rent, rates, insurance of general office, bank charges, telephone, postage, and the like are the examples of administration overhead.

3. **Selling Overhead :** The selling overhead refers to the cost of selling function i.e., the cost of activities relating to create and stimulate demand for company products and to secure orders. Salaries, Commission and traveling expenses of sales representatives and executives, advertising and publicity expenses, samples, printing of price lists, discounts, rebates, bad debts, and the like are the examples of selling overhead.

4. **Distribution Overhead :** The term distribution refers to the activities relating to the sequence of operation starts from making the packed product available for dispatch and ends with making reconditioned returned empty package available for reuse.

   Distribution is also one of the functions like manufacturing, administration and selling. Running expenses of delivery van, wages of packers, carriage, and freight outwards, rent, rates and insurance of warehouses and the like are some of the examples of distribution overhead.

5. **Research and Development Overhead :** Research overhead is the cost of searching for new products, new techniques for production or finding new equipment. The development overhead is the cost of implementation of research result on commercial basis. Cost of raw materials used for research, salaries and wages of R and D department staff, subscription to books and journals, subscription

to research association, patent feeds and the like are examples of research and development overhead.

3.4 Advantages of Classification of Overheads :

Classification enables an analysis to be made of overhead costs, under the nature of the item, the type of service provided and by department, cost centre, process, and others.

Items need to be arranged in logical sequence having regard to their nature or the purpose to be fulfilled.

Detailed information is provided for the control of overhead expenses.

Certain overheads have to be apportioned and classification facilitates the task of collecting the costs of a particular service.

The provision of detailed costs enables the behaviour of costs to be observed. In addition, the following advantages have also been observed :

Profit Planning : The Primary objective of doing any business is to earn profits. Hence, it is very important to make profit planning. Profit planning is concerned with taking a series of decisions and selecting amongst the various alternatives available. Thus, it is very important to study the behaviour of costs and profits in relation to change in the volume of output.

Effective Cost Control : Profits can also be increased through effective cost control and cost reduction. Classification of costs into fixed and variable elements helps management to control costs effectively as fixed costs are incurred by management decisions and can be controlled only by the top management. Further, variable costs may be controlled even at the lower levels of management.

Fixation of Selling Prices : Profits could be maximised either by reduction and control over costs or by increasing the sales value through increase in sales volume or prices. Fixation of proper selling prices is thus very important for the management.

The segregation of costs into fixed and variable elements enables the management to adopt the most appropriate selling price policy as sometimes one may have to sell even below total cost. However, the selling prices should not be below the variable cost.

Marginal Costing and Break–Even Analysis : The basic assumption of marginal costing, break-even analysis and cost–volume profit analysis is that all elements of cost can be segregated into fixed and variable. Hence, for the use of marginal costing and break–even techniques, the classification of costs as fixed and variable is very essential.

Budgetary Control : For the preparation of flexible budgets and effective budgetary control, this classification is a pre–requisite. The flexible budget is designed to change in accordance with the level of activity and hence the cost behaviour is very important.

Proper Absorption of Overheads : The analytical study of the behaviour of costs also helps in the proper absorption of overheads as the method to be adopted for the absorption depends upon the nature of overhead.

Helpful in Decision–Making : The classifications of cost into fixed and variable elements helps management in taking many decisions such as make or buy decisions, selection of a proper product mix, capacity decision, operate or close down decisions, etc. Thus, this classification is very essential for not only ascertainment of cost but also for–profit planning, cost control and decision–making.

3.5 Methods of Segregation of Semi–Variable Overhead :

The semi–variable overhead gives a lot of problem to management in cost analysis. The reason is that the management is not able to find any relationship between cost and volume. Hence, there is a need of segregation of semi–variable overhead into fixed and variable element. The following methods are used to segregate the semi–variable overheads.

1. **Intelligent Estimate of Individual Items :** Under this method, the past overhead data is used to find the relationship between cost and volume through analysing various activity levels. Suitable adjustments are made in data for anticipated changes. By doing so, the semi–variable overhead is divided into fixed and variable. This method is very simple but not scientific. Hence, the management is not possible to take a quality decision.
2. **High and Low Method :** This method is otherwise called as Range Method. Under this method, two levels of expenses are considered. One level of expenses is high, and another level of expenses is low. Besides, output of these level periods is considered. The difference in output and expenses are found out. The difference in expenses is due to variable element. Moreover, it is assumed that the fixed element of semi–variable overhead is expected to remain fixed for two periods in two levels of expenses. In this way, both fixed and variable overheads are found out.
3. **Method of Averages :** Initially, averages of two selected groups are taken into consideration. Then, high, and low method is followed to segregate the fixed and variable components of semi–variable overhead.
4. **Analytical Method :** Under this method, degree of variability is found out in percentage for each item of semi–variable overhead. The Cost Accountant has determined the percentage out of his/her experience and the past data. With this percentage information, fixed and variable components for each item of semi–variable overhead are segregated.

5. **Scatter Graph Method :** Under this method, output in various levels and the semi–variable overhead of corresponding levels are considered. A scatter graph can be drawn with the help of these data. X–axis is taken as output and Y–axis is taken as semi–variable overhead in total.

   The costs at several levels of output are plotted on a graph. Then, a straight line is drawn between the points plotted in such a manner. The point at which the line of best fit touches the ordinate indicates fixed component of the total cost. The slope of the line indicates the degree of variability of costs.

6. **Least Squares Method :** This method is also called as Simple Linear Regression Analysis Method. Regression is the measure of the average relationship between two or more variables in terms of the original units of the data. Under this method, the degree of prevailing relationship between two variables is identified.

Volume of production and expenses are two variables. Electricity charges, maintenance expenses and the like are the examples of expenses. These expenses may vary with the volume of production though not in the same proportion.

To study the cause–and–effect relationship, volume of production is taken as independent variable and expenses is taken as dependent variable. In this analysis, independent variable by one unit leads to constant absolute change in the dependent variable.

In this way, regression line can be used to find out the values of dependent variable. The regression line is based on equation called regression equation.

The regression equation is given below.

$Y = a + bx$

Where,

Y represents total cost.

a represents fixed element of total cost.

b represents variable element of total cost.

x represents number of units.

Check Your Progress :

1. An example of a production overhead would be :

   (A) Material (B) Rent

   (C) Labour cost(D) Supervisory cost

2. All such expenses which are incurred for creating and enhancing the demands for the products are.

   (A) Selling expenses (B) Administrative expenses

   (C) Distribution expenses (D) All of the above

3. To control costs it is essential to keep control on
   (A) Prime cost
   (B) Overheads
   (C) Indirect materials and tools cost.
   (D) All of the above
4. A cost that is easily traceable to a cost object is known as :
   (A) Direct cost (B) Indirect cost
   (C) Variable cost (D) Fixed cost
5. Which of the following best describes a fixed cost ? A cost which :
   (A) Represents a fixed proportion of total costs
   (B) Remains at the same level up to a particular level of output
   (C) Has a direct relationship with output.
   (D) Remains at the same level when output increases.

3.6 Let Us Sum Up :

Overhead costs are the continuous business expenses that are not directly related to manufacturing a product or creating a service. It is an important part of the budgeting process and determines how much a company will charge for a product or service for profit.

Simply put, an overhead meaning can be any expense a company incurs to support the core business activities, while not being directly related to the business' products and services.

3.7 Answers for Check Your Progress :

1. D **2.** D **3.** B **4.** A **5.** A

3.8 Glossary :

1. Absorption of Overheads : Assigning of overheads to cost objects by means of appropriate absorption rate.

2. Administrative Overheads : Cost of all activities relating to general management and administration of an entity.

3. Allocation of Overheads : Allocation of overheads is assigning total amount of an item of cost directly to a cost object.

3.9 Assignment :

Explain the different methods of classification of overheads.

3.10 Activities :

What are the advantages of classification of costs ? Explain in detail.

3.11 Case Study :

Study an organisation in your locality and identify the overhead classification overhead method followed by them.

3.12 Further Readings :

1. Overhead Costs : Sir Henry Bunbury

Unit 4
BASIS OF APPORTIONMENT AND RE APPORTIONMENT OF OVERHEADS

: UNIT STRUCTURE :

4.0 Learning Objective :

- To learn about methods of apportionment
- To learn about basis of apportionment
- To understand importance of overhead apportionment
- To learn how to reduce manufacturing overheads
- To understand the difference between cost allocation and cost apportionment
- To learn about key differences between cost allocation and cost apportionment.

4.1 Introduction :

Cost allocation is the assigning of a common cost to several cost objects. For example, a company might allocate or assign the cost of an expensive computer system to the three main areas of the company that uses the system. A company with only one electric meter might allocate the electricity bill to several departments in the company.

In Cost Accounting the analysis and collection of overheads, their allocation and apportionment to different cost centres and absorption to products or services plays an important role in determination of cost as well as control purposes. A system of better distribution of overheads can only ensure greater accuracy in determination of cost of products or services. It is, therefore, necessary to follow standard practices for allocation, apportionment, and absorption of overheads for preparation of cost statements.

What is Overhead Allocation ?

Overhead allocation is the apportionment of indirect costs to produced goods. It is required under the rules of various accounting frameworks. In many businesses, the amount of overhead to be allocated is substantially greater than the direct cost of goods, so the overhead allocation method can be of some importance.

There are two types of overhead, which are administrative overhead and manufacturing overhead. Administrative overhead includes those costs not involved in the development or production of goods or services, such as the costs of front office administration and sales; this is essentially all overhead that is not included in manufacturing overhead. Manufacturing overhead is all the costs that a factory incurs, other than direct costs.

You need to allocate the costs of manufacturing overhead to any inventory items that are classified as work–in–process or finished goods. Overhead is not allocated to raw materials inventory since the operations giving rise to overhead costs only impact work–in–process and finished goods inventory.

The following items are usually included in manufacturing overhead :

Depreciation of factory equipment

Quality control and inspection

Factory administration expenses

Rent, facility and equipment.

Indirect labour and production supervisory wages

Repair expenses

Indirect materials and supplies

Rework labour, scrap, and spoilage

Maintenance, factory, and production equipment

Taxes related to production assets.

Officer salaries related to production.

Uncapitalized tools and equipment

Production employees' benefits

Utilities

4.2 Methods of Apportionment of Overheads :

The following points highlight the top two methods of apportionment of overheads. The methods are : 1. Primary Distribution of Overhead 2. Secondary Distribution.

Apportionment of Overhead : Method 1.

Primary Distribution of Overhead :

Primary distribution involves apportionment or allocation of overhead to all departments in a factory on logical and rational basis. This process of apportionment is also known as departmentalisation of overhead. It is to be carefully noted that at the time of making primary distribution, the distinction between production and service departments is ignored.

Following points should be considered for primary distribution of items of overheads :

(i) Basis for distribution should be equitable and practicable.

(ii) Method adopted for distribution should not be time–consuming.

