CENTRE FOR DISTANCE AND ONLINE EDUCATION

Class : B.Com. III **Semester : 5**

Paper : Cost Accounting I (BCOU3504T) **Unit : I**

Medium : English

LESSON NO. : UPDATED ON 1ST JUNE 2023

UNIT NO. I

1.1 : NATURE OF COST ACCOUNTING

1.2 : ELEMENTS OF COST

1.3 : COST AUDIT

1.4 : MATERIAL CONTROL

1.5 : INVENTORY CONTROL AND EVALUATION

BCOU3504T: COST ACCOUNTING-I

Time allowed : 3 hours
Pass Marks : 35%
Periods per week : 6

Max Marks: 100
Internal Assessment: 30
External Assessment: 70

Note : Simple Calculator(not scientific) is allowed

INSTRUCTIONS FOR THE PAPER SETTER/ EXAMINERS

The question paper covering the entire course shall be divided into three sections as follows.

SECTION-A

It will consist of essay type and numerical questions. Four questions, two theory and two numerical, shall be set by the examiner from Unit-I of the syllabus and the candidate shall be required to attempt two. Each question shall carry 10 marks; total weight of the section shall be 20 marks.

SECTION-B

It will consist of essay type and numerical questions. Four questions, two theory and two numerical, shall be set by the examiner from Unit-II of the syllabus and the candidate shall be required to attempt two. Each question shall carry 10 marks; total weight of the section shall be 20 marks.

SECTION-C

It will consist of 12 very short answer questions (six theory and six numerical) from entire syllabus. Students are required to attempt 10 questions up to five lines in length. Each question shall carry 3 marks; total weight of the section shall be 30 marks

UNIT – I

Cost Accounting: Meaning and definition, limitations of financial accounting, Development of Cost Accounting, Functions, Objectives, Advantages and Limitations of Cost Accounting, Importance of Cost Accounting to Business Concern. Relationship between Cost Accounting, Financial Accounting, and Management Accounting; Installing a Cost Accounting System, Essentials of a good Cost Accounting System. Cost concepts and classification; Preparation of cost sheet; Role of Cost Accountant in an organization; Concept of Cost Audit.

Accounting for Material : Concept, objectives and techniques of Material Control, Accounting and Control of Purchase, Storage and Issue of Materials; Methods of pricing material issues: FIFO, LIFO, HIFO, NIFO, simple average, weighted average method, replacement cost method, standard method, base stock method; Treatment of Material Losses.

UNIT- II

Accounting for Labour: Labour cost control procedure; Labour turnover; Idle time and overtime; Methods of wage payment; Time and piece rates; Essentials of a good wage plan, Incentive schemes: Taylor's differential piece rate system, Halsey plan, Rowan Plan; Fringe benefits.

Accounting for Overheads: Definition, Classification of Overheads: element-wise, Functional and behavioural; Need for classifying into fixed and variable; various types of overheads; Allocation and Apportionment of overheads; Absorption of overheads; Determination of overhead rates; Under and over absorption and its treatment; Treatment of special items of overheads like interest, depreciation, packing expenses, carriage expenses, machinery erection, tools, R&D, advertisement, bad debts etc .

Course Outcome: After completion of this course students will learn about meaning, functions, objectives, importance of cost accounting and its installation. Further students will learn about accounting for materials, accounting for labour and accounting for overheads.

R.S. Arya

Suggested Readings :

1. S.N. Maheshwari **:** Fundamentals of Costing, sultan chand and sons, New Delhi.
2. Horngren, Foster, Datar, et al., Cost Accounting,- A Managerial Emphasis, Pearson
3. M.N. Arora **:** Essentials of Cost Accounting, Vikas Publication**.**
4. Jawahar Lal & Seema Srivastava, Cost Accounting, TMH
5. Nigam Sharma **:** Cost accounting- principles and problems, sultan chand& Co. New Delhi.

R.S. Arya

B.COM. PART-III

BCOU3504T

COST ACCOUNTING

LESSON NO. 1.1

AUTHOR : DR. J.S. PASRICHA

NATURE OF COST ACCOUNTING

1.1.1 Objective

1.1.2 Introduction
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1.1.4.1 Cost
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1.1.4.5 Cost Accountancy
1.1.4.6 Cost Accounting
1.1.5 Scope of Cost Accounting
1.1.5.1 Cost Ascertainment
1.1.5.2 Cost Presentation
1.1.5.3 Cost Control
1.1.6 Objectives of Cost Accounting
1.1.6.1 Advantages of Cost Accounting
1.1.6.2 Limitations of Cost Accounting
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1.1.7.1 Job Costing
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1.1.8 Financial Accounting Vs. Cost Accounting
1.1.9 Installation of Costing System
1.1.9.1 Objectives of Designing
1.1.9.2 Steps in Designing
1.1.9.3 Essentials of a Good Costing System
Self check Exercise
1.1.10 Summary
1.1.11 Answers to self check questions
1.1.12 Glossary
1.1.13 Exercise
1.1.14 Suggested Readings

1.1.1 OBJECTIVE

Cost Accounting is one of the three branches of accounting.i.e (i) Financial Accounting,(ii) Cost Accounting and (iii) Management Accounting. Each of these has its own extent and scope. The objective of this Lesson is to enlight the students with the cost accounting system as a branch of accounting dealing with the classification, recording, allocation, summarisation and reporting of current and prospective cost.

1.1.2 INTRODUCTION

The origin of Cost Accounting can be traced to the beginning of 20th century. The system of large scale production in factories created new problems in accounting. The amount and varieties of expenditure increased and many new items of cost not only increased the calculations but also gained prominence. The financial accounting was exposed of its limitations. It failed to meet the requirements of modern Industries.

1.1.3 FINANCIAL ACCOUNTING AND ITS LIMITATIONS

Financial Accounting : The definition of accounting given by the chartered Institute of Management Accountants, London is as given below :

1. "the classification and recording of monetary transactions; and
2. the presentation and interpretation of the results of those transactions in order to assess performance over a period and the financial position at a given date; and the monetary projection of future activities arising from alternative planned courses of action."

Limitations

The major limitations of financial accounting are explained below:

1. Financial accounting does not give clear picture of operating efficient when prices are rising or falling on account of inflation or depression. It is possible that profits may be more or less, not because of efficiency or inefficiericy but because of inflation or depression,
2. Financial accounting discloses only the net result of the collective activities of business as a whole. It does not indicate profit or loss of each department, Job, prices or contract. Thus, exact point of inefficiency remains unreported.
3. In Financial accounting, there is no such system by which accounts are classified so as to give data regarding costs by department processes, product in the manufacturing divisions, by units of products lines and sale territories.
4. In Financial accounting costs are not available as an aid in determining prices of the products and services.
5. It does not provide information for a proper control of materials and supplies, wages labour and overheads.

6. In Financial accounting, expenses are not classified as to direct and indirect items and are not assigned to the products at each stage of production to show the controllable or uncontrollable items of overhead costs.
7. Financial accounting is mainly historical and tells about the cost already incurred. It does not provide day to day cost information to the management for making effective plans for the coming year and the period after that as financial data are summarised at the end of the accounting period.
8. It does not supply useful data to the management for taking various financial decisions such as introduction of new products, replacement of labour by machines.

1.1.4 DEFINITIONS

1.1.4.1 Cost : According to Shilling law, "Cost represents the resources that have been or must be sacrified to attain a particular objective.''

1.1.4.2 Cost Unit : "The cost unit is a unit of product or service in relation to which costs are ascertained."

1.1.4.3 Cost Centre : "The cost centre is a production or service location, function, activity or item of equipment for which costs are accumulated."

1.1.4.4 Costing : "Costing" has been defined as "the technique process of ascertaining costs". It involves systems, methods and techniques of accumulation, classification, analysis and appropriate allocation of expenditure incurred in respect of a product of service.

1.1.4.5 Cost Accountancy : The term 'Cost accountancy', includes costing, cost accounting, budgetary control, cost control and cost audit.

1.1.4.6 Cost Accounting :

Cost Accounting means "the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived therefrom for the purpose of managerial decision-making."

Thus there exists a distinction between the meaning conveyed by "Cost Accounting" and "Cost Accountancy". Therefore, strictly speaking cost accounting is a formal system of recording, analysing and allotment of costs to cost centres or costs units. On the other hand, cost accountancy embraces, in addition to cost accounting, the principles, methods and techniques by means of which cost control is exercised and the profitability is determined. It involves the system of reporting the data for management decisions.

1.1.5 SCOPE OF COST ACCOUNTING

From the above it is clear that the scope of cost accounting includes :

1. Cost Ascertainment;
2. Cost Presentation; and
3. Cost Control.

1.1.5.1 Cost Ascertainment :

Cost Ascertainment refers to :

(i) The collection and analysis of expenses.

(ii) The measurement of production at different stages,

(iii) The linking up of production with expenses.

For the purpose of cost ascertainment. Costing has developed systems, methods, and techniques, viz.

(1) systems like historical (actual) costs, estimated costs, standard costs are used for collection of expenses.

(2) methods of costing such as job costing, process costing, output costing etc. are the instruments of measurement of productions; and

(3) techniques like absorption costing, marginal costing have been evolved linking up production with expenses.

1.1.5.2 Cost Presentation :

It refers to a system of reporting cost data to various levels of management to suit their requirements. For managerial purposes, the right and appropriate information should be made available to the right person who needs them, at right time, and in a proper form, various printed forms and statements are used for effective reporting.

1.1.5.3 Cost Control :

Cost control is defined as "the guidance and regulation by executive action of costs of operating an undertaking. Cost control can be ensured through :

(1) setting up standard targets for Expenses and production performance;

(2) comparing the actual with the standards to find out variations, if any;

(3) analysing reasons for such variation; and

(4) taking up corrective action to eliminate the variation and thus bringing up actual performance to the pre-set standards. In this context management needs costs data so that responsibility for incurrence of cost can be identified. The cost concepts covered here are:

    (1) Responsibility Cost,

    (2) Controllable and Non-Controllable Costs; and

    (3) Direct and Indirect Cost.

1.1.6 OBJECTIVES OF COST ACCOUNTING

The following are the main objectives of Cost Accounting : Ascertainment of Cost : The objective cost accounting is to ascertain the cost per unit of the different products manufactured by a business concern.

2. Analysis of Cost: The objective of cost accounting is to provide a correct analysis of cost both of the process or operation and by different elements of cost.
3. Identify sources of Wastage : The objective is to disclose sources of wastage whether of material, time or expense or in the use of machinery, equipment and tools and to prepare such reports which may be necessary to control such wastage.
4. Provide required Cost data : The objective is to provide requisite cost data and serve as a guide for price fixation of products manufactured or services rendered.
5. Ascertain profitability : The objective is to ascertain the profitability of each of the products and advise the management as to how these profits can be maximised is another objective of Cost Accounting.
6. Effective Control : Next objective is to exercise effective control on stocks of raw materials, work in progress, consumable store and finished goods in order to minimise the capital locked up in these stocks.
7. Reveal Sources of economy : The objective of cost accounting is to reveal sources of economy by installing and implementing a system of cost control for materials, labour and overheads.
8. Advicing Management : To advice management on future expansion policies and proposed capital projects, is another objective of cost accounting.
9. Organise an effective information system : Here objective is that different levels of management may get the required information at the right time, in right form for carrying out their individual responsibilities in an efficient manner.
10. Supply Useful data to the management to take various financial decisions such as introduction of new products, replacement of labour by machine etc.
11. To organise cost reduction programmes with the help of different departmental managers.
12. To provide specialised services of cost audit in order to prevent the errors and frauds and to facilitate prompt and reliable information to the management.

1.1.6.1 Advantages of Cost Accounting :

The advantages of Cost Accounting System may be summarised as follows :

1. The Cost Accounting System enables the manufacturer to ascertain the exact cost of each specific unit of output and the extent to which each element of expenditure contributes to such cost.
2. It enables the manufacturer to fix selling prices on the basis of cost of production and thus saves him from losses, which may arise due to

injudicious fixation of prices without actually looking to the cost of production.

3. It provides a reliable basis upon which tenders' estimates may be prepared.
4. The profitable and unprofitable project or assignment can be readily disclosed.
5. It assists the manufacturer in ascertaining the importance of each element of cost or process and in determining where is greater scope of economy ?
6. It facilitates the detection and prevention of wastage, leakage and inefficiencies.
7. It assists in controlling costs with the application of standard costing and budgetary control system.
8. Cost Accounting system provides an independent and most reliable check on the accuracy of financial accounts by means of reconciliation of profits as shown by cost and financial accounts.

1.1.6.2 Limitations of Cost Accounting :

It is sometimes remarked that cost accounting is not as exact science and there is no such thing as 'exact' of 'true' cost. This is because of the fact that there may not be uniformity in cost ascertained by different cost accountants from the same data. Disagreement in cost of a product arises on account of different procedures of cost ascertainment followed by the accountants. Following are certain areas in cost ascertainment wherein there are varied approaches open and where the cost accountant has to choose the one which he thinks best :

1. Determination of Expenses entering into Cost of Production : It includes determination of non-cost items, e.g. whether interest on capital or cash discount should be considered in calculation or be excluded.
2. Computation of Material Cost or Product Cost: There are different methods of pricing material such as FIFO, LIFO, average cost method, standard cost method, etc. The material cost of product differs according to the method of pricing adopted.
3. Apportionment and Absorption of Overheads : Overheads are apportioned to cost centres on the basis of floor area, capital value, number of employees etc. Similarly overheads are absorbed by different methods such as percentage of direct material cost, percentage of wages, direct labour hours, machine hours etc.
4. Choice of technique of cost ascertainment : Different costing techniques like absorption (total) costing, marginal costing are available.

In above cases the cost accountants has to make assumptions and select method which he deems proper in determination of cost.

(A) The nature of cost data requires for decision-making may differ according to the purpose for which it is needed. Cost control requires standard cost and actual cost to be ascertained currently, whereas for budgeting estimated costs are necessary.

(B) Costs have no usefulness in themselves; their value depends only upon the action taken by the management in the light of the information they reveal. Cost accountant has no powers to take decisions and enforce them. He is a staff official acting in advisory capacity to the executives to present necessary information with his expert recommendations on the issue. It is for the directors and other managerial personnel to take decisions and act on them.

1.1.7 METHODS OF COSTING

Different methods of costing are applied for ascertaining unit cost in different industries based on the nature of operation and unit of finished product involved. All these methods have the same general principles but they differ in so far as the methods used in collecting and presenting cost data are concerned. Basically, there are three methods of ascertaining costs :

(1) Job costing.

(2) Process costing.

(3) Multiple or Composite costing.

1.1.7.1 Job Costing : is applied to special order type of industry devoted to the execution of specific orders such as Printing press, house building, ship building manufacture of heavy electrical machinery, etc. The main objective of job costing is to ascertain cost and profit or loss in respect of each job, contract or project undertaken.

The following methods are, included in job costing :

(A) Contract (or Terminal) Costing : This method of costing is employed in business where separate constructional contracts are undertaken and it is desirable to ascertain the exact cost of each contract. Contract costing is generally applicable to the business engaged in building construction, road construction, bridge building, ship building etc.

(B) Batch Costing : This method of costing is applied to industries where production is carried on in batches. Under this method, a batch of similar products is treated as one job and then the batch is divided by total numbers in the batch in order to arrive at the unit cost of articles produced. Batch costing is generally employed in industries engaged in biscuit manufacture, toy making, spare parts manufacture, ready-made garments etc.

1.1.7.2 Process Costing : This method applied to mass production type of industries engaged in the continuous production of uniform standard products such as chemicals, oils, textiles, paints, cement, mining, colliery, flour etc. The objective of process costing is to ascertain the cost of process of operation involved in converting raw material into finished products. The following methods are included in process costing:

(A) Single Output (or Unit Costing) : This method is applied to ascertain the cost per unit of output where the production is continuous and the units manufactured are identical or uniform. Single costing is generally adopted where the manufacturing concern is engaged in producing only one type of product or a few grades of the same product. The method is commonly used in case of industries like collieries, brick works, flour mills, quarries, cement mills, iron and steel works, paper mills etc.

(B) Operating Costing : Operating costing is the system of costing employed to ascertain the cost of providing or operating a service. This system of costing is adopted by undertakings which render services rather than manufacture goods such as railways, road transport, tramways, electricity companies, gas companies, water works etc.

(C) Operation Costing : Operation costing represents a refinement of process costing. Under this method, each operation in each process or stage of production is separately costed. Operation cost generally refer to, conversion cost i.e. cost of labour and overheads. At the end of each operation the unit operation cost is ascertained by dividing the conversion cost by output. Thereafter the cost of finished unit is determined by adding the material cost plus the cost of several operations through which it passes. This method is suitable to those industries which are connected with mass production of repetitive nature.

1.1.7.3 Multiple or Composite Costing : Multiple or composite costing is applied to ascertain the cost of complex products manufactured by a factory, where no single-system of costing is applicable. Under this method the total cost is ascertained by aggregating component cost which are collected by both job and process costing. Multiple costing applies to industries engaged in the production of bicycle, motorcycles, motor cars, radios, typewriter, engines, machine tools, aero planes and other complex products.

1.1.7.4 Illustration-I : Specify the method of Costing and the cost unit applicable to the following industries :

	Industries	Method	Answer Cost Unit
(a)	Ship-building	Contract Costing	a ship
(b)	Toy-making	Batch costing	a batch
(c)	Textiles	Process costing	meter
(d)	Sugar	Process cost	tonne or kg

(e)	Cement	Unit costing	a bag or tonne
(f)	Road transport	Operating costing	km.
(g)	Radio	Multiple costing	a radio
(h)	Oil	Process costing	a litre
(i)	Hospital	Operating costing	Patient, bed
(j)	Chemicals	Process costing	a Jar or litre
(k)	Medicines	Batch costing	a batch
(1)	Motor Car	Multiple costing	a car
(m)	Bicycle	Multiple costing	a cycle
(n)	Catering	Operating costing	a meal
(o)	Printing	Job costing	a job
(p)	Aerated water	Unit costing	a dozen
(q)	Dairy	Unit costing	a dozen
(r)	Brewery	Unit or Process costing	a bottle or a barrel
(s)	Furniture	Batch costing	a batch
(t)	House building	Contract costing	building

Importance of Cost Accounting to business concern

Cost accounting has many importance. Specially, the following parties are benefitted from it.