(iii) Overhead expenses should be distributed among different departments based on benefits received by departments.

For the purpose of primary distribution, a departmental distribution summary is prepared in the following way :

Basis of Apportionment of Factory Overhead :

Expenses :

1. Lighting, heating, rent, rates and taxes, depreciation on building, repair cost of building, caretaking etc.
2. Insurance on Plant and Machinery, Building; Depreciation on Plant and Machinery; Maintenance of Plant and Machinery.
3. Insurance on tools and fixtures, power, repairs, and maintenance cost etc.
4. Canteen subsidy or expenses, pension, medical expenses, personnel department expenses, cost of recreational facilities. Expenses of wage department
5. Cost of supervision.

Base :

1. Floor area occupied by each department. Light points for lighting.
2. Capital values of Assets.
3. Direct Labour hours or Machinery hours.
4. Number of employees or workers.
5. Time devoted.

Apportionment of Overhead : Method 2.

Secondary Distribution :

In a factory a product does not pass–through Service department (S), but service department renders service to production departments for carrying on production function. It is, therefore, logical that the product cost should bear the equitable share of cost–of–service department. Under this backdrop, the second step is to distribute the total cost of service departments among the production departments.

The process of redistributing the cost–of–service departments among production departments is known as secondary distribution. Here, the cost–of–service department means the apportioned overheads plus direct materials plus direct labour and direct expenses of concerned service department.

Bases for Secondary Distribution :

Service Department Costs :

(i) Employment department

(ii) Maintenance department

(iii) Purchase department

(iv) Store keeping

(v) Canteen, welfare, and recreation

Basis of Redistribution :

(i) Rate of labour–turnover or number of employees.

(ii) Hours worked for each department.

(iii) No. of purchase orders or value of materials purchased.

(iv) No. of requisitions.

(v) No. of employees of each department.

(i) Direct Redistribution Method : Under this method, service department's costs are apportioned to production departments only ignoring service rendered by one service department to another. When this method is followed, the number of secondary distributions will be equal to number of secondary departments.

(ii) Step Method : This method of redistribution gives cognizance to the service rendered by one service department to another service department. The cost–of–service department which renders service to the largest number of other departments is distributed first.

After this is done, the cost–of–service department serving the next largest number of departments is apportioned. This process continues till the cost of last service department is apportioned. The cost of last service department is apportioned among production departments only.

(iii) Reciprocal Distribution Method : There may be two or more service departments in a factory, and they may render service to each other. In that situation it is logical to give weight to inter–departmental services while distributing the expenses of service departments.

There are three methods for dealing with the distribution of inter–departmental services :

(A) Trial and Error Method

(B) Repeated Distribution Method

(C) Simultaneous Equation Method.

A. Trial and Error Method : Under this method, the cost of one service department is apportioned to another service department and the cost of another service department plus the share received from first service department is again apportioned to first service department and this process is continued till the balancing figure is negligible.

B. Repeated Distribution System : Under this method, costs of one service department are apportioned to other service departments and production departments on agreed percentages and this process is repeated till the figures of service departments are too small to be reckoned for further apportionment.

The following steps are involved in this method :

(i) Apply the given percentages to distribute the primary total of first service department. After proper distribution, the account of first service department will be closed.

(ii) Apply the given percentages to the second service department whose total is made up of primary charges plus amount apportioned from Service Department 1. This will close the amount of second service department.

(iii) Repeat this process.

(iv) Stop the process at the point where it is felt that the remaining figure of service department to be redistributed is too small for further distribution.

C. Simultaneous Equation Method : Under this method, the true costs of service department are ascertained first with the help of simultaneous equations. After that, the total costs are distributed among production departments based on given percentages.

4.2.1 Basis of Apportionment :

The basis used for apportionment of costs is the number of cost centres when the expenses are to be shared equitably between them. This happens when an overhead cannot be assigned directly to one specific cost centre.

Rent and business rates, for example, are sometimes paid by individual cost centres, and floor space is also used as a basis for apportionment to share costs between relevant cost centres.

The costs are proportionately assigned to different departments when the overhead belongs to various departments. In simple terms, the expenses which cannot be charged against a specific department are dispersed over multiple departments.

For example, the wages paid to the factory head, factory rent, electricity, etc. cannot be charged to a particular department, then these can be apportioned among several departments.

Following are the main bases of overhead apportionment utilized in manufacturing concerns :

(i) **Direct Allocation :** Overheads are directly allocated to various departments based on expenses for each department, respectively.

(ii) **Direct Labor/Machine Hours :** Under this basis, the overhead expenses are distributed to various departments in the ratio of a total number of labours.

(iii) **Direct Wages :** This method is used only for those items of expenses which are booked with the amounts of wages.

(iv) **Number of Workers :** This method is used for the apportionment of certain expenses as welfare and recreation expenses, medical expenses, timekeeping, supervision etc.

(v) **Technical Estimates :** This basis of apportionment is used for the apportionment of those expenses for which it is difficult, to find out any other basis of apportionment.

4.2.2 Importance of Overhead Apportionment :

It helps to determine the product cost.

It helps to fix the price of the product.

It helps to measure the effectiveness of a particular department or cost centre.

It helps to supply the cost information to the management.

It helps to evaluate the profitability of a product line in multi–product business.

It helps to make a proper judgement for measurement of departmental efficiency.

It helps to provide cost information for planning, controlling and managerial decision making.

It helps to make accurate pricing for the competitive market.

It can be used to control wastage and defective.

4.2.3 How to Reduce Manufacturing Overheads :

If your organization is looking to reduce and better manage overhead costs, consider these steps :

- Budget for a higher estimate of overhead costs.
- Perform preventative maintenance.
- Reuse old equipment parts.
- Hire an in–house maintenance professional.
- Communicate overhead reduction goals with employees.
- Build strong relationships with vendors.
- Reduce the need for office supplies.
- Rent out extra space.

1. **Budget for a higher estimate of overhead costs :** Every month calculate your facility's estimated overhead costs. You can use past bills, statements, and records to determine how much you should allocate for overhead in your budget. Consider setting aside an amount over your estimate to account for any potential repairs or other unforeseen costs. If you do not use that additional money for those costs, you can have those funds saved for future use should a larger expense arise.

   Repeating this process every month can help you identify areas of improvement and potential increases or decreases in costs. Also, knowing your business's estimated overhead can tell you how much money your business needs to earn to make up for that expense. This step can help you set efficient production goals for floor teams.

2. **Perform preventative maintenance :** Keeping your equipment up to date and maintaining it can ensure it operates efficiently and lasts longer. Preventative maintenance can save money on equipment costs, such as repairs and replacements. Adding lubricants and cleaning a machine might cost a small amount of money upfront, but it can reduce the likelihood of having to replace equipment due to neglect and overuse.

3. **Reuse old equipment parts :** Check your storeroom for salvageable parts that can be used in minor repairs–if you ensure that they are compatible and in good working condition. For example, a part that was removed from an old piece of equipment might be able to be used as a replacement. This step can help reduce repair costs related to buying replacement parts.

4. **Hire an in–house maintenance professional :** An in–house repair professional can perform routine checks, preventative maintenance, and minor repairs on your equipment. This hiring decision could save money on unexpected repair costs or work fees for an external repair vendor. Having an on–site person who can also perform emergency repairs could prevent you from paying an outside person

overtime or extra costs if your equipment breaks after operation hours.

5. **Communicate overhead reduction goals with employees :** You can set specific reduction goals related to certain numbers your budget should aim for. These can help you establish team goals that contribute to that reduction.

   Consider bringing these goals to your employees and brainstorm some ways the production line can reduce costs. Since your employees operate the equipment and perform manufacturing labour, they may have some ideas on how to improve the process. For example, your employees can inform you of any frequent malfunctions or struggles they see, such as material that gets ruined each time it is placed in a machine. The replacement material might be slightly more costly, but it will save you money because you will not be wasting materials.

   You can also evaluate your employees to see if there are individual or team processes that impact production efficiencies, such as misuse of equipment or a long operational process. You can then collaborate with direct supervisors and floor teams to identify streamlining processes that work better for them and can save time and money. This process can be done to determine potential areas of improvement or to understand the effectiveness of newly implemented strategies.

6. **Build strong relationships with vendors :** Vendors sometimes offer discounts or specialized contracts to valued customers. Consider becoming a loyal patron of a few select vendors to show your support and appreciation for their help in making your production possible.

   You can also communicate your overhead reduction goals with your vendors to see if they have any bulk options for materials, such as gloves or safety glasses. Many times, the bulk cost can save you money.

7. **Reduce the need for office supplies :** Consider going paperless to help reduce costs related to office supplies. Send company emails rather than printing paper fliers, announcements, and invitations to company events. This step can reduce the paper budget and the need for pens and pencils, correctional tape, and other office supplies.

8. **Rent out extra space :** If you have extra or unused rooms in your facility, consider renting them out to small businesses or organizations to help pay the rental or mortgage costs on your building. You may have some employees that are not always required to work in–office, so you could consider letting them work from home to free up possible rental space.

4.3 Principles of Apportionment :

The various principles of apportionment of overheads are :

The overheads (normal cost) of the common firm must be attached to different production and service departments on some common basis. In the procedure of determining the basis to be acquired, the given guiding principles can be followed :

1. **Actual advantage :** According to the principle, overheads are distributed in different departments based on actual profit. It can be adopted where it is possible to measure the actual profit obtained from a particular cost.

   For example, different departments can be appointed based on rental occupation area. Similarly, the cost of the machine shop can be done on a real time basis devoted to every work, for which proper job cards are maintained.

2. **Potential advantage :** Distributing general costs will be ideal, based on the actual profit given, but, in most of the cases, the measure of actual profit cannot be possible, or it may be too unmanageable to keep the necessary records. Therefore, it is advocated that appeals can be made based on potential benefits.

   For example, if the cost of lighting is estimated based on the actual profit obtained then you must keep a record of the no. of light points in each department, the wattage of the bulbs used in each light point, and the time, the amount of which would be at each point was on. It is rather impractical.

Therefore, the costs of lighting costs can be estimated in each department based on light pine. Similarly, the cost of transport for workers can be appealed based on the number of employees in each department. This method is also called 'service or use' method.

4.3.1 Difference Between Cost Allocation and Cost Apportionment :

Departmentalization can be understood as a process of creating departments such as machining, personnel, fabrication, maintenance, stores, accounts, etc., in an organization, for the purpose of allocation and apportionment of overheads in a convenient way. The term allocation of cost is concerned with the complete cost items, whereas the apportionment of the cost is all about the proportion of cost items.

Based on the relation of the cost item with the cost centre or unit, to which it is imposed, the cost item is allocated or apportioned and not as per the nature of the expense.