Importance to management :

Management is highly benefitted with the introduction of cost accounting. It helps to ascertain the cost and selling price of the product. Cost data help management to formulate the business policies. The introduction of budgetary control and standard cost would be an aid to analyze cost. Its also helps to find out reasons for profit or loss. It provides data to submit tender as well. Thus, cost accounting is an aid to management.

Importance to investors :

Investors can obtain benefit from the cost accounting. Investors want to know the financial conditions and earning capacity of the business. An investor must gather information about organization before making investment decision and investor can gather such information from cost accounting.

Importance of consumers :

The ultimate aim of costing is to reduce the cost of production to minimize the profit of business. Reduction in the cost is usually passed on the consumers in the form of lower price. Consumers get quality goods at a lower price.

Importance to Employees :

Cost accounting helps to fix the wages of the workers. Efficient workers are rewarded for their efficiency. It helps to induce incentive wage plan in business.

Importance to Government :

Cost Accounting is one of the prime sources to provide reliable data to internal as well as external parties. It helps government agencies to determine excise duty and income tax. Government formulates tax policy industrial policy, export and import policy based on the information provided by the cost accounting.

1.1.8 FINANCIAL ACCOUNTING VS. COST ACCOUNTING

Cost accounting and Financial accounting as we know are two different branches of accounting and main objective of both of them is to provide information by recording the business systematically and scientifically so that it 'may serve the purpose of the management for policy formulation and of controlling and to provide necessary protection to the outsides. Both are based on double entry system and their roles are supplementary. Besides, having some similarities these two are very different form each other. Some difference are as under :

	FINANCIAL ACCOUNTING		COST ACCOUNTING
1.	It gives information in general way about the profit and loss and financial position of the business.	1.	It gives information to the management for proper planning, operation control and decision making.
2.	It lays emphasis on the recording aspect without attaching any importance to control	2.	It provides detailed system of control for materials, labour and overhead costs with the help of standard costing and budgetary control
3.	It reports operating results and financial position usually at the when end of the year.	3.	It gives information through cost reports to management as and desired.
4.	Financial accounts are the accounts of the whole business, as they disclose the result of a business as a whole.	4.	Cost accounting is only a part of financial accounting and discloses results of each product, job or service.
5.	The costs are reported in aggregate in financial accounts.	5.	The cost are broken down on a unit basis in cost accounts.
6.	Financial accounting is concerned with external transaction (i.e. transaction between business concern and third party based on payment and receipt of cash.)	6.	Cost accounts are concerned with internal transactions which do not form the basis of payment or receipt of cash.

7. Monetary information is only used.	7. Non-monetary information is also used, e.g. units.
8. Stocks are valued at cost or market price which is less.	8. Stocks are valued at cost.
9. These accounts are kept in generally such a way as to meet the requirement of Companies Act and Income Tax Act.	9. These accounts are kept voluntarily to meet the requirements of management. But now it is compulsory for some manufacturing companies to keep cost records.

1.1.9 INSTALLATION OF COSTING SYSTEM (Designing of a Cost Accounting System)

A formal system of cost accounting is essential for ascertaining and controlling costs. And, the requirements of two firms are not alike and the system must be designed to meet the individual needs to each.

1.1.9.1 Objectives of Designing :

(1) It will aid in planning the future and controlling the present.
(2) It will aid in establishing selling prices.
(3) It will provide a means of costing inventories.
(4) It will compute the cost of sales.
(5) It will measure the efficiency of materials, employees, and machines.
(6) It will furnish data for various other analytical processes.

1.1.9.2 Steps in Designing :

While installing a costing system, the cost accountant should examine certain issues and take systematic steps in its installation. These steps are :

(1) Organisational structure of the company :

The organization set-up should, therefore, be examined thoroughly, with reference, to responsibility and authority assigned to the various functionaries. The organization charts must be prepared in such a manner that highlight the authority and responsibility relationships between managers, superintendents and departmental heads, who are responsible for:

- (1) Providing detailed information needed for accounting department;
- (2) Incurring expenditures for materials, labour and other costs; and
- (3) Reporting to those incharge.

(2) Procedures and processes :

The cost accounting system must reflect the manufacturing procedures, processes, methods, and the marketing and administrative organisation of a particular company.

(3) Nature of Product :

It is essential to examine the nature of products manufactured, methods and stages of production cycle; the number of products and quantity manufactured of each product.

(4) Type of cost information :

The service rendered by the accountant is judged by the prompt presentation of meaningful costs reports and statements to management. A good costing system of cost accounting will provide information which helps in decision-making.

(5) Organisation of cost office :

The cost office should be properly organised, and as far as possible, it should be situated adjacent to the factory so that delay in routing out documents or removal of discrepancies and doubts is avoided. Normally, the duties of cost office are divided into following categories:

- (i) Stores Accounts.
- (ii) Labour Accounts.
- (iii) Cost Accounts.
- (iv) Cost Control Accounts.

(6) Costing Department and its relationship with other departments:

The costing department is responsible for the presentation of the operating statements and cost analysis for management action, including areas of inefficiency and wastage, and relative profitability of products. Costing system should be designed in such a manner so as to serve these purposes.

(7) Legal requirements and installation of cost :

It is equally important to weight the cost of the system against its advantages. There are certain requirements imposed on an organisation that necessitate the establishment of minimum costing system. For example, maintenance of cost audit records as required under the Companies Amendment Act, 1965, laws like Income tax, and Securities (Contract) Regulation Act prescribe certain requirement regarding record keeping and reporting.

1.1.9.3 Essentials of a good costing system :

- (1) Simplicity and adaptability
- (2) Accurate and speedy statistics
- (3) Admit comparisor
- (4) Standardisation
- (5) Co-ordination
- (6) Economical

Self Check Exercise :

Q.1 Discuss the scope of cost accounting.

Q.2 Give in detail varius essentials of good costing system.

1.1.10 SUMMARY

In comparison, financial accounting does not provide management with detailed cost and revenue information relevant to its needs. On I lie other hand cost accounting helps in determination and analysis of costs of departments, processes, jobs, products, sales territories, sales orders etc. Hence, cosy accounting is a tool of management, which provides management with detailed records of the costs relating to products, operations or functions, as it covers classfication analysis and interpretation of costs.

1.1.11 Answer to self check Questions :

Ans.1Scope of cost accounting: Cost accounting means "the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived therefrom for the purpose of control and decision making."

From above definition it is clear that the scope of cost accounting includes :

1. Cost ascertainment.
2. Cost presentation, and
3. Cost Control.

Ans.2Essential of Good costing system : Give in detail following points :

1. It must be simple.
2. It must be adaptable.
3. It must be accurate.
4. Comparison should be possible.
5. Coordination of various activities must be required.
6. It must be economical
7. It should follow the standards.

1.1.12 GLOSSARY

(1) Costing Techniques of ascertaining cost.
(2) Installation-Starting a new system in an organisation.
(3) Operating costing-System of measuring service cost
(4) Operation costing sytem of measuring cost of each operation.
(5) Job Costing-System of ascertaining cost of specific order.

1.1.13 EXERCISE

(A) Short Questions :

Q.1 Define 'Cost', 'Cost accounting' and 'Costing'.

Q.2 How the cost accounting is different from financial accounting ?

Q.3 What are the main objectives of cost accounting system?

(B) Long Questions :

Q.1 What are the limitations and techniques of costing?

Q.2 Explain how will you go about the task of installing a cost accounting system in an industry ?

Q.3 Discuss in detail various methods of costing.

Q.4 Differentiate cost Acccounting and Financial Accounting.

1.1.14 SUGGESTED READINGS

1. V.K. Saxana and CD. Vashist, Advanced Cost and Management Accounting Sultan Chand & Sons, New Delhi,1998.
2. Dr. Manmohan & S.N. Goyal, Principles of Management Accounting Shakithabhavan Publication, Agra.
3. Barfield, Jessie, Ceily A. Raiborn and Micheal R. Kenny : Cost Accounting, Traditions and innovations, South Western College Publishing, Cincinnati, Ohio.
4. Homgren, Charles T George Foster and Srikant M Daliar : Cost Accounting, a managerial emphasis, Prentice Hall, Delhi.
5. Lall, B.M and I.C Jain : Cost Accounting : Principles and Practice Hall, Delhi.
6. Welsch Glenn A, Ronald W Hilton and Paul N Gorden : Budgeting, Profit Planning and Control, Prentice Hall, Delhi.

LESSON NO. 1.2 AUTHOR : DR. J.S. PASRICHA

ELEMENTS OF COST

1.2.1 Objective
1.2.2 Introduction
1.2.3 Cost Elements and Cost Classification
 1.2.3.1 Classification on the basis of elements
 1.2.3.2 Classification on the basis of Functions
 1.2.3.3 Classification on the basis of Variability
 1.2.3.4 Classification on the basis of Controllability
 1.2.3.5 Classification on the basis of Normality
1.2.4 Production Cost and its Composition
 1.2.4.1 Total/Absorption Costing approach
 1.2.4.2 Variable Costing approach
 1.2.4.3 Alternative approach to Production Cost
1.2.5 Cost Sheet
 1.2.5.1 Specimen of Simple Cost Sheet
 1.2.5.2 Specimen of Typical Cost Sheet
 1.2.5.3 Purposes of Cost Sheet
1.2.6 Tender or Quotations
1.2.7 Illustration-I
 Self-Check Exercise
1.2.8 Summary
1.2.9 Answers to self check questions
1.2.10 Glossary
1.2.11 Exercise
1.2.12 Suggested Readings

1.2.1 OBJECTIVE

The main objective of this lesson is to introduce the students with the various elements of cost. The term 'elements of cost' has been defined as "the constituent parts of costs according to the factors upon which expenditure is incurred, namely, material labour and expenses." In practice, for different purposes different kinds of information is required, so, attempt has been made to classify the costs on the basis of elements, functions, variability, controllability and normality.