Comparison Chart

BASIS FOR COMPARISON	COST ALLOCATION	COST APPORTIONMENT
Meaning	Allocation of cost, implies the entire distribution of the overhead item to the departments on a logical basis.	Apportionment of cost refers to distribution of various overhead items, in proportion, to the department on a logical basis.
Represents	It represents that part of cost attribution, which charges a particular cost to a cost unit.	It represents that part of cost attribution, which shares cost among multiple cost units, in the proportion of expected benefit received.
Distribution	Directly assigned to the department.	Proportionately assigned to different departments.
Application	When the overhead belongs to a specific department.	When the overhead belongs to different departments.

4.3.2 Definition of Cost Allocation :

Cost Allocation, as the name suggest, is the direct allotment of cost to the traceable cost object. It is the process of associating the expenses incurred, to different departments of the organization.

When a particular cost item is easily recognizable with a cost unit, i.e., product, or cost centre, then these costs are charged to the concerned cost centre or unit, and the process is called as cost allocation. In finer terms, it is the full–fledged distribution of an overhead item to the department, rationally.

Therefore, a process, in which there is an outright charging of whole cost items to the concerned cost centre, is termed as cost allocation. The two factors responsible for cost allocation are :

Respective cost unit or cost centre, causing the overhead to be incurred.

Definite amount of cost is to be calculated.

For instance : Salary paid to the employees of the maintenance department, can be allocated to that department.

4.3.3 Definition of Cost Apportionment :

When the cost items cannot be outrightly charged to or accurately traceable to a particular cost centre, then such items of cost are prorated amongst various cost objects, on an equitable basis, this process is known as cost apportionment. It is the distribution of different items of cost in proportions to the cost unit or cost centre on a suitable basis.

In simple terms, the expenses which are unallowable are dispersed over multiple departments, is known as apportionment.

For instance : Wages paid to the head of the factory, rent of factory, electricity, etc. cannot be charged to a particular department, then these can be apportioned amongst various departments.

The basis for apportionment of costs is determined after proper examination of the relationship between the base and different variables. It is important to predetermine an appropriate basis for apportionment, which guarantees the equitable share of common overheads for the departments. The basis should be periodically reviewed, to improve the accuracy.

4.3.4 Key Differences Between Cost Allocation and Cost Apportionment :

The difference between cost allocation and cost apportionment can be drawn clearly on the following grounds :

- Allocation of cost means a process in which the entire amount of overhead is charged to a specific cost centre. On the contrary, Apportionment of cost can be understood as the distribution of proportions of cost items to the cost unit, i.e., product or service or the cost centre.
- Allocation of the cost is possible only when the cost is recognized as particularly imputable to a specific cost centre. Conversely, apportionment of the cost is needed when the cost cannot be allocated to a particular cost centre. Instead, the cost is shared by two or more cost centres, as per the expected benefit received.
- As allocation of overhead is a sheer process of departmentalization of expenses, the overheads are directly assigned to the department. In contrast, cost apportionment involves the proportionate distribution of cost to different departments, on a reasonable basis.
- Cost allocation is applied when the overhead is associated with a particular department. As against this, cost apportionment is applied when the overhead is related to various departments.

Check Your Progress :

1. Cost apportionment involves :

   (A) The sharing out of overheads to service departments.

   (B) The sharing out of common costs to departments.

   (C) The allocation of direct costs to departments

   (D) The sharing out of costs to products.

2. What would be the most appropriate way of apportioning depreciation costs across ? Different manufacturing departments in a business ?

   (A) Floor space

   (B) Numbers of personnel

   (C) Value of buildings and equipment

   (D) Value of land.

3. The process of distribution of overheads allotted to a particular department or cost centre over the units produced is called :

   (A) Allocation (B) Apportionment

   (C) Absorption (D) Departmentalization

4. Which of the following procedure is incorrect for attributing overhead costs to cost units ?

   I. Collecting production overhead costs by item.

   II. Establishing cost centres.

   III. Allocating and apportioning overhead costs to cost centres.

   IV. Apportioning service cost centre costs to production cost centres

   V. Absorbing production cost centre costs into cost units

   (A) All of the above are correct.

   (B) All of the above are incorrect.

   (C) (II) and (IV) are incorrect.

   (D) (II) is incorrect

5. The apportionment of production overhead costs might be in two stages :

   sharing (or dividing) general costs between production centres and service centres; and

   then sharing the costs of the service centres between the production centres.

   (A) Correct (B) Incorrect (C) Maybe (D) 50 Percent

4.4 Let Us Sum Up :

When all the items are collected properly under suitable account headings, the next step is allocation and apportionment of such expenses to cost centres. This is also known as departmentalisation of overhead. Departmentalisation of production overheads is the process of identifying production overhead expenses with different production/service departments or cost centres. It is done by means of allocation and apportionment of overheads among various departments. It involves :

(i) Allocation and apportionment of overheads among production and service departments and

(ii) Reapportionment of service departments overheads among production departments.

A factory is administratively divided into sub–divisions known as departments for running it smoothly and efficiently. This sub–division is done in such a manner that each department represents a division of activity of the concern such as repairs department, power department, tools department, stores department, cash department, cost department etc.

4.5 Answers for Check Your Progress :

1. C **2.** D **3.** C **4.** A **5.** A

4.6 Glossary :

1. **Production Departments :** Production departments are the departments directly engaged in the manufacturing of products e.g., cutting, stitching, and finishing packing departments of a garment's factory.
2. **Service Departments :** Service departments are the departments that do not perform operations on products to be manufactured but provide auxiliary services to. support operations in production departments e.g., repair and maintenance, purchasing, storeroom, training, payroll departments etc.
3. **Apportionment :** Apportionment of cost refers to the distribution of various overhead items, in proportion, to the department on a logical basis.

4.7 Assignment :

Explain the basis of apportionment in detail.

4.8 Activities :

What are the advantages of apportionment of overheads ? Is it easy to implement the apportionment process ?

4.9 Case Study :

Visit an organisation in your vicinity and identify the cost apportionment methodology followed by them. Advise them for any changes required.

4.10 Further Readings :

1. Overhead Costs : Sir Henry Bunbury

BLOCK SUMMARY

In this block you have learn the various implication and importance of overheads for the real–world scenarios. It also guides you towards the definition, nature, and scope of labour costing and overheads from the managerial perspective. This block also focuses on the understanding of the classification of labour cost and overheads, and how it is useful for future managers. It comprises different techniques of labour costing like time–based costing, wage costing and incentive costing. Block also teach you the basic concept of apportionment of overheads as well as the technique of apportionment. It contains the various definition and understanding of components of overheads and their effect into various business process.

BLOCK ASSIGNMENT

Short Questions :

1. Define the term Overheads ?
2. What is meant by labour Cost Accounting ?
3. How do you define the term Overhead Accountancy ?
4. State the three most important need for Labour cost Accounting ?
5. What are the advantages of classification of overheads ?

Long Questions :

1. Write a brief note on classification of overheads.
2. Explain labour costing process in detail
3. What are the advantages and disadvantages of labour costing ?
4. Explain in the brief the different components of labour costing.

❖ **Enrolment No. :** ______

1. How many hours did you need for studying the units ?

Unit No.	1	2	3	4
No. of Hrs.				

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	☐	☐	☐	☐	______
Language and Style	☐	☐	☐	☐	______
Illustration used (Diagram, tables etc)	☐	☐	☐	☐	______
Conceptual Clarity	☐	☐	☐	☐	______
Check your progress Quest	☐	☐	☐	☐	______
Feed back to CYP Question	☐	☐	☐	☐	______

3. Any other Comments

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Dr. Babasaheb
Ambedkar
OpenUniversity

BBAR-502

Cost Accounting

BLOCK-4 INTRODUCTION TO BUDGETARY CONTROL

BLOCK 4 : INTRODUCTION TO BUDGETARY CONTROL

Block Introduction

In this block we will understand the fundamental concepts of budgetary control, Objectives, Advantages, Limitations, Pre–requisite and Installation of Budgetary Control System. Second Unit of the block contain Types of Budget its Functional Classification and ZERO–BASE Budgeting. Third Unit consists of Classification on the Basis of Flexibility : fixed budget and flexible budget. Forth Unit comprises of Contemporary Issues and Cases in Budgeting.

Block Objectives

After learning this block, you will be able to understand :

- Definition of Budgetary Control
- Introduction of Budgetary Control
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Block Structure

Unit 1

INTRODUCTION, MEANING AND OBJECTIVES OF BUDGETARY CONTROL

: UNIT STRUCTURE :

1.0 Learning Objectives :

- Understand the process of budgeting, objectives of budgeting.

1.1 Introduction :

In this unit we will discuss about the Budget, Budgeting and Budgetary Control. The term 'Budget' appears to have been derived from the French word 'baguette' which means 'little bag', or a container of documents and accounts. A budget is an accounting plan. As budget is any financial plan serving as an estimate of and a control over future operations. Hence, any estimate of future costs. Any systematic plan for the utilisation of manpower, material or other resources. The entire process of creating, enacting, and managing a budget is known as budgeting.

1.2 Definition of Budget :

Kohler defines budget as :

1. Any financial plan serving as an estimate of and a control over future operations.

2. Hence, any estimate of future costs.
3. Any systematic plan for the utilisation of manpower, material or other resources.

1.3 Definition of Budgeting :

The entire process of creating, enacting, and managing a budget is known as budgeting. The provision of resources to support plans that are being implemented is the main focus of this short–term budgeting process.

1.4 Definition of Budgetary Control :

The Chartered Institute of Management Accountants, London defines Budgetary control as "the establishment of budgets, relating the responsibilities of executive to the requirements of a policy and the continuous comparison of actual with budgeted results either to secure by individual action the objectives of that policy or to provide a firm basis for its revision".

The budget is a blueprint for the anticipated course of action that is expressed in financial terms and for a given amount of time. The budgets provide the plan a concrete form, and subsequent actions ensure that the plan is followed in order to finish the control system. Budgetary control, then, is the act of sticking to the plan, whereas budgeting is the skill of planning. Budgetary control actually entails routinely comparing actual results to the budget and swiftly addressing any discrepancies.

Rowland and William in their book entitled Budgeting for Management Control has given the difference between budget, budgeting and budgetary control as follows :

"Budgets are the individual objectives of a department, etc. whereas budgeting may be said to be the act of building budgets. Budgetary Control embraces all this and in addition include the science of planning the budgets themselves and the utilisation of such budgets to effect an overall management tool for the business planning and control".

Thus, a budget is a financial plan and budgetary control results from the administration of the financial plan.

1.5 Objectives of Budgetary Control :

The objectives of budgetary Control are the following.

i. To use several levels of management in a collaborative effort to fulfil the firm's goals
ii. To facilitate centralised control with delegated authority and responsibility.
iii. To maximise profits by budgeting income and expenses and making the best use of the resources at hand.

iv. To ensure adequate working capital in other resources for efficient operation of business.

v. To reduce losses and wastes to the minimum.

vi. To bring out clearly where effort is needed to remedy the situation.

vii. To ensure that the company doesn't be side tracked while pursuing its long–term goals by unexpected emergencies.

viii. Budgetary control is used to coordinate a variety of activities, including production, sales, the purchasing of materials, etc.

1.6 Advantages of Budgetary Control :

Budgetary control is what separates following a carefully calculated course toward a specified differentiation from drifting aimlessly in an uncharted sea. As a result of its planning, coordination, and control capabilities, it is a powerful management tool.

The advantages of a budgetary control system are enumerated below :

1. The goal of budgetary control is to maximise profits through efficient planning and management of revenue and expenditure – allocating resources and capital to the best and most lucrative channel.
2. The business's funding and spending are planned, ensuring that money is used as efficiently as possible for the advantage of the company.
3. The goal and objectives of the concern are clearly defined, and a means is provided for objecting to periodic review of these policies.
4. The task of managerial co–ordination is facilitated through budgetary control
5. The best possible use of people, materials, and resources can be made possible since every level of management is aware of the task and completely aware of how it should be carried out.
6. Reports are provided in accordance with management or control by exception principles. Only budget variances that highlight weak points and inefficiencies are thoroughly investigated.
7. It instils in management the habit of planning ahead and thoroughly analysing issues before making judgments.
8. A budgetary control system assists delegation of authority and is a powerful tool of responsibility accounting.
9. Budgets are the precursors to standard expenses in the sense that they establish the circumstances for their establishment.
10. The process of comparing performance to budgets offers a suitable foundation for creating a reward system based on results as well

as identifying individuals with excellent leadership and management abilities.

11. Since it involves foreseeing difficulties of various types, it will lead to their removal in time.

1.7 Limitations of Budgetary Control :

1. The initial stage of budgetary control is the establishment of budgets, which are essentially estimations. As a result, a key component in assessing the effectiveness of the budgetary management system is the quality or accuracy of estimations.
2. Budgets are designed to address the dynamic nature of business environment. As a result of its rigidity, budget estimates are less effective in shifting circumstances. The budgetary control system must be maintained with sufficient flexibility.
3. Without adequate management of personal administration, the budgetary control system is dependent on quantitative data and solely represents an impersonal judgement of the conduct of economic activities.
4. It has often been found that in practice the organisation of budgetary control system become top heavy and, therefore, costly especially from the point of view of small concern.
5. Budgets and budgetary control have led to a very unhealthily pervasive perception that they are the answer to all corporate issues. This has led to a very mediocre human response to these issues, which ultimately leads to the breakdown of the budgetary control system.
6. It is a part of human nature that all controls are resented to. Budgetary control which places restrictions on the authority of executive is also resented by the employees.

1.8 Pre–Requisite of Budgetary Control System :

Material procurement procedure can be understood with help of following diagram. Documents required and the departments who initiate these documents are shown sequentially.

For the successful implementation of a system of budgetary control certain pre–requisites are to be fulfilled.

1. An organisational chart should clearly outline the obligations of each level of executives as well as the delegation of authority to those levels.
2. The objectives, plans, and policies of the business should be defined in clear cut and unambiguous terms.
3. The budget factor or the key factor(s) which will be the starting point of the preparation of the various budgets should be indicated.

4. For formulation and efficient execution of the plan, a Budget Committee should be set up.
5. There should be an efficient system of accounting to record and provide data in line with the budgetary control system.
6. There should be a proper system of communication and reporting between the various levels of management.
7. A budget manual should contain all pertinent information on the plan, its operational process, and the duration of the budget period.
8. The budgets should primarily be prepared by those who are responsible for performance.
9. The budgets should be comprehensive, complete, continuous and realistic to attain.
10. There should be an assurance from the top management executives for co–operation and acceptance of the budgetary control system.
11. A strong organisation for budget creation, budget maintenance, and budget administration is crucial for the effectiveness of a budgetary management system. The top executive in charge of the budgetary control organisation is typically referred to as the Budget Controller, Budget Director, or Budget Officer. This executive may be supported by a budget committee made up of representatives from various departments, including purchasing, sales, production, development, administration, and accounts.

1.9 Installation of Budgetary Control System :

The following steps should be considered in detail for sound budgets and for successful implementation of the budgetary control system.

i. **Organisation Chart :** An organisational chart is a statement defining functional representatives of executives responsible for accomplishment of organisational objectives. This chart shows :

(a) Functional responsibility of a particular executive.

(b) Delegation of authority to various levels.

(c) Relative position of a functional head with heads of other functions.

ii. **Budget Centre :** A component of the organisation of the project designated for budget control is known as a budget centre. For cost control, a budget centre should be created, and each budget should be connected to a cost centre. Budget centres will identify the organisational divisions where anticipated performance is not met. Because a distinct budget needs to be established with the support of the head of the department in question, each budget centre needs to be clearly defined. To give an example, the production manager must be contacted when creating the production budget and the finance manager when creating the cash budget.

iii. **Budget Manual :** A budget manual is a book containing standing instructions regarding the procedures to be followed and the time schedules to be observed. It is a document that sets forth outstanding instructions governing the roles of individuals and the procedures, forms, and records relating to the preparation and use of budgets.

iv. **Budget Controller :** To line up the various functions of Budget Committee, to bring them together and to co–ordinate their efforts in the matter of preparation of target figures, there should be a person usually designated as the Budget Controller, who can provide ready data relating to all the functions. He is more or less the secretary to the budget committee. The Budget Controller does not control; he is staff man; he advises but does not issue instructions.

v. **Budget Committee :** The budget committee is a group of representatives of various functions in an organisation. As all functions are inter–related and as any change in one's target will have its impact on that of the other, it is necessary to discuss the targets so that a mutually agreed programme is determined. This is the co–ordination in budget making. It is a powerful force in knitting together the various activities of the business and enforcing real control over operations.

vi. **Budget Period :** CIMA defines budget period as "the period for which a budget is prepared and used, which may then be sub–divided into control periods". It refers to the period of time covered by a budget. The broad classification in this regard has already been stated as "long–term budget" and "short–term budget".

The short–term budget itself could be bifurcated into yearly and quarterly budgets. Long–term budgets provide the perspective, since one would be able to have a view of what is likely to be achieved and what the chief problems are likely to be, such as, competition from new products. Short–term budgets, say, for a year are quite exact and those for a quarter even more so. These are particularly suitable for control purposes. A short–term budget need not necessarily be for one year. It is generally long enough to cover one season or business year.

vii. **Budget Key Factor :** A budget key factor or principal budget factor is described by the CIMA London terminology as : **"a factor which will limit the activities of an undertaking and which is taken into account in preparing budgets".** The degree of demand for the company's goods or services is typically the limiting factor, but it could also be a scarcity of one of the productive resources, such as skilled labour, raw materials, or machine capacity. It is first necessary to determine how much of an impact this component has in order to make sure that the functional budgets are realistically capable of being met. All organisational functions are connected, as has already been mentioned. The target of one has influence on that of the other.

It would be pointless to produce 100,000 units if the sales department could only sell 50,000 of them. A sales potential of 100,000 units is not very important if the production department has a capacity of 50,000 units. The budget committee would decide how to overcome a restricting issue after deliberations. One limiting issue may be overcome, but then another may emerge. Therefore, depending on the situation, different limiting constraints may apply. A decision that maximises productivity while taking into account the many limiting variables must be made. An inquiry into the future is the fundamental problem. It is necessary to calculate all possibilities under various conditions in order to set the target at the ideal level.

viii. Budget Reports : All control systems include performance assessment and variance reporting as essential components. Budgeting is useless in and of itself unless actual spending is routinely compared to budgeted allowances, with the results being communicated to management. Budget reports that compare actual spending to planned spending should be published on a regular basis in order to achieve this goal. The reports should be created in a way that identifies the department or executive who is responsible and fully explains any discrepancies so that the appropriate corrective action can be performed. Both favourable and unfavourable deviations should be displayed and discussed in the reporting, which should be based on the exception reporting principle. In a nutshell, a budget report compares actuals to budgets for the month as well as cumulatively up to the current month. In order to identify the cause and make it easier to take corrective action, budget deviations are calculated for each expense item.

Check Your Progress :

1. Budget can be classified as

   (A) Audit of historical expenses

   (B) Estimate of future costs

   (C) Comparison of estimated expenses and actual expenses

   (D) None of the above

2. It is used to coordinate a variety of activities, including production, sales, the purchasing of materials, etc.

   (A) Budget manual (B) Budget Centre

   (C) Budgetary Control (D) None of the above

3. A budget is a plan of action expressed in ___________

   (A) Financial terms (B) Non financial terms

   (C) Both (D) Subjective matter

4. Budget is prepared for a ___________

   (A) Indefinite period (B) Definite period

   (C) Period of one year (D) Six months

5. A budget is a tool that helps the management in planning and control of ___________
   (A) All business activities (B) Production activities
   (C) Purchase activities (D) Sales activities

1.10 Answers for Check Your Progress :

A budget is a precise statement of the financial and quantitative implications of the course of action that management has decided to follow in the immediate next period of time. The budget manual is a written document or booklet which specifies the objectives of the budgeting organization and procedures.

1.11 Answers for Check Your Progress :

1. B **2.** C **3.** C **4.** B **5.** A

1.12 Glossary :

1. Budget : Any financial plan serving as an estimate of and a control over future operations.

2. Budgeting : The entire process of creating, enacting, and managing a budget is known as budgeting.

3. Budgetary Control : Budgetary control is the establishment of budgets, relating the responsibilities of executive to the requirements of a policy and the continuous comparison of actual with budgeted results either to secure by individual action the objectives of that policy or to provide a firm basis for its revision.

1.13 Assignment :

What are the objectives of Budgetary Control.

1.14 Activities :

Define and differentiate Budget, Budgeting and Budgetary.

1.15 Case Study :

State the Advantages and Disadvantages of Budgetary Control.

1.16 Further Readings :

1. Cost accounting : Concepts and Methods – N K Agrawal and Deepali Jain

Unit 2

CLASSIFICATION OF BUDGET

: UNIT STRUCTURE :

2.0 Learning Objectives :

After studying this unit students will be able to :

- Create a savings plan to meet short and long–term goals.
- Define and categorize items as needs or wants.
- Define opportunity cost and explain how it applies to time lost, other activities that could be completed, or additional wants.

2.1 Introduction :

The term 'Budget' appears to have been derived from the French word 'baguette' which means 'little bag', or a container of documents and accounts. A budget is an accounting plan. It is a formal plan of action expressed in monetary terms. It could be seen as a statement of expected income and expenses under certain anticipated operating conditions. It is a quantified plan for future activities – a quantitative blueprint for action.

By coordinating various activities, every organisation can able to accomplish its goals. Effective planning of these operations is critical for achieving goals, which is why management has a key role in achieving goals, which is why management has a key role of goals, which is why management has a key role to play in developing the plans for its company. Plans of action for upcoming times should be created in order to coordinate various activities within a corporation. The term "budgets" is frequently used to describe these detailed plans. A management tool for short–term planning and control is budgeting. Not simply an accounting exercise, though.