1.2.2 INTRODUCTION

Cost refers to the amount of expenditure incurred on, or attributable to a given thing.

Costs which are classified according to factors upon which expenditure is primarily incurred, namely, materials, wages and expenses are known as elements of cost. Cost may be basically classified as 'Direct costs' and 'Indirect costs'. Costs which can be directly identified with cost centres, processes, production units are direct costs. For Example : Cost of yarn in the manufacture of cloth, wages payable to a worker for weaving the cloth etc. Costs which can not be identified with cost centres of cost units but are of a general character are indirect costs. For Example : rent of factory, salary of the factory manager, salary of a foreman or supervisor etc

1.2.3 COST ELEMENTS AND COST CLASSIFICATION

The elements of cost can be divided into direct cost and indirect cost as follows:

1. Direct Material Cost
2. Direct Labour cost
3. Direct Expenses
4. Overheads

1.2.3.1 Classification on the basis of Elements

1. Direct Material Cost : Direct materials are those materials which can be traced to a cost object in an economically feasible way. Thus, these materials directly enter the product and form a part of finished product. For example, timber in furniture making, cloth in dress making, bricks in building a house. The following are normally classified as direct materials :

   1. All raw materials like jute in the manufacture of gunny bags, pig iron in foundry, and fruit in canning industry.
   2. Materials specifically purchased for a specific job, process or order like "gum for book binding, starch powder for dressing yarn.
   3. Parts or components purchased or produced like batteries for transistor radios and tyres for cycle.
   4. Primary packing materials like cartoon wrapping, cardboard boxes etc.

However in some cases, though the material is a part of the finished product yet it is not treated as direct material. For example, sewing thread in the dress making and nail in furniture making. This is because they are used in comparatively small quantities and it would be futile elaboration to make an analysis of them for the purpose of a direct charge. Thus, such materials are treated as indirect materials.

2. Direct Labour Cost : Direct labour is all labour expended in altering the construction composition, confirmation or condition of the product. In simple words, it is that labour which can be conveniently identified or attributed wholly to a particular job, product or process or expended in converting raw materials into finished goods. Wages of such labour are known as direct wages. Thus, it includes payment made to

the following groups of labour :

(i) Labour engaged on the actual production of the product or carrying out of an operation or process.

(ii) Labour engages in aiding the manufacturing way of supervision, maintenance, tools setting, transportation of material etc.

(iii) inspectors analysis etc. specially required for such production.

The wage paid to supervisors, inspectors etc. though not direct labour, can be treated as direct labour, if they are directly engaged on specific product or process and the hours they spend on it can be directly measured without much of an effort. Similarly where the cost is not significant like the wage of trainees or apprentices, their labour though directly spend on a product is not Heated as direct labour.

3. Direct Expenses : Direct expenses include all expenditure other than direct material or direct labour that are specifically incurred for a particular product or process. Such expenses are charged directly to the particular cost centre as part of the prime cost. Examples of direct expenses are :

(i) Excise duty, (ii) Royalty, (iii) Architect or Surveyor fees, (iv) Cost of rectifying defective work, (v) travelling expenses to the site, (vi) Experimental expenses of pilot projects, (vii) Expenses of designing of drawing of patterns of model, (viii) repairs and maintenance of plant obtained on hire, (ix) Hire of special equipment obtained for a contract.

4. Overheads : Overheads may be defined as the aggregate of the cost of indirect materials, indirect labour and such other expenses including services as cannot conveniently be charged direct to specific cost units. Thus overheads are all expenses other than direct expenses. In general terms overheads comprises of all expenses incurred for or in connection with in the general organisation of the whole or part of the undertaking i.e. the cosl of operating supplied and services used by the undertaking and including the maintenance of capital assets.

(B) Indirect Cost :

The main group into which overheads/ indirect costs can be divided are as follows :

(a) Indirect Material Cost

(b) Indirect Labour Cost

(c) Indirect Expenses

(a) Indirect Material Cost : It refers to material cost which cannot be allocated but which can be apportioned to, or absorbed by cost centres or cost unit e.g. cotton waste, oil grease used in keeping the machines in running condition.

(b) Indirect Labour Cost : If refers to the cost of remuneration of the employees of an undertaking which cannot be allocated but which can be apportioned to, or absorbed by cost centres of cost units, e.g. salary of the factory manager, salary paid to the factory supervisor etc.

(c) Indirect Expenses : Expenses which cannot be allocated but which can be apportioned to or absorbed by cost centres or cost units e.g. Factory rent, depreciation of plant and machinery, insurance of factory premises, rates taxes etc. are known as indirect expenses.

1.2.3.2 Classification on the basis of Functions

(a) Factory Overheads

(b) Office and Administration Overheads

(c) Selling and Distribution Overheads

(a) Factory Overheads : Factory overheads includes all the indirect expenses incurred in the factory in connection with manufacturing operations. Factory overheads comprises the cost of indirect materials, indirect labour and all other indirect expenses incurred in running of the works of factory e.g. oil, cotton waste of storekeeper, foremen, supervisors, factory rent, rates, depreciation of plant and machinery, power and fuel etc.

(b) Office and Administration Overheads : These include all expenses relating to-the direction, control and administration of an undertaking. In other words office and administration overhead refer to general office expenses of administration and control of business e.g. office rent and rates, office lighting, depreciation of office furniture and buildings, office stationary, audit fee, director’s remuneration-ibank charges etc.

(c) Selling and Distribution Overheads : These include all indirect expenses incurred for promoting sales and retaining customers and for delivering an article after its manufacture to the consumer e.g. cost of advertisement, salaries of salesmen, commission of sales, rent and rates of the showrooms, carriage outwards, packing charges, running and maintenance of delivery vans, rent of warehouse etc.

1.2.3.3 Classification on the basis of Variability

According to this classification costs are classified according to the behaviour in relation to changes in the level of activity or volume of production. On this basis costs are classified into three groups viz.

(a) Fixed or period costs

(b) Variable or product costs

(c) Semi-variable costs

(a) Fixed or Period Costs : These are commonly described as those which remain fixed in lotal amount and decreases’per unit as production increases and increases per unit as production declines. Examples of fixed cost are rent, insurance of factory building, factory manager’s salary etc. These fixed costs are constant in total amount but fluctuate per unit as production changes.

(b) Variable or Product Costs : These are those which vary in total in direct proportion to the volume/output. These cost per unit remain relatively constant with changes in production. Thus variable costs fluctuate in total amount but tend to remain constant per unit as production activity changes. Examples are direct material costs, direct labour costs, power, repairs etc.

(c) Semi-Variable Costs : These are those which are partly fixed variable. For example, telephone expenses include a fixed portion of annual charges plus variable charge according to calls. Thus total telephone expenses are semi-variable. Other examples of such costs are depreciation, repair and maintenance of building and plants etc.

1.2.3.4 Classification on the basis of Controllability

Under this, costs are classified according to whether or not these costs are influenced by the actions of a given member of the undertaking. On this basis it is classified into two categories :

(a) Controllable Costs.

(b) Uncontrollable Costs.

(a) Controllable Costs : Controllable costs are those which are influenced by the action of a specified member of an undertaking that is to say, cost which are at least partly within the control of management. An organisation is divided into a number of responsibility centres and controllable costs incurred in a particular cost centre can be influenced by the action of the manager responsible for the centre. Generally speaking, direct costs include direct material, direct labour and some of the overhead expenses are controllable by lower level of management.

(b) Uncontrollable Costs : Uncontrollable costs are those which cannot be influenced by the action of specified member of an undertaking. Most of the fixed costs are uncontrollable. For example, rent of the building is not controllable and so are managerial salaries. Overhead costs, which are incurred by one service section and is apportioned to another which receives the services is not controllable by the latter.

The distinction between controllable and uncontrollable is sometimes left to individual judgement and is not sharply maintained. It is only in relation to a particular level of management or an individual manager that we may say whether a cost is controllable or uncontrollable. A Particular item of cost, which may be controllable from a point of view of one level of management, may be uncontrollable from another point of view. This is partly so in case of fixed costs.

1.2.3.5 Classification on the basis of Normality

Under this, costs are classified according to whether these costs are normally incurred or not at a given level of output in the conditions in which that level of activity is normally attained. On this basis, it is classified into two categories.

(a) Normal Cost

(b) Abnormal Cost

(a) **Normal Cost :** It is the cost which is normally incurred at a given level of output in the conditions in which that level of output is normally attained. It is a part of cost of production.

(b) **Abnormal Cost :** It is the cost which is not normally incurred at a given level of output in the condition in which that level of output is normally attained. It is not a part of cost of production and charged to Costing Profit and Loss Account.

1.2.4 PRODUCTION COST AND ITS COMPOSITION

Production cost is the sum total of both direct and indirect costs connected with production. The official Terminology defines production cost as "Prime Cost plus absorbed production overhead."

Cost	=	Direct Cost + Indirect Cost
		or
	=	Material Cost + Labour Cost + Expense Cost
Production Cost	=	Prime Cost + Absorbed Production overhead or
Production Cost	=	Direct Material cost + Direct Labour Cost + Direct expenses + Indirect Material cost + Indirect Labour cost + Indirect expenses (all connected with Production) or
Production Cost	=	Prime Cost + Overheads/Indirect Cost connected with production

Thus, direct cost and prime cost are virtually the same and indirect cost and overhead are also the same.

1.2.4.1 Total/Absorption Costing Approach

The total costing approach is also known as the full costing or absorption costing and orthodox costing approach. According to this approach, all costs, whether fixed or variable are treated as product costs.

1.2.4.2 Variable Costing approach

In this approach, product cost includes only variable cost. Fixed cost is transferred in its entirety, to the Profit and loss account.

1.2.4.3 Alternative approach to Production Cost

Based on the distinction between fixed and variable cost, students can also distinguish two alternative approaches to production cost.

I : Total Costing Approach			II : Variable Costing Approach		
Direct Costs :	Material	-	Direct Cost :	Material	-
	Labour	-		Labour	-
	Expenses	-		Expenses	-
	Prime Cost	XXX		Prime Cost	XXX

Indirect Cost : Materials	-	Indirect Costs:Material (Variable)	-
Labour	-	Labour (Variable)	-
Expenses	-	Expenses (Variable)	-
Production Cost	XXX	Production Cost	XXX
Selling and Distribution	-	Variable selling and	-
Overhead (total)	-	Distribution overhead (Variable)	-
Administration (total)	-		
Total Cost	XXXX	Total Cost	XXXX

1.2.5 COST SHEET

Cost Sheet is a statement presenting the items entering into cost of production and service analysed by their elements, function and even by their behaviour, within the strict meaning of the term it does not include sales proceeds and profit earned.

Under this system an analysis of the different elements of the cost is made so as to ascertained the prime cost, factory cost, office cost and total cost.

1. Prime cost is the aggregate of all direct costs, viz. direct material, direct labour and direct expenses.
2. Works (factory) cost is the total of prime cost and factory overheads.
3. Cost of production is the sum total of works cost and administrative overheads.
4. Cost of sales is the sum total of cost of production and selling and distribution overheads.

1.2.5.1 Specimen of Simple Cost Sheet

	Total Cost	Per unit Cost
Direct Material consumed	XXX	XX
Direct Wages	XXX	XX
Direct Expenses	XXX	XX
(1) Prime Cost	XXX	XX
Add : Factory (works) overheads	XXX	XX
(2) Work Cost	XXX	XX
Add : Administrative Overhead	XXX	XX
(3) Cost of Production	XXX	XX
Add : Selling and Distribution overhead	XXX	XX
(4) Cost of Sales	XXX	XX

However, the same information in relation to cost, sales and profit may be presented in the form of a ledger account known as Production or Manufacturing Account. This account is debited with the opening stock and all items of cost and credited with sales revenue and closing stock, so that the balancing figure shows either profit or loss.

1.2.5.2 Specimen of Typical Cost Sheet

Monthly ending .... Unit Produced ....

	Rs.	Total Cost (Rs.)	Per Unit Cost (Rs.)
Direct Material			
Opening Stock of material	XXX		
Add : Purchases of materials	XXX		
Less: Closing stock of materials	XXXX		
Material consumed	XXX		
Direct Wages		XXXX	XXXX
Direct Expenses		XXXX	XXXX
(1) Prime Cost		XXXX	XXXX
Add : Factory (Works) Overheads :		XXXX	XXXX
Fuel-Power and water (Factory)	XXX		
Lighting and heating	XXX		
Indirect Materials	XXX		
Wages of foremen and other	XXX		
Indirect labour	XXX		
Drawing office, works office expenses	XXX		
Depreciation of Plant, equipment	XXX		
Depreciation on factory land and building	XXX		
Factory rent, taxes and insurance	XXX		
Less: Scrap value of defective work	XXX		
Add : Work in Progress (opening)	XX	XXXX	
		XX	
Less: Work in Progress (closing)		XXXX	
		XXX	XXXX
Add : Administrative Overheads :			XXXX
Office rent, insurance, lighting, clearing	XXX		
Office salary	XXX		
Telephone, law expenses, audit fees	XXX		
Depreciation on office building and furniture	XX		
Director's remuneration	XXX		

	General Manager's salary	XXX		
	Printing and Stationery	XXX	XXXX	XXXX
	(3) Total cost of Production		XXXX	XXXX
Add :	Opening stock of finished products		XXXX	XXXX
			XXXX	XXXX
Less:	Closing stock of finished products		XXXX	XXXX
	(4) Cost of goods sold		XXXX	XXXX
Add :	Selling and Distribution Overheads .:	XXX		
	Showroom expenses	XXX		
	Salemen's salaries and commission	XXX		
	Bad debts	XXX		
	Discount of distributors	XXX		
	Warehouse rent and other expenses	XXX		
	Carriage outwards and delivery expenses	XXX		
	Advertisement	XXX	XXXX	XXXX
	(5) Cost of sales		XXXX	XXXX
	Net Profit		XXXX	XXXX
	(6) Selling Price		XXXX	XXXX

1.2.5.3 Purpose of Cost Sheet

The cost sheet is a statement of all expenses/costs incurred or expected to be incurred during a given period. It is prepared at convenient intervals such as, weekly, fortnightly, monthly, quarterly, half-yearly or annually.

A cost sheet serves the following purposes:

1. It discloses the total components by stages and cost per unit of output during a period.
2. It provide data for planning, production, fixing sale price and submitting tenders and quotations.
3. It facilitates comparative study of costs with previous costs sheets to know the cost trends and also with standard cost to check the nation from actual costs.
4. It enables close watch over the cost for cost control.

Role of Cost Accountant in Organization :

1. First is to maintain cost information on the products the company is producing. This maintenance includes a constant review of existing standards, noting changes in processes or products which result in change of cost. The goal of the cost accounting team is to maintain up-to-date and accurate product costs. Such information should be based on actual data being produced on

the floor or to original standards and rates that were used to develop the cost at the beginning of the period. This is an ongoing assignment which requires frequent attention and constant focus on what is occurring on the shop floor. In addition, the job requires the ability to anticipate needs from the management team related to product costing.

2. Second, cost accountants provide management controls of operations. Many costing systems are still based on the standard cost method which includes variance reporting by department, by product, by a person, or by a process. Such reporting can be utilized to compare standard cost data in relationship to actual results. In some cases, reporting of such management information is completed very regularly, may be hourly or may be daily, and issued in reports to the various management team members. However, other components may be reported on less frequently. For instance, overhead variance calculations should probably be done no more frequently than once a month. These variance calculations are generally done for the purpose of improving maangement control and usually result in very specialized periodic reporting to a variety of individuals based solely on their ability to impact or improve the costing results based on the data that they have been provided to them from the cost accounts.

3. The third general category of assignments cost accountants frequently work on are related to specialized projects. I have worked with accounting teams which were charged with determining the profitability of certain parts, or a specific manufacturing location. Others have included assignments related to make vs. buy or outsourcing of a product to a foreign country. In this particular instance, special assignments included those related to products previously produced by the company and analyzing costs to determine if it would be more cost-effective to have these parts produced elsewhere.

1.2.6 TENDER OR QUOTATIONS

Very often a producer in response to an advertisement in press, is required to submit a tender or to quote prices for the supply of the commodities he produces or for completing a job. A tender has to be prepared very carefully as the receipts of orders depend upon the acceptance of quotations or tenders supplied by the manufacturers. The preparation of tenders require information regarding prime costs, works, administration and selling overheads and profit of 11n: proceeding period. The manufacturers, has to ascertain and find out the possible changes in prices of material, rates of wages and other costs. He has inascertain the amount of variable, semi-variable and fixed overheads on the basis of past experience. He must also have a reasonable amount of profit by taking into consideration the market condition. In preparation of estimates or tenders, overheads are generally not given. They are estimated as percentage of estimates i.e. works overheads on wages basis and selling and distribution overheads on works cost basis etc.

1.2.7 ILLUSTRATION-I

Prepare a cost sheet from the following data to find out Profit and Cost per Unit.

	Rs.
Raw material consumed	1,60,000
Direct Wages	80,000
factory over heads	16,000
Office overheads (10% of factory cost)	—
Selling overheads	12,000

Units Produced - 4000

Unit Sold 3,600

Selling price per unit Rs.100.

SOLUTION :

Cost Sheet of .... for the period ending.................

Unit Produced 4,000		Per Unit Rs.	Total Rs.
Raw materials consumed		40.00	1,60,000
Direct Wages		20.00	80,000
Prime Cost		60.00	2,40,000
Factory overheads		4.00	16,000
Factory Cost or Production Cost		64.00	2,56,000
Add : Office Overhead *(10% Rs. 2,56,000)		6.40	25,600
Adjustment for finished goods inventory		----	----
Add : Opening inventory			
Less : Closing Inventory			
Units Produced	4,000		
Unit sold	3,600		
Closing inventory	400		28,160
Cost of goods sold	(@Rs,.64+6.40)	70.4	2,53,440
Selling overheads (as given)		3.33	12,000
Cost of sales		73.73	2,65,440
Profit (B/F)		26.27	94,560
Sales 3600x100		100.00	3,60,000

Self Check Exercise:

Q.1 Define the term cost. Classify the cost on the basis of its functions and elements.