Meaning and Definition :

- **Budget :**

According to CIMA (Chartered Institute of Management Accountants) UK, a budget is "A plan quantified in monetary terms prepared and approved prior to a defined period of time, usually showing planned income to be generated and, expenditure to be incurred during the period and the capital to be employed to attain a given objective."

In the view of Keller & Ferrara, "A budget is a plan of action to achieve stated objectives based on predetermined series of related assumptions."

2.2 Types of Budget :

Classification of Budget

2.2.1 Classification on the Basis of Functional Activities :

2.2.1.1 Sales Budget :

The sales budget is an estimate of total sales which may be articulated in financial or quantitative terms. It is normally forming the fundamental basis on which all other budgets are constructed. In practice, a quantitative budget is prepared first then it is translated into economic terms. While preparing the Sales Budget, the Quantitative Budget is generally the starting point in the operation of budgetary control because sales become, more often than not, the principal budget factor. The factor to be considered in forecasting sales are as follows :

- Study past sales to determine trends in the market.
- Estimates made by the salesman in various markets of company products.
- Changes in business policy and method.
- Government policy, controls, rules, and Guidelines etc.
- Potential market and availability of material and supply.

2.2.1.2 Production Budget :

The production budget is prepared on the basis of estimated production for the budget period. Usually, the production budget is based on the sales budget. At the time of preparing the budget, the production manager will consider the physical facilities like plant, power, factory space, materials and labor, available for the period. The Production budget envisages the production program for achieving the sales target. The budget may be expressed in terms of quantities or money or both. Production may be computed as follows :

Units to be produced = Desired closing stock of finished goods + Budgeted sales – Beginning stock of finished goods.

2.3.1.3 Production Cost Budget :

This budget shows the estimated cost of production. The production budget demonstrates the capacity of production. These capacities of production are expressed in terms of cost in the production cost budget. The cost of production is shown in detail in respect of material cost, labor cost, and factory overhead. Thus, the production cost budget is based on the Production Budget, Material Cost Budget, Labour Cost Budget, and Factory overhead.

2.2.1.4 Raw Material Budget :

A direct Materials budget is prepared with the intention to determine standard material cost per unit and consequently it involves quantities to be used and the rate per unit. This budget shows the estimated quantity of all the raw materials and components needed for production demanded by the production budget. Raw material serves the following purposes :

- It supports the purchasing department in scheduling the purchases.
- The requirement for raw materials is decided on the basis of the production budget.
- It provides data for raw material control.
- Helps in deciding terms and conditions of purchase like credit purchase, cash purchase, payment period, etc.

It should be noted that the raw material budget generally deals with only direct materials whereas indirect materials and supplies are included in the overhead cost budget.

2.2.1.5 Purchase Budget :

Strategic planning of purchases offers one of the most important areas of reduction cost in many concerns. This will consist of direct and indirect material and services. The purchasing budget may be expressed in terms of quantity or money.

The main purposes of this budget are :

- It designates cash requirements in respect of purchases to be made during the budget period; and
- It facilitates the purchasing department to plan its operations in time in respect of purchases so that long–term forward contracts may be organized.

2.2.1.6 Labour Budget :

Human resources are a highly expensive item in the operation of an enterprise. Hence, like other factors of production, the management should find out in advance personnel requirements for various jobs in the enterprise. This budget may be classified into labor requirement budget and labor recruitment budget. The labor necessities in the various job categories such as unskilled, semi ?skilled, and supervisory are determined with the help of all the heads of the departments. Labor employment is made keeping in view the requirement of the job and its qualifications, the degree of skill and experience required, and the rate of pay.

2.2.1.7 Production Overhead Budget :

The manufacturing overhead budget includes direct material, direct labor, and indirect expenses. The production overhead budget represents the estimate of all the production overhead i.e. fixed, variable, and semi ?variable to be incurred during the budget period. The reality that overheads include many different types of expenses creates considerable problems in :

(1) Fixed overheads i.e., that which is to remain stable irrespective of variations in the volume of output,

(2) Apportion of manufacturing overheads to products manufactured, semi–variable cost i.e., those which are partly variable and partly fixed.

(3) Control of production overheads.

(4) Variable overheads i.e., that which is likely to vary with the output.

The production overhead budget engages the preparation of overheads budget for each division of the factory as it is desirable to have estimates of manufacturing overheads prepared by those overheads to have the responsibility for incurring them. The service department's costs are projected and allocated to the production departments in proportion to the services received by each department.

2.2.1.8 Selling and Distribution Cost Budget :

The Selling and Distribution Cost budget is estimating the cost of selling, advertising, delivery of goods to customers, etc. throughout the budget period. This budget is closely associated with the sales budget in the logic that sales forecasts significantly influence the forecasts of these expenses. Nevertheless, all other linked information should also be taken into consideration in the preparation of the selling and distribution budget. The sales manager is responsible for the selling and distribution cost budget. Naturally, he prepares this budget with the help of managers of sub–divisions of the sales department. The preparation of this budget would be based on the analysis of the market condition by the management, advertising policies, research programs, and many other factors. Some companies prepare a separate advertising budget, particularly when spending on advertisements is quite high.

2.2.1.9 Administration Cost Budget :

This budget includes the administrative costs for non ?manufacturing business activities like director's fees, managing directors' salaries, office lighting, heating, air conditioning, etc. Most of these expenses are fixed so they should not be too difficult to forecast. There are semi ?variable expenses that get affected by the expected rise or fall in cost which should be taken into account. Generally, this budget is prepared in the form of a fixed budget.

2.2.1.10 Capital Expenditure Budget :

This budget stands for the expenditure on all fixed assets for the duration of the budget period. This budget is normally prepared for a longer period than the other functional budgets. It includes such items as new buildings, land, machinery, and intangible items like patents, etc. This budget is designed under the observation of the accountant which is supported by the plant engineer and other functional managers. At the time of preparation of the budget some important information should be observed :

- Overfilling on the production facilities of certain departments as revealed by the plant utilization budget.
- Long ?term business policy with regard to technical developments.
- Potential demand for certain products.

2.2.1.11 Cash Budget :

The cash budget is a sketch of the business estimated cash inflows and outflows over a specific period of time. A cash budget is one of the most important and one of the last to be prepared. It is a detailed projection of cash receipts from all sources and cash payments for all purposes and the resulting cash balance during the budget. It is a mechanism for controlling and coordinating the fiscal side of the business to ensure solvency and provides the basis for forecasting and financing required to cover up any deficiency in cash. Cash budget thus plays a vital role in the financing management of a business undertaken.

❖ **The function of Cash Budget :**

- It makes sure that enough cash is available when it is required.
- It designates cash excesses and shortages so that steps may be taken in time to invest any excess cash or to borrow funds to meet any shortages.
- It shows whether capital expenditure could be financed internally.
- It provides funds for standard growth.
- It provides a sound basis to manage cash position.

2.2.2 Classification of Flexibility

2.2.2.1 Fixed Budget :

A fixed budget is prepared for one level of output and one set of conditions. This is a budget in which targets are tightly fixed. It is known as a static budget. According to CIMA, "A budget which is designed to remain unchanged irrespective of the level of the activity attained". It is firm and prepared with the assumption that there will be no change in the budgeted level of motion. Thus, it does not provide room for any modification in expenditure due to the change in the projected conditions and activity. Fixed budgets are prepared well in advance.

This budget is not useful because the conditions go on changing and cannot be expected to be firm. The management will not be in a position to assess, the performance of different heads on the basis of budgets prepared by them because of the budgeted level of activity. It is hardly of any use as a mechanism of budgetary control because it does not make any difference between fixed, semi ?variable, and variable costs and does not provide any space for alteration in the budgeted figures as a result of the change in cost due to change in the level of activity. A Fixed budget can be revised in the light of changing situations, yet the rigidity and control over costs and expenses would be lost in such cases. Fixed budgets should be prepared only where sales, production and costs can be accurately estimated.

2.2.2.2 Flexible Budget :

This is a dynamic budget. In comparison with a fixed budget, a flexible budget is one "which is designed to change in relation to the level of activity attained." The underlying principle of flexibility is that a budget is of little use unless cost and revenue are related to the actual volume of production. The statistics range from the lowest to the highest probable percentages of operating activity in relation to the standard operating performance. Flexible budgets are a part of the feed advance process and as such are a useful part of planning. An equally accurate use of flexible budgets is for the purposes of control.

2.2.3 Classification on Time Budget :

With regard to time, budgets may be classified into four categories :

2.2.3.1 Long–term Budget :

These budgets are prepared on the basis of long ?term projection and portray long ?range planning. These budgets generally cover plans for three to ten years. In this regard, it is mostly prepared in terms of physical quantities rather than in monetary values.

2.2.3.2 Short–term Budget :

In this budget forecasts and plans are given in respect of its operations for a period of about one to five years. They are generally prepared in monetary units and are more specific than long ?term budgets.

2.2.3.3 Current Budgets :

These budgets cover a very short period, maybe a month or a quarter or a maximum of one year. The preparation of these budgets requires adjustments in short ?term budgets to current conditions.

2.2.3.4 Rolling Budgets :

A few companies follow the practice of preparing a rolling or progressive budget. In this case companies prepare the budget for a year in advance. A new budget is prepared after the end of each month or quarter for a full year in advance. The figures for the month or quarter which has rolled down are dropped and the statistics for the next month or quarter are added.

2.2.4 Performance Budgeting (PB) :

This term was used for the first time in the United States by the Hoover Commission. In India, Performance Budgeting was first discussed in 1954 during the Lok ?Sabah debates. But it was only in 1961 that the government of India issued general orders drawing the attention of the administrative ministries to the recommendations of the Estimates Committee, and requesting them to consider the issuance of suitable instructions. It was left to the Administrative Reforms Commission to come out with a more elaborate emphasis on PB in 1967. Performance budgeting is a budgeting system, which involves the assessment of the performance of the business, and both its specific and overall objectives. It gives clarity about organizational objectives and provides an exact direction to each employee in the business.

2.2.4.1 Meaning :

The term performance implies results or outputs. 'A performance budget is one which presents the purposes and objectives for which funds are required, the costs of the programmes proposed for achieving those objectives, and quantitative data measuring the accomplishments and work performed under the programme. Thus, PB is a technique of presenting budgets for costs and revenues in terms of functions, programmes, and activities and correlating the physical and financial aspects of the individual items comprising the budget.

As per the National Institute of Bank Management, the PB technique is, "the process of analysing, identifying, simplifying and crystallizing specific performance objectives of a job to be achieved over a period in the framework of the organizational objectives, the purpose and objectives of the job. The technique is characterized by its specific direction towards the business objectives of the organization." As a result, the performance budget accentuates the execution of specific goals over a period of time.

Steps in Performing Budgeting (PB) :

- Establishment of performance targets
- Establishment of a responsibility centre
- Estimating financial requirements
- Comparison of actual with budgeted performance
- Reporting and action

2.2.5 Zero–Based Budgeting :

Zero–base budgeting is a new technique designed to revitalize budgeting. A company should not only make decisions about the proposed new programmes but should also from time to time review the appropriateness of the existing programmes. Zero–base budgeting is one such technique of appraisal.

CIMA defines zero–base budgeting as "a method of budgeting whereby all activities are re–evaluated each time a budget is set. Discrete levels of each activity are valued and a combination is chosen to match funds available." Zero–base budgeting is a revolutionary concept of planning future activities, and it is sharply contradictory to conventional budgeting.

Zero–base budgeting is based on the premise that every rupee of expenditure requires justification. The traditional budgeting approach includes expenditures of the previous year which are automatically incorporated in new budget proposals and only increments are subject to debate. Zero–base budgeting assumes that a responsibility–center manager has had no previous expenditure. Important features of zero–base budgeting are :

(i) Concentration of efforts is not simply on "how much" a unit will spend but "why" it needs to spend.

(ii) Choices are made on the basis of what each unit can offer for a specific cost.

(iii) Individual unit's objects are linked to corporate targets.

(iv) Quick budget adjustments can be made if during the operating year costs are required to maintain the expenditure level.

(v) Alternative ways are considered.

(vi) Participation of all levels in decision–making.

2.2.6 Master Budgeting :

The Master budget is "a summary of the budget schedules in capsule form made for the purpose of presenting, in one report the highlights of budget forecast". CIMA, London, defines it as "the summary budget, incorporating its component functional budgets, which is finally approved, adopted and employed." Thus, it is a summary budget that incorporates all other budgets. It sets out the plan of operations for all departments in considerable detail for the budget period.

The budget may take the form of a Profit & Loss Account and Balance Sheet and the budgeted cash flow at the end of the budget period. The master budget is prepared by the budget committee on the basis of coordinated functional budgets and becomes the target of the company during the budget period once it is finally approved. This budget acts as the company's individualized key to successful financial planning and control. It provides the basis for computing the effect of any changes in any phase of operations, such as sales volume, product mix, prices, labor costs, material costs, or changes in facilities. It segregates income, costs, and profits by areas of responsibility. The master budget presents all this information to the depth appropriate for the top management action. It also shows the gross and net profit and the important accounting ratios.

In a master budget, costs are classified and summarized by types of expenses as well as by departments. This information extends the range of usefulness of the master budget. It is considered the best mode of understanding the company's micro–economic position by making things clear and more transparent for the forthcoming budget period.

Check Your Progress :

1. A budget is a plan of action expressed in ___________
   (A) Financial terms (C) Both
   (B) Non–financial terms (D) Subjective matter
2. Budget is prepared for a ___________
   (A) Indefinite period (C) Period of one year
   (B) Definite period (D) Six months
3. The budgets are classified on the basis of ___________
   (A) Time (B) Function (C) Flexibility (D) All
4. An example of the long period budget is ___________
   (A) R & D budget (C) Sales budget
   (B) Master budget (D) Personnel budget
5. Sales budget shows the sales details as ___________
   (A) Month–wise (C) Area wise
   (B) Product wise (D) All of the above

6. Production budget is ___________
   (A) Dependent on purchase budget
   (B) Dependent on sales budget
   (C) Dependent on the cash budget
   (D) None

2.3 Let Us Sum Up :

- A budget is a precise statement of the financial and quantitative implications of the course of action that management has decided to follow in the immediate next period of time
- CIMA, London, defines budgetary control as "the establishment of budgets relating to the responsibilities of executives to the requirements of a policy, and the continuous comparison of actual with budgeted results, either to secure by individual action the objective of that policy or to provide a basis for its revision".
- The budget manual is a written document or booklet which specifies the objectives of the budgeting organization and procedures.
- The Master budget is "a summary of the budget schedules in capsule form made for the purpose of presenting, in one report, the highlights of budget forecast".
- The Chartered Institute of Management Accountants, London defines a flexible budget as a budget that by recognizing different cost behaviour patterns, is designed to change as the volume of output changes. It is a budget prepared in a manner as to give the budgeted cost for any level of activity. It is a budget that by recognizing the difference between fixed, semi–fixed, and variable costs are designed to change in relation to the activity attained.
- Zero base budgeting is "a method of budgeting whereby all activities are re–evaluated each time a budget is set. Discrete levels of each activity are valued and a combination is chosen to match funds available."
- Performance budgeting is looked upon as a budget based on functions, activities, and projects and is linked to the budgetary system based on objective classification of expenditure.
- Performance budgeting involves the evaluation of the performance of an organization in the context of both species as well as the overall objectives of the organization.

2.4 Answers for Check Your Progress :

1. C	**2.** B	**3.** D
4. A	**5.** D	**6.** B

2.5 Glossary :

1. **Budget :** A comprehensive and coordinated plan, expressed in financial terms, for the operations and resources of an enterprise for some specific period in the future.
2. **Forecasting :** A statement of events likely to occur.
3. **Fixed Budget :** A budget prepared on the basis of a standard or a fixed level of activity.
4. **Flexible Budget :** A budget designed in a manner so as to give the budgeted cost at any level of activity.
5. **Master Budget :** A summary budget incorporating all functional budgets which is finally approved, adopted and employed.

2.6 Assignments :

1. Differentiate between zero–based budgeting and traditional budgeting.
2. Explain briefly the classification of budgeting on the basis of functions.
3. What do you understand by performance budgeting ?
4. What steps are required to be taken for preparing a performance budget ?
5. Write a short note on

   (a) Zero base budgeting (b) Master Budget (c) Budget manual (d) fixed budget (e) Flexible Budget.

2.7 Activities :

Discuss with your family and friends about monthly budget for home, yearly budget for the Business and also watch annual budget proposed by Corporation.

2.8 Case Study :

State attributes of the library budget of your University/College.

2.9 Further Reading :

1. Lal Nigam B.M. and Sharma G.L., Advanced Cost Accounting, Himalaya Publishing House, Bombay–4.
2. Maheswari, S.N. 1987, Management Accounting and Financial Control, Sultan Chand : New Delhi
3. Edward B. Deakin and Michael W. Maher, Cost Accounting, Richard D. Erwin, inc., Homewood, Illinois
4. Jawahar Lal and Seema Srivastava., Cost Accounting, Tata McGraw Hill.

Unit 3 CLASSIFICATION OF BUDGETS ON THE BASIS OF FLEXIBILITY

: UNIT STRUCTURE :

3.0 Learning Objective :

In previous chapters we have learned about different types of budget. In this chapter we shall learn in detail about different types of budget based on flexibility

3.1 Introduction :

In this unit we will discuss about the classification of budgets on the basis of flexibility. Here, we will learn about the fixed budget with its merits and demerits, flexible budget with its merits and demerits.

3.2 Classification of Budgets :

These types of budgets are prepared on the basis of activity level or utilization of capacity. Theses are known as "Budgets based on the basis of Flexibility"

3.3 Fixed Budget :

A budget may be established either as a fixed budget or a flexible budget. A fixed budget is a budget designed to remain unchanged irrespective of the level of activity actually attained. A fixed budget is one which is designed for a specific planned output level and is not adjusted to the level of activity attained at the time of comparison between the budgeted and actual costs. Obviously, fixed budgets can be established only for a small period of time when the actual output is not anticipated to differ much from the budgeted output. However, a fixed budget is liable to revision if due to business conditions undergoing a basic change or due to other reasons, actual operations differ widely from those planned in the fixed budget. These budgets are most suited for fixed expenses, but they have only a limited application and is ineffective as a tool for cost control. It is also known as static budget.

3.4 Essential Conditions :

1. When the nature of business is not seasonal.
2. There is no impact of external factors on the business activities.
3. The demand of the product is stable and certain.
4. Supply orders are received and issued regularly
5. There is no need of special labour or material in the production of the products.
6. Supply of production inputs in regular.
7. There is a trend of price stability.

3.5 Merits of Fixed Budget :

Following are the merits of fixed budget

1. It is very simple to understand
2. It is less time consuming

3.6 Demerits of Fixed Budget :

Following are the demerits of fixed budget

1. It does not suite a dynamic organisation and may give misleading results. A poor or good performance may remain unnoticed.
2. It is not suitable for long period
3. It is also found unsuitable particularly when the business conditions are changing constantly.
4. Accurate estimates are not possible.

3.7 Flexible Budget :

Flexible budget can be defined as a budget which by recognising different cost behaviour patterns, is designed to change as volume of output changes. It is a budget prepared in a manner so as to give the budgeted cost for any level of activity. It is a budget which by recognising the difference between fixed, semi–fixed and variable cost is designed to change in relation to the activity attained. It is designed to furnish budgeted cost at any level of activity attained. Flexible budgeting is desirable in the following cases :

(i) Where the level of activity during the year varies from period to period, either due to the seasonal nature of the industry or to variation in demand.

(ii) Where the business is a new one and is difficult to foresee the demand.

(iii) Where the undertaking is suffering from shortage of a factor of production such as materials, labour, plant capacity, etc.

The main characteristic of flexible budget is that it shows the expenditure appropriate to various levels of output. If the volume changes the expenditure appropriate to it can be established from the flexible budget for comparison with actual expenditure as a means of control. It provides a logical comparison of budget allowances with actual cost. When flexible budget is prepared, actual cost at actual activity is compared with budgeted cost at actual activity i.e. two things to a like base. For preparation of flexible budget, items of cost have to be analysed individually to determine how different items of cost behave to change in volume. Therefore, in–depth cost analysis and cost identification is required for preparation of flexible budget. Following are the striking features of flexible budgets :

(i) They are prepared for a range of activity instead of a single level.

(ii) They provide a very dynamic basis for comparison because they are automatically geared to changes in volume.

(iii) They provide a tailor–made budget for a particular volume.

(iv) These are based upon adequate knowledge of cost behaviour pattern.

3.8 Merits of Flexible Budgets :

Following are the merits of flexible budgets

1. With the help of flexible budget, the sales, costs and profit may be calculated easily by the business at various level of production capacity.
2. In flexible budget, adjustment is very simple according to change in business condition.
3. It also helps in determination of production level as it shows budgeted costs with classification at various levels of activity along with sales. Hence the management can easily select the level of production which shows the profit predetermined by the owners of the business.
4. It also shows the quantity of product to be produced to earn determined profit.

3.9 Demerits of Flexible Budget :

1. The formulation of flexible budget is possible only when there is proper accounting system maintained, perfect knowledge about the factors of production and various business circumstances is available.
2. Flexible budget also requires the system of standard costing in business.
3. It is very expensive and labour oriented.