Q.2 Discuss production cost and its composition under the costing system.

1.2.8 SUMMARY

The three important areas in cost accounting are cost ascertainment, cost analysis and cost control. For cost accounting to be useful in these areas, cost must be accumulated, classified and grouped in such a manner that total cost and units cost can be determined. These requirements call for an understanding of the concept of cost and of its appropriate classification.

1.2.9 Answer to Self Check Questions

Ans.1 Cost means the amount of expenditure incurred on, or attributable to a given thing.

(A) Functional Classification of cost will cover :

(1) Factory overheads (2) Office and administration Overheads, (3) Selling and Distribution overheads.

(B) Elementwise classification cost will cover :

(1) Direct materials cost (2) Direct labour cost

(3) Direct expenses and (4) Overheads

Q.2 Production cost is "Prime Cost plus absorbed production overhead". Production Cost = Direct material cost + direct labour cost + direct expenses + indirect material cost + indirect labour cost + indirect expenses connected with production.

Explain all these components to discuss the concept of production cost in detail. Thus direct cost and prime cost are virtually the same, and indirect cost and overhead are also same.

1.2.10 GLOSSARY

1. Tender- Statement showing prices of products.
2. Cost Sheet- Statement of cost detail.
3. Direct Cost- Cost directly attributable to the product/service.
4. Indirect Cost- Cost which cannot directly attributable to the product or sevice.
5. Semi-Variable Cost - which partly fixed and partly variable.

1.2.11 EXERCISE

(A) Short Questions :-

Q.1 What are the elements of cost ? How these elements can be further analysed ?

Q.2 Distinguish between direct and indirect costs.

Q.3 What do you mean by controllable costs? Give examples.

(B) Long Questions :-

Q.1 What is a cost sheet 'What are its objectives and advantages ?

Q. 2. How does a production account differ from a cost sheet ?

Q. 3. In a factory, 20,000 units of Product A were manufactures in the month of July 2009. From the following figures obtained from the costing records, prepare a cost sheet showing cost per unit.

	Rs.
Opening Stock of raw material	5,000
Purchases	55,000
Closing Stock	10,000
Direct Wages	25,000
Factory overheads	40,000
Office and Administration overheads	20,000

Q.4 From the following particulars, Prepare a statement showing total cost and profit :

	Rs.
Opening stock of raw material	10,000
Closing stock of raw material	8,000
Opening stock of finished goods	15,250
Closing stock of finished goods	10,750
Raw material purchased	75,000
Carriage on raw material	1,500
Direct wages	32,500
Factory Cost	6,000
Office Cost	4,000
Selling expenses	5,250
Sale of scrap	600
Branch office expenses	2,400
Warehouse expenses	1,750
Exhibition expenses	1,250

Profit is to be calculated @ 2% on selling price. Unit produced during the period were 10,000.

1.2.12 SUGGESTED READINGS

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COST AUDIT

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1.3.20 Recommended Hooks

1.3.0 OBJECTIVE

Over the years, costing system is being established by the concerns to attain its objectives relating to cost. The main objective of this lesson is to introduce (1) objectives of Cost Audit, (2) Ceiling on number of Cost (3) Cost Audit Programme; (4) Cost audit Report; and (5) Rights, disqualifications, rights and duties of cost auditor.

1.3.1 INTRODUCTION

Cost Audit is the audit of cost records. It is an effective tool of control. It identifies the weaknesses and inefficiencies at all levels of organization. It gives Assistance to management in decision making process. According to Institute of Cost and Management Accountants of England, "Cost audit represents the verification of cost accounts and a check on the adherence to cost accounting plan.

Thus Cost Audit comprises :

(i) Verification of the cost accounting records such as cost statements, cost data, cost reports and costing techniques, and

(ii) Checking and examination of these records to ensure that they adhere to the cost accounting principles, plans and objectives.

When cost audit is introduced under a statute of law it is called statutory cost Audit. The Institute of cost and works Accountant of India defines statutory cost Audit as, "a system of audit introduced by the government of India for the review, examination and appraisal of the cost accounting records and added information required to be maintained by specified industries".

1.3.2 OBJECTIVES OF COST AUDIT

The objectives of cost audit are as follows :

1. To verify the adequacy of the books of accounts and records about cost .
2. To detect the Frauds and error of Principle of cost records.
3. To find the accurate value of work-in-Progress and closing finished stock.
4. To verify the total cost of each product, process, operation and job to ensure that they are accurate.
5. To ensure that cost accounting procedures laid by the management are strictly followed.
6. To advise the management to adopt alternative course of action.
7. To check whether the company is making optimum use of resources.
8. Help in price fixation and price control.
9. Help to increase productivity of different factors of production.
10. To improve cost consciousness.

1.3.3 WHO SHOULD CARRY OUT THE COST AUDIT

Under section 233 (B) Companies Act, the central government may, if it feels necessary, direct by an order that an audit of the cost record kept by a company under section 209 (1) (d) shall be conducted by a cost accountant within the meaning of the cost and works Accountant Act, 1959 in such a manner as may be specified. A firm of cost

Accountants can also be appointed as cost auditor if all the partners of the-firm are practicing cost accountant and the firm itself has been constituted with the previous approval of the central government under the regulation of the cost and works Accountant Act, I959 Unlike financial audit, cost audit is to be conducted only if the central government makes an order for a particular year and for a specified company.

1.3.4 DISQUALIFICATIONS

According to the sub-section (3) and (4) of section 226 of companies Act the following person can not be appointed as cost auditor .

1. A body corporate.
2. An officer or employee of the company.
3. A person who is a partner, as who is in the employment of an officer or employee of the company.
4 A person who is indebted to the company for an amount exceeding one thousand rupees or who has given any guarantee, or provided any securities in connection with the indebtedness of any third person to the company for an amount already specified.
5. A person who is disqualified on the above grounds as an auditor of any other body corporate which is the company's subsidiary or holding company or another subsidiary or of another subsidiars of its holding company.
6. A person appointed as financial auditor of the company shall not be appointed to do the cost audit of the same company also an internal auditor cannot be appointed as the cost auditor to that company.

1.3.5 CEILING ON NUMBER OF COST AUDIT

Section 224 (13) impose a ceiling on the number of audits which is as follows:

(1) In the case of an Individual cost accountant, who is in full time employment twenty companies, of which not more than ten should have a paid-up share capital of Rs. 25 lakh or more.

(2) In the case of an Individual cost accountant who is not in full time employment. There is no limit on the number of companies that such a person can audit.

(3) In the case of a firm of cost accountant.

For every partner of the firm who is not in full time employment maximum number of companies is twenty. Out of which not more than ten such companies should have a paid up share capital of Rs. 25 lakh or more.

Self Check Exercise-I

Q.1 Discuss the qualifications and disqualifications of the cost auditor

Q.2 What are the objectives of Cost Audit ?

1.3.6 TYPES OF COST AUDIT

The following are the main types of cost audit :

1. Cost audit on the behalf of the management :

The object of this type of audit is that the cost data are reliable and serve the purpose of management in taking important decisions. Cost auditor also help the management in improving the quality of cost accounting system.

2. Cost audit on the behalf of customer :

In some cases customer insists on a cost auditor to satisfy himself about the correct ascertainment of cost. This is done in the case of cost plus contracts. The customer do this to find out the correct cost so that he may be able to pay price on the basis of correct cost plus an agreed margin of profit.

3. Cost audit on the behalf of government :

Government may appoint a cost auditor in public interest to fix the fair price of any product, some times government is approached for subsidies or protection etc. before taking a decision the government may prefer to determine the cost of production on the basis of cost audit to satisfy itself whether the need is genuine or not.

4. Cost audit on the behalf of trade Association :

Sometime a trade association may appoint a cost auditor to conduct cost audit to determine minimum price to avoid cut throat competition among its members and to ascertain comparative profitability of its members.

5. Statutory Cost Audit :

The central government may under section 233-B of Companies Act 1956 order certain companies to get their cost accounts audited.

1.3.7 COST AUDIT PROGRAMME

There is no standard pattern for cost audit programme. But the cost audit programme should include all the usual steps that are used by a financial auditor in this audit programme. Cost audit will be affected by the nature and size of the business, attitude of the management etc. The cost auditor should draw a cost audit programme which should be specific to the unit concerned.

A cost audit programme may be divided into the following stages :

1.3.7.1 Preparation of Cost Audit :

Before starting the cost audit, an auditor should acquaint himself with several factors such as :

1. Cost accounting system used in organisation.
2. Production methods and manufacturing processes.
3. Information, about raw materials and components used in Production.
4. Concessions received from Government, if any.
5. Memorandum on Articles of Association and important points mentioned therein about costing requirements.

6. Information about cost records and documents.
7. Cost Accounting Rules or Cost Accounting Manual used in the organisation.

1.3.7.2 Review of Cost Accounting Records :

This will include :

(a) Method of costing in use like process, batch.
(b) Method of accounting for raw materials, stores, wastages etc.
(c) Method of accounting of depreciation.
(d) System of internal auditing.
(e) System of budgetary control.
(f) Basis of allocation and absorption of overhead.

1.3.7.3 Verification of Cost Statements :

This will include the verification of :

(a) Financial ratios
(b) Production data
(c) Cost Statements
(d) Cost of raw material, wages and salaries, stores, power and fuel etc.
(e) Reconciliation with financial books.