3.10 Difference between Fixed and Flexible Budget :

Sl. No.	Fixed Budget	Flexible Budget
1.	It does not change with actual volume of activity achieved. Thus it is known as rigid or inflexible budget.	It can be re-casted on the basis of activity level to be achieved. Thus it is not rigid.
2.	It operates on one level of activity and under one set of conditions. It assumes that there will be no change in the prevailing conditions, which is unrealistic.	It consists of various budgets for different levels of activity.
3.	Here as all costs like - fixed, variable and semi variable are related to only one level of activity so variance analysis does not give useful information.	Here analysis of variance provides useful information as each cost is analysed according to its behaviour.
4.	If the budgeted and actual activity levels differ significantly, then the aspects like cost ascertainment and price fixation do not give a correct picture.	Flexible budgeting at different levels of activity facilitates the ascertainment of cost, fixation of selling price and tendering of quotations.
5.	Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between the two activity levels.	It provides a meaningful basis of comparison of the actual performance with the budgeted targets.

3.11 Illustrations :

1. A factory which expects to operate 7,000 hours, i.e., at 70% level of activity, furnishes details of expenses as under :

Variable expenses	₹ 1,260
Semi–variable expenses	₹ 1,200
Fixed expenses	₹ 1,800

The semi–variable expenses go up by 10% between 85% and 95% activity and by 20% above 95% activity. PREPARE a flexible budget for 80, 90 and 100 per cent activities.

Solution :

Head of Account	**Cotnrol Basis**	**70%**	**80%**	**90%**	**100%**
Budgeted Hours		7,000	8,000	9,000	10,000
		₹	₹	₹	₹
Variable expenses	Variable	1,260	1,440	1,620	1,800
Semi–Variable Expenses	Semi–variable	1,200	1,200	1,320	1,440
Fixed expenses	Fixed	1,800	1,800	1,800	1,800
Total expenses		4,260	4,440	4,740	5,040

Conclusions :

We notice that the recovery rate at 70% activity is ₹ 0.61 per hour. If in a particular month the factory works 8,000 hours, it will be incorrect to estimate the allowance as ₹ 4,880 @ ₹ 0.61. The correct allowance will be ₹ 4,440 as shown in the table. If the actual expenses are ₹ 4,500 for this level of activity, the company has not saved any money but has over–spent by ₹ 60 (₹ 4,500 – ₹ 4,440).

2. A department of Company X attains sale of ₹ 6,00,000 at 80 per cent of its normal capacity and its expenses are given below :

Administration costs :	**(₹)**
Office salaries	90,000
General expenses	2 per cent of sales
Depreciation	7,500
Rates and taxes	8,750
Selling costs :	
Salaries	8 per cent of sales
Travelling expenses	2 per cent of sales
Sales office expenses	1 per cent of sales

General expenses	1 per cent of sales
Distribution costs :	
Wages	15,000
Rent	1 per cent of sales
Other expenses	4 per cent of sales

PREPARE flexible administration, selling and distribution costs budget, operating at 90 per cent, 100 per cent and 110 per cent of normal capacity.

Solution :

Flexible Budget of Department .. of Company X

	80% ₹	**90% ₹**	**100% ₹**	**110% ₹**
Sales	6,00,000	6,75,000	7,50,000	8,25,000
Administration Costs				
Office Salaries (fixed)	90,000	90,000	90,000	90,000
General Expenses (2% of Sales)	12,000	13,500	15,000	16,500
Depreciation (fixed)	7,500	7,500	7,500	7,500
Rent and rates (fixed)	8,750	8,750	8,750	8,750
A. Total Admin Costs	**1,18,250**	**1,19,750**	**1,21,250**	**1,22,750**
Selling Costs :				
Salaries (8% of sales)	48,000	54,000	60,000	66,000
Travelling Exps (2% of sales)	12,000	13,500	15,000	16,500
Sales office (1% of sales)	6,000	6,750	7,500	8,250
General expenses (1% of sales)	6,000	6,750	7,500	8,250
B. Total Selling Costs	**72,000**	**81,000**	**90,000**	**99,000**
Distribution Costs :				
Wages (fixed)	15,000	15,000	15,000	15,000
Rent (1% of Sales)	6,000	6,750	7,500	8,250
Other expenses (4% of Sales)	24,000	27,000	30,000	33,000
C. Total Distribution Costs	**45,000**	**48,750**	**52,500**	**56,250**
Total Costs (A + B + C)	**2,35,250**	**2,49,500**	**2,63,750**	**2,78,000**

Note : In the absence of information it has been assumed that office salaries, depreciation, rates and taxes and wages remain the same at 110% level of activity also. However, in practice some of these costs may change if present capacity is exceeded.

Check Your Progress :

1. The classification of fixed and variable cost is useful for the preparation of

   (A) Master budget (B) Flexible Budget

   (C) Cash Budget (D) None of the above

2. Which of the following is usually short term budget

   (A) Capital expenditure budget

   (B) Research & Development Budget

   (C) Cash Budget

   (D) All of the above

3. While preparing a flexible budget, direct material, direct labour and direct expenses all are placed under the head of variable cost.

   (A) True (B) False

4. Semi–variable cost will not be zero, even if production is nil.

   (A) True (B) False

5. Semi–variable expenses increase with the increase in the level of activity,

   (A) In the same proportion as the activity increases

   (B) Not in the same proportion as the activity increases

   (C) In inverse proportion of activity increase

   (D) None of the above

3.12 Let Us Sum Up :

In this unit we have learnt about fixed and flexible budget with its pros and cons. As A fixed budget is a budget designed to remain unchanged irrespective of the level of activity actually attained. A fixed budget is one which is designed for a specific planned output level and is not adjusted to the level of activity attained at the time of comparison between the budgeted and actual costs. Whereas Flexible budget can be defined as a budget which by recognizing different cost behavior patterns, is designed to change as volume of output changes.

3.13 Answers for Check Your Progress :

1. B **2.** C **3.** A **4.** A **5.** A

3.14 Glossary :

1. **Fixed Budget :** A fixed budget is a budget designed to remain unchanged irrespective of the level of activity actually attained.

2. **Flexible Budget :** A flexible budget is defined as a budget which, by recognizing the difference between fixed, semi–variable and variable costs is designed to change in relation to the level of activity attained. ?

3.15 Assignment :

PQR Ltd. is currently operating at 75% of its capacity. In the past two years, the levels of operations were 55% and 65% respectively. Presently, the production is 75,000 units. The company is planning for 85% capacity level during 2021–22. The cost details are as follows :

	55%	65%	75%
	₹	₹	₹
Direct Materials	11,00,000	13,00,000	15,00,000
Direct Labour	5,50,000	6,50,000	7,50,000
Factory Overheads	3,10,000	3,30,000	3,50,000
Selling Overheads	3,20,000	3,60,000	4,00,000
Administrative Overheads	1,60,000	1,60,000	1,60,000
	24,40,000	**28,00,000**	**31,60,000**

Profit is estimated @ 20% on sales.

The following increases in costs are expected during the year :

	In Percentage
Direct Materials	8
Direct Labour	5
Variable Factory Overheads	5
Variable Selling Overheads	8
Fixed Factory Overheads	10
Fixed Selling Overheads	15
Administrative Overheads	10

Prepare flexible budget for the period 2021–22 at 85% level of capacity. Also ascertain profit and contribution.

3.16 Activities :

Define the flexible budget in detail.

3.17 Case Study :

State the difference between the fixed budget and flexible budget also give example.

3.18 Further Readings :

1. Cost accounting : Concepts and Methods – N K Agrawal and Deepali Jain

Unit 4 CONTEMPORARY ISSUES AND CHALLENGES OF BUDGETING

: UNIT STRUCTURE :

4.0 Learning Objectives :

Understanding the contemporary issues and challenges regarding budgeting and various ways to resolve those issues.

4.1 Introduction :

A solid planning strategy originates with developing a budget. To do so, employees need to work together to gather, analyse, and apprise a company's revenue, expenses, and cash flows for the upcoming financial or calendar year

Budgeting is portrayed as an affirmative tool mainly for developing organizations that want constant cash–flow oversight. But as with the whole lot that a enterprise tackles, budgeting comes with a number of integrated challenges. These consist of making sure the records are accurate, placing the records to appropriate use and locating the right gear and sources to create the great viable price range. Developing budget for the business with multiple expense categories and a variety of decision makers, things can get a little complicated.

4.2 Various Issues and Challenges of Budgeting :

COORDINATION AND COLLABORATION :

Preparing a budget involves many moving parts and phases. These stages can involve a lot of back and forth with department heads before everything is finalized. Consequently, in larger organizations, the challenges and complexities increase exponentially.

COMPLEXITY :

There are many tasks that may produce complexness for budget owners, including :

(a) Gathering info that goes into the budget from numerous sources, resembling CRM and human Resource systems.

(b) Creating complicated formulas to consolidate the budget spreadsheets.

(c) Coordinating changes to the spreadsheets, change numbers, and gathering the most recent files for consolidation.

(d) Reviewing multiple iterations and changes

TIME :

Organizations can take three months or more to manually complete a quote. Most organizations prepare the budget just before the new fiscal year. Budgeters often use current year's actual data as the basis for next year's budget. Therefore, it would be ideal to start the budgeting process as late as possible in the year to maximize the number of months actually available for budgeting. But if the process is manual and time–consuming, you have no choice but to start months ahead

ACCURACY :

Unfortunately, in many research it has been found that there are gross errors in organizations budget numbers after the budgets were approved by the board of directors. There is risk in consolidating Excel files, for multiple reasons

CONTINUOUS PLANNING :

Unless an organization is small and the business is very predictable and routine, continuous planning is key. Ongoing planning includes at least a monthly review of the budget versus the actual variance report. Businesses should also plan to recalibrate forecasts for the months ahead and create what–if scenarios to strategize and plan for future growth. Because the budgeting process is so overwhelming when done manually, many of our clients do not make forecasts, even though this is Best Practice

INFORMATION IS INACCURATE :

The large a commercial enterprise becomes, the extra hard it's far to generate the proper information . With more than one departments spending cash in numerous ways, you can discover that the numbers on your price range don't mirror how cash will absolutely be spent.

A budget is only as useful as you make it

If an organization produces a budget once a year and set it aside, it won't facilitate organizational business at all. It's necessary that you just not solely follow that budget closely throughout the year however pay close attention to however correct your projection was. Otherwise, organization is simply wasting valuable time

Finding the Right Budgeting Tool :

Many of the organizations budgeting problems could be related to the tool it is using. If they are still working with Excel spreadsheets, they are missing a great opportunity to use a solution that not only guides you through the budgeting process, but also uses technology to help them analyze financial performance. In addition to their reporting tools, organization should make sure that their budgeting software is compatible with the other tools you use. For example, being able to easily connect up to your billing and payroll solutions saves you time while making your reports more informed.

Some of the additional contemporary challenges that organization face are like

A. Budgeting does not effectively link financial investments to results or conclusions, restricting the ability for in–depth analysis and understanding of the real ROI for any given line of business or Initiative.

B. Budgets are created based on requests from competing stakeholders, each justifying their Projected expenditures based on their departmental needs rather than the overall goals of the organization.

C. Budgeting has consistently shown high rates of inaccurate assumptions, a massive time commitment and tedious manual input.

D. Budgets and multi–year financial plans produce high level financial targets and constraints, but if material deviations occur during the year, they can paralyze an organization that does not have an efficient process for evaluating the causes of these changes and adjusting the budgets and plans accordingly.

E. In an unstable and sometimes volatile marketplace, drastic changes in resource levels, budget constraints, and strategies are inevitable. If material deviations occur during the year, they can paralyze an organization that does not have an efficient process for evaluating the causes of these changes and adjusting the budgets and plans accordingly.

4.3 Suggestions for Resolving Various Issues of Budgeting :

The many challenges encountered in budget preparation have solutions, as long as organization is willing to put a little extra effort in. Here are some solutions to the most common budgeting problems

The best budgets get as close to their goal as possible.

Rather than just randomly picking dollar numbers to estimate your spending, do extensive research and talk to others in your organization beforehand on the site. The more accurate your budget estimates are, the easier it is to stick to them.

Acknowledge that your first budget will take a while to put together

The budget difficulties of the first year will not be repeated in the following years. This will give you a better sense of the time and money you are investing.

Use your budget.

Require that all purchases go through an approval process and require that the budget be reviewed before granting this approval. If you track your budget and see how you're doing at the end of the year, you know your company used the numbers there as a guide

Make sure your budget numbers are factual

From the start, make sure your budget numbers are factual. This starts with researching how much your business has spent on various expenses over the past year, but should also include asking who will be using the money.

Ensure Commitment to goals

Once you have created a draft of your budget, every decision maker in the organization should sign off on it to ensure everyone agrees on the spending limits you have set for the year.

Recognize that Budget is not everything

Recognize that Even though budget is important, it doesn't help you to focus on customer service or product quality. In addition to your spending habits, be sure to measure sales and customer complaints. If you make cuts that could impact key customer areas, monitor these analyses closely to ensure your sales and hard–earned reputation aren't hurt.

Avoid the tendency of rush to use it or lose it

Around one of the biggest budget problems to avoid that's the rush to use it or lose it at the end of each year, make sure you're not penalizing multiple departments for underspending. Note that spending can vary from year to year and avoid cutting a department's budget because you didn't use the entire amount allocated last year.

4.4 Zero–Based Budgeting (ZBB) :

Zero–based Budgeting (ZBB) is defined as a method of budgeting which requires each cost element to be specifically justified, though the activities to which the budget relates are not being undertaken for the first time. The cost of each activity has to be justified and without justification, the budget allowance is zero.

Zero based budgeting differs from the conventional system of budgeting because it mainly starts from scratch or zero and not on the basis of trends or historical levels of expenditure. In the customary budgeting system, the last year's figures are accepted as they are, or cut back or increases are granted. Zero based budgeting on the other hand, starts with the premise that the budget for next period is zero so long the demand for a function, process, project or activity is not justified for each rupee from the first rupee spent.

Zero–based Budgeting (ZBB) is an emergent form of budgeting which arises to overcome the limitations of incremental (traditional) budgeting system.

ZBB is an activity based budgeting system where budgets are prepared for each activities rather than functional department. Justification in the form of cost benefits for the activity is required to be given. The activities are then evaluated and prioritized by the management on the basis of factors like synchronisation with organisational objectives, availability of funds, regulatory requirement etc.

ZBB is suitable for both corporate and non–corporate entities. In case of noncorporate entities like Government department, local bodies, not for profit organisations, where these entities need to justify the benefits of expenditures on social programmes like mid–day meal, installation of street lights, provision of drinking water etc.

In case of corporate entities, ZBB is best suited for discretionary costs like research and development cost, training programmes, advertisement etc.

4.5 Stages in Zero Based Budgeting :

Zero based budgeting involves the following stages :

1. Identification and description of Decision packages
2. Evaluation of Decision packages
3. Ranking (Prioritisation) of the Decision packages
4. Allocation of resources

1. **Identification and Description of Decision Packages :** Decision packages are the programmes or activities for which decision is required to be taken. The programmes or activities are described for technical specifications, financial impact in the form of cost benefit analysis and other issues like environmental, regulatory, social etc.

2. **Evaluation of Decision Packages :** Once Decision packages are identified and described, it is evaluated against factors like synchronisation with organisational objectives, availability of funds, regulatory requirement etc.

3. **Ranking (Prioritisation) of the Decision Packages :** After evaluation of the decision packages, it is ranked on the basis priority of the activities. Because of this prioritization feature ZBB is also known as Priority–based Budgeting.

4. **Allocation of Resources :** After ranking of the decision packages, resources are allocated for decision packages. Budgets are prepared like it is done first time without taking reference to previous budgets.

4.6 Advantages of Zero Based Budgeting :

The advantages of zero–based budgeting are as follows :

- It provides a systematic approach for the evaluation of different activities and rank them in order of preference for the allocation of scarce resources.
- It ensures that the various functions undertaken by the organization are critical for the achievement of its objectives and are being performed in the best possible way.
- It provides an opportunity to the management to allocate resources for various activities only after having a thorough cost–benefit–analysis. The chances of arbitrary cuts and enhancement are thus avoided.
- The areas of wasteful expenditure can be easily identified and eliminated.
- Departmental budgets are closely linked with corporation objectives.
- The technique can also be used for the introduction and implementation of the system of 'management by objective.' Thus, it cannot only be used for fulfillment of the objectives of traditional budgeting but it can also be used for a variety of other purposes.

4.7 Limitations of Zero Based Budgeting :

- The work involves in the creation of decision–making and their subsequent ranking has to be made on the basis of new data. This process is very tedious to management.
- The activities selected for the purpose of Zero Based Budgeting are on the basis of the traditional functional departments. So, the consideration scheme may not be implemented properly.

4.8 Difference between Traditional Budgeting and Zero Based Budgeting :

Following are the points of difference between traditional budgeting and zero based budgeting :

- Traditional budgeting is accounting oriented. Main stress happens to be on previous level of expenditure. 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 traditional budgeting, first reference is made to past level of spending and then demand for inflation and new programmes. In zero–based budgeting, management focuses attention to only on decision packages, which enjoy priority to others.
- In tradition budgeting, some managers deliberately inflate their budget request so that after the cuts they still get what they want. 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.
- Traditional budgeting is not as clear and as responsive as zero–base budgeting is.
- In traditional budgeting, it is for top management to decide why a particular amount should be spent on a particular decision unit. In Zero–based budgeting, this responsibility is shifted from top management to the manager of decision unit.
- Traditional budgeting makes a routine approach. Zero–based budgeting makes a very straightforward approach and immediately spotlights the decision packages enjoying priority over others.

Check Your Progress :

1. This budgeting makes a decision oriented approach

   (A) Zero based budgeting (B) Performance budgeting

   (C) Traditional budgeting (D) None of the above

2. Which of the following is essential of a budget ?

   (A) It is prepared for a definite future period

   (B) It is a statement prepared prior to a defined period of time

   (C) The Budget is a monetary and I or quantitative statement of policy

   (D) All of the above.

3. In comparing a fixed budget with a flexible budget, what is the reason for the difference between the profit figures in the two budgets ?

   (A) Different levels of activity.

   (B) Different levels of spending.

   (C) Different levels of efficiency.

   (D) The difference between actual and budgeted performance

4. When budget allowances are set without the involvement of the budget owner, the budgeting process can be described as

   (A) Top–down budgeting (B) Negotiated budgeting

   (C) Zero–based budgeting (D) Participative budgeting

5. For which of the following would zero–based budgeting be most suitable ?

   (A) Building construction

   (B) Mining company operations

   (C) Transport company operations

   (D) Government department activities

4.9 Let Us Sum Up :

In this unit we have learnt about the issues of budgeting, zero-based budgeting with its pros and cons. As an issue there were coordination and collaboration, complexity, time, accuracy, continuous planning, and information is inaccurate.

Furthermore, zero-based Budgeting (ZBB) is defined as a method of budgeting which requires each cost element to be specifically justified, though the activities to which the budget relates are not being undertaken for the first time.

4.10 Answers for Check Your Progress :

1. A **2.** D **3.** A **4.** A **5.** D

4.11 Glossary :

1. **Zero–Based Budgeting (ZBB) :** Zero–based Budgeting (ZBB) is defined as 'a method of budgeting which requires each cost element to be specifically justified, although the activities to which the budget relates are not being undertaken for the first time, without approval, the budget allowance is zero.

4.12 Assignment :

What are the various issues and challenges faced in budgeting ? In your opinion, what are the suggestive remedies ?

4.13 Activities :

Discuss zero-based budgeting in detail.

4.14 Case Study :

State the difference between the traditional budgeting and zero-based budgeting also give example.

4.12 Further Readings :

1. Cost accounting : Concepts and Methods – N K Agrawal and Deepali Jain

BLOCK SUMMARY

In this block you have learn the various classification and importance of budgetary control for the real–world scenarios. It also guides you towards the definition, nature, and scope of budgetary control from the managerial perspective. This block also focuses on the understanding of the functional classification and different types of budget and how it is useful for future decision making process. It classifies budget in two ways i.e. on the basis of flexibility and time period. This Block also teach you the basic contemporary aspect and different cases in budgeting control process. The overall purpose of this block is to plan different phases of business operations, coordinate activities of different department s of the firm and to ensure effective control over it.

BLOCK ASSIGNMENT

Short Questions :

1. What do you understand by the term, "Budget" ?
2. What does "budgetary control" mean ?
3. Explain with example concept of "forecasting".
4. What do you mean by "master Budget"– explain.
5. Explain different types of time budget.

Long Questions :

1. Explain the system of installation of Budgetary Control System.
2. Explain the classification of budgets on the basis of Functional activities.
3. Differentiate between Fixed and Flexible Budget.
4. Explain difference between Traditional Budgeting and Zero–Based Budgeting.
5. Explain in detail about advantages and disadvantages of the Budgetary Control system.

❖ **Enrolment No. :** ______________

1. How many hours did you need for studying the units ?

Unit No.	1	2	3	4
No. of Hrs.				

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	☐	☐	☐	☐	____________
Language and Style	☐	☐	☐	☐	____________
Illustration used (Diagram, tables etc)	☐	☐	☐	☐	____________
Conceptual Clarity	☐	☐	☐	☐	____________
Check your progress Quest	☐	☐	☐	☐	____________
Feed back to CYP Question	☐	☐	☐	☐	____________

3. Any other Comments

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DR.BABASAHEB AMBEDKAR

OPEN UNIVERSITY

'Jyotirmay' Parisar,
Sarkhej-Gandhinagar Highway, Chharodi, Ahmedabad-382 481.
Website : www.baou.edu.in