1.3.8 ADVANTAGES OF COST AUDIT

The following are the advantages of cost audit.

1.3.8.1 To Management :

(1) Cost Control :

Cost audit helps the management to control different elements of cost like material, labour and overheads.

(2) Helpful in reducing the prices :

Cost audit increase the efficiency of industries and helps in increasing the production and reducing the cost of production.

(3) Helpful in increasing profit :

Cost audit indicate the efficiencies and inefficiencies of an organisation and helps in increasing profit by controlling inefficiencies.

(4) Management by exception :

Management by exception become possible through allocation of responsibilities to individual managers.

(5) Helpful in Budgetary control and standard costing :

Cost audit helps in budgetary control and standard costing by comparing actual results with the budgeted results and actual cost with standard cost.

(6) Proper valuation of stocks etc. :

A reliable check on the valuation of closing stock, and work-in-progress helps the management. Facts about over valuation and under valuation are reported on which remedial action can be taken.

(7) Fixing responsibilities :

Cost audit helps in fixing responsibilities of a particular person, group of persons for irregularities or non compliance of rules and regulations of the company.

1.3.8.2 To Shareholder :

Cost audit ensure the shareholders, that they will get a fair return on their investment. It explore to the shareholders that proper records regarding income and expenses, purchase and sale are maintained.

1.3.8.3 To Government :

(i) Cost audit helps the government to focus its attention on inefficient unit,

(ii) Cost audit helps in fixation of prices of essential commodities,

(iii) Where the government enter into a cost-plus contract it helps to fix a reasonable price.

(iv) It helps the government to settle trade disputes.

1.3.8.4 To Society :

Cost audit helps in increasing efficiency of the company and reduces the price of product and provides the goods to the consumer at a fair price and of good quality.

1.3.9 DISADVANTAGES OF COST AUDIT

Disadvantages of cost audit are as follows :

1. By making cost audit compulsory restriction on companies will increase and it will disturb the normal working of companies.
2. Most of the working of cost accountant and financial accountant are the same and cost audit leads to duplication of work.
3. Cost audit is expensive and increase the cost of product. But it is wrong to say that cost audit will interfere in the working of the management rather it helps the management to achieve their objectives. Cost auditor also helps the management to reduce cost by bringing in their knowledge inefficiencies and wasteful expenditures.

Self Check Exercise-II

Q. 1 Discuss the various types of cost audit.

Q. 2 Discuss the various stages of cost audit programme.

1.3.10 RIGHTS OF A COST AUDITOR

The cost auditor enjoys the same powers as an auditor under section 227:

(I). The rights of a cost auditors are as follows :

1. He has a right of access at all times to the books of accounts and vouchers of the company.
2. He is entitled to require from the officers of the company such information and explanations as he may consider necessary for the performance of his duties.

3. He has a right to get all facilities and assistance from the company to perform his duties.

1.3.11 DUTIES OF A COST AUDITOR

The duties of a cost auditor are as follows :

1. He is liable to the company if he does not perform his duty properly or is guilty of gross negligence or fraud.
2. He owes a legal responsibility to third party who might mislead by his audit certificate and acted in reliance thereon.
3. He is bound to answer any query or clarification required by the central government on the audit report submitted by him.
4. He should not disclose any confidential information acquired during his work.

1.3.12 DIFFERENCE BETWEEN COST AUDIT AND FINANCIAL AUDIT

1. Cost audit is the verification of cost accounts. Cost auditor gives his opinion that the cost records prescribed by law have been maintained or not and on the other hand financial audit is the verification of the financial account as to whether balance sheet and profit and loss account exhibit a true and fair view of the state of affairs of the concern.
2. Cost audit is product oriented as compared to financial audit which is organization oriented.
3. A cost auditor should be a cost accountant appointed by the board of directors while a financial auditor is appointed by the shareholders and should be a chartered accountant.
4. Cost auditor reports to management while the financial auditor reports to shareholders.

1.3.13 COST AUDIT REPORT

A report is a formal statement usually made after an enquiry, examination or review of specified matters under report and includes the reporting auditors opinion thereon. Cost audit report is the end product of audit of cost accounts. Under section 233 (B) of the companies act 1956, the cost auditor has to submit his report to the central government and also to send a copy of the report to the company. The company within 30 days from the date of receipt of the copy of the report furnish to the central government the whole information and explanation on every reservation or qualification contained in the cost audit report. Cost auditor is bound to answer any query or classification required by the central government on the audit report.

1.3.14 GENERAL FEATURES OF COST AUDIT REPORT

The cost auditor has to submit in his report whether :

(1) All information and explanation required for the purpose of cost audit are obtained or not.

(2) Whether proper cost accounting record as required under section 209(1) (d) of the companies act are maintained or not.

(3) The books and records give information required by the companies act 1956 in the manner so required.

(4) Books and records give a true and fair view of cost or not.

Time Limit for submission of report

The cost auditor shall send his report referred in sub rule (1) of rule (4) to the central government and to the concerned company within 182 days from the end of the company's financial year to which the cost audit report relates.

Penalties :

If default is made by any cost auditor to send his report to the central government and to the concerned company, he shall be punishable with fine upto five hundred rupees. If the company and every officer therefore fails to provide required cost accounting records, books and papers within 90 days.

From the end of the financial year of company every officer who is in default shall be punishable with fine which may extend to five hundred rupees.

1.3.l5 FORM OF COST AUDIT REPORT [Section 2(C) and rule (4)]

The cost auditor has to submit his audit report in the following form. I/We————— ——————having been appointed as cost auditor(s), under section 233- B of the companies act, 1956 of----------—(name of the company), have examined the books of accounts as prescribed under clause (d) of sub-section (1) of section 209 of the said act and other relevant record for the year ended————————(financial year) relating to——————————(name of product) maintained by the company and report, subject to my/our comments under the heading "auditors observations and conclusions" contained in the Annexure to this report, that——

(a) I/We/have/have not obtained all the information and explanations which to the best of my/our knowledge and belief were necessary for the purpose of this audit.

(b) Proper cost accounting records as required under clause (d) of Section 209 of the company act 1956 have/have not been kept by the company.

(c) Proper returns adequate for the purpose of my/our cost audit, have/have not been received from branches not visited by me/us.

(d) The said books and records give/do not give the information required by the Companies Act, 1956 (1 of 1956) in the manner so required.

(e) In my/our opinion the company's cost, accounting records have/have not been properly kept so as to give a true and fair view of the cost of production, processing, manufacturing or mining activities as the case may be.

(f) The cost statements in respect of product under reference as specified in Annexures/

Proformance of Schedules 1 and II of the cost Accounting Records (-----)

Rules duly audited by me/us are/are not kept in the company.

The matter contained in the annexure to this report form part of this report, which is also subject to my/our observation made therein.

COST AUDITOR(S)

Dated this............day of.....................

Annexure to Cost Audit Report.

The salient part of annexure are as follows :

1. General Information :

This includes:

- Name and address of the company
- Name and address of the cost auditors.
- Reference No.......................and date of government order under which the audit report is conducted.
- Financial year of the company for which accounts are audited.
- Location of the factory.
- Date of incorporation of the company and its status.
- A copy of Annual Report along with audited profit and loss account and balance sheet in respect of the company's financial year for which the reports rendered shall be enclosed with the cost audit report.

2. Cost Accounting System :

Briefly describe the cost accounting system and comment on its adequacy or otherwise to determine correctly the cost of production of the product.

3. Financial Position :

A number of figures and ratios are to be given like (1) Net worth (2) Profit (3) Capital employed (4) Net sale (5) Operational Profit (6) Value addition (7) Ratios. The figures of capital employed, Profit and net sales are to be given for the company and for the product under reference.

4. Production :

The following information is to be given for each type of product under reference and for each factory.

1. Licensed capacity, registered capacity
2. Installed capacity
3. Actual production, Production capacity enhanced by leasing.
4. Percentage of production in relation to installed capacity.

5. Process of Manufacture : A brief note regarding the .... process of manufacture of the product alongwith a flow chart shall be given.'

6. Raw Material : The consumption of major raw material should be shown both in term of value and quantity. The consumption of major raw material should be shown alongwith the standard requirements.

7. **Power and Fuel :** The quantity, rate per unit and total cost for each major form of power and fuel used in production should be shown and actual physical consumption per unit of production should be compared with standards if any with the preceding two years consumption.

8. **Wages and Salaries :** Wages and salaries paid to all employees should be showing separately the direct labour cost on production, indirect labour cost on production, employee cost of administration and selling and distribution cost. The average number of workers employed should be mentioned.

9. **Repair and Maintenance :** The expenditure per unit on stores and spares, labour charges should be shown.

10. **Depreciation :** The method of depreciation adopted by the company e.g. straight line, diminishing balance etc. and the basis of allocation of depreciation should be stated. The depreciation if any, provided on the amount of revalued assets shall not form part of cost of production.

11. **Overheads :** The amount of each overhead should be shown separately like factory overheads, administration overheads, selling overhead, and distribution overheads. The basis of allocation and apportionment of the common overheads should be stated. The basis of absorption of overheads to cost centers should also be stated.

12. **Sales :** In respect of each type of product sold, sales in quantity, net sale realization and average sale realization per unit should be shown where the product is sold at different prices in accordance with government policy, quantity and value of sale at different prices should be shown separately.

13. **Abnormal Non-recurring Costs :** If there were any abnormal features affecting Production during the year e.g. strikes, lockouts, major breakdowns in the Plant, substantial power cuts, serious accidents etc. they shall, wherever practical, be briefly mentioned indicating their effect on the unit cost of production.

14. **Auditor’s observation and conclusions :** The cost auditor shall report on :-

(a) matters which appear to him to clearly wrong in principle or apparently unjustifiable.

(b) cases where the company’s funds have been used in a negligent or inefficient manner.

(c) factors which could have been controlled but have not been done resulting in increase in the cost of production.

(d) the adequacy of otherwise of budgetary control system, if any, in vogue in the company.

The cost auditor shall suggest measures for improvements in performance, if any, in respect of the following :

(a) rectification of general imbalance in production facilities.

(b) fuller utilisation of installed capacity.

(e) concentration on areas offering scope for cost reduction, increased productivities.

(d) improved inventory policies.

The cost auditor may give his other observations and conclusions, if any, irelevant to the cost audit. If the auditor wants to give qualified report he shall indicate the extent to which he has to qualify the report and the reason there of.

1.3. l6 SUMMARY

Cost Audit is mainly a preventive measure. It serves as a guide for policy formulation and decision making in addition to being a barometer of performance. Although government has made it a statutory obligation to have cost audit in a few type of industries. But in the coming years, it will be the competition driven market which will drive the cost audit. In the competition driven market, cost audit will be an important tool in bringing out inefficiencies and thus improving probability.

1.3.17 ANSWERS TO SELF CHECK QUESTIONS

Self Check Exercise-I

Ans.1Qualifications and disqualifications of the cost auditor : The cost audit shall be conducted by a cost accountant within the meaning of cost and works accoutants Act, 1959.

Disqualifications : A body corporate, officer or employee of a company, a person who is indebted to the company, a person appointed as financial auditor of the company, a partner who is in the employment of an officer or employee of a company, and a person who is disqualified on the above grounds as an auditor of any other body corporate which is the compnay is subsidiary or holding company or another subsidiary/ subsidiaries of its holding company are disqualified to appoint as cost auditor.

Ans.2Objectives of Cost Audit :

1. Verify books of accounts / records.
2. Detect grounds and error of principle.
3. Valuation of stock
4. Verify total cost of each product, process, operation or job.
5. Ensure follow up of cost accounting procedures.
6. Highlight alternative course of action.
7. To make optimum use of resources.
8. Price fixation and price control.
9. Increase productivity.
10. Improve cost consciousness.

Self Check Exercise-II

Ans. Various types of cost audit are as given below :

1. Cost audit on the behalf of management.
2. Cost audit on the bahalf of customer.
3. Cost audit on the behalf of government.
4. Cost audit on the behalf of trade association.
5. Statutory cost audit etc.

Ans.2 Following are the stages of cost audit programme

1. Preparation of cost audit plans.
2. Review of cost accounting records.
3. Verification of cost statements.
4. Preparation of cost audit report.

1.3.18 GLOSSARY

1.	Financial Audit	:	Verification of Financial accounts (i.e. Profit and loss account and balance sheet)
2.	Cost Audit Report	:	A formal statement reporting auditors opinion about cost and expenditure.
3.	Cost	:	The amount of expenditure incurred on, or attributable to a given thing.
4.	Cost Accounting system	:	A system which is installed to ascertain, record, measure and presentation of cost data.
5.	P & L A/c	:	Profit and Loss Account
6.	B/S	:	Balance Sheet

1.3.19 EXERCISE

(A) Short Questions :

Q.1 Define Cost audit and its objectives.

Q.2 Distinguish between Cost Audit and Financial Audit.

Q.3 What do you mean by Cost Audit Programme ?

(B) Long Questions :

Q. 1 Explain the provisions of Companies Act, 1956 and the cost audit (report) rules, 1996 relating to statutory cost audit.

Q.2 "The cost audit report contains significant information which would help to assess and improve the operational efficiency of a concern." Discuss the statement with reference to the matters to be reported by a cost auditor in his report.

Q.3 Discuss the matters to be reported under the head 'Auditors' observations and conclusions under Para 14 of the Annexure to the cost audit (reports) rules.

1.3.20 RECOMMENDED BOOKS

1. V.K. Saxana and CD. Vashist, Advanced Cost and Management Accounting Sultan Chand & Sons, New Delhi,1998.
2. Dr. Manmohan & S.N. Goyal, Principles of Management Accounting Shakithabhavan Publication, Agra.
3. Barfield, Jessie, Ceily A. Raiborn and Micheal R. Kenny : Cost Accounting, Traditions and innovations, South Western College Publishing, Cincinnati, Ohio.
4. Homgren, Charles T George Foster and Srikant M Daliar : Cost Accounting, a managerial emphasis, Prentice Hall, Delhi.
5. Lall, B.M and I.C Jain : Cost Accounting : Principles and Practice Hall, Delhi.
6. Welsch Glenn A, Ronald W Hilton and Paul N Gorden : Budgeting, Profit Planning and Control, Prentice Hall, Delhi.

Note : This lesson has been written with the financial assistance of D.E.C.

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MATERIAL CONTROL

STRUCTURE OF THE LESSON

1.4.0 Objective
1.4.1 Introduction
1.4.2 Material Control
1.4.2.1 Needs of Material Control
1.4.2.2 Objectives of Material Control
1.4.2.3 Essentials of Material Control
1.4.3 Purchasing of Material
1.4.3.1 Centeralised Purchasing
1.4.3.2 Purchasing Procedure
1.4.3.3 Just-in-time Purchasing
Self Check Exercise
1.4.4 Codification of Materials
1.4.4.1 Benefits of Codification
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1.4.5 Summary
1.4.6 Answers to self check questions
1.4.7 Glossary
1.4.8 Exercise
1.4.9 Suggested Readings

1.4.0 OBJECTIVES

The following objectives are covered under this lesson :-

1. To study the need and essentials of material control system.
2. To study the various types of purchasing system and process of purchasing materials.
3. To study the codification system of material.

1.4.1 INTRODUCTION

Material is the basic substance used in the process of Production. The cost of material has been defined as "The cost of commodities supplied to an undertaking.' It includes raw materials, spare parts and components, factory supplies and packing materials. It may be direct or indirect. Direct and Indirect materials are distinguished on the basis of identification or traceability of an item of material to the cost unit or cost centre. Oil, grease, cotton waste, etc. are those items of materials that cannot be traced to the finished product.

1.4.2 MATERIAL CONTROL

The material being the biggest cost factor, affords a wide scope for saving in costs. Therefore a costing system has to provide for a proper control over material and stores. Material control is defined as "a systematic control over purchasing, Storing and consumption to materials so as to maintain a regular and timely supply of materials, at the same time, avoiding overstocking." It can be achieved by systematically organising and standardising the procedures and activities relating to :

(1) Purchase
(2) Receipt and inspection
(3) Storing
(4) Issuing and
(5) Record keeping

1.4.2.1 Needs of Material Control

Material control aims at achieving saving in material cost, improvement in material handling, increased production and larger profits. It ensures :

1. Timely availability of required quantity of material resulting in smooth and continuous flow of production.
2. Purchases of stores appropriate quality at reasonable price.
3. Minimum capital investment in the inventory by fixing stock levels and avoiding over stocking.
4. Economy in buying and holding expenses by evolving an ideal order quantity for each item.
5. Prevention of leakage, deterioration, wastage of materials by arranging suitable storage facilities and by fixing allowable limits of such losses in storing as well as manufacturing.
6. Minimisation of risk due to spoilage, obsolescence, theft pilferage by enforcing slock control measures and physical verification of stock.
7. Maintenance of appropriate stock records which furnish the data relating to stores quickly and accurately.

1.4.2.2 Objectives of Material Control

The various objectives may be enumerated as follow .

(a) Procurement of materials and stores from suppliers at the lowest price, consistent with the standard specification as to quality and timely delivery;
(b) Avoidance of production hold-up for want of materials;
(c) Maintenance of even flow of control;
(d) Prevention of excessive investment in material stock;
(e) Avoidance of losses occasioned by deterioration due to evaporation, dryage careless handling of materials and supplies, pilferage, obsolescence etc; and

(f) Making available, accurate and reliable information about the different items of materials and stores for proper planning and control.

1.4.2.3 Essentials of Material Control

Material control embraces all aspects of material management viz. buying, receiving and inspecting, storing, consumption and accounting. It should be organized keeping in mind the following requirements :

1. There should be co-operation and co-ordination among the departments dealing with materials viz, purchase, receiving, inspection, production planning and control departments (drawing office), stores and shops.
2. All items in the stores should be codified.
3. All purchases must be centralised and must be made through an expert purchase manager.
4. Receiving and inspection procedure should be chalked out. Material not ordered or not in accordance with the specification should be rejected.
5. Standard forms for requisitions, purchase order, issues and for transfer of material from one job to other job, should be used.
6. The storage of material should be well-planned to avoid losses from theft, carelessness, damage, deterioration, evaporation and pilferage.
7. Procedures for issue and transfer are to be standardised and applied.
8. Minimum, maximum and re-ordering levels for each type of material should be fixed to ensure that there is no shortage of material and that there is no overstocking.
9. Ordering quantity for each type of material should be fixed to reduce the ordering cost and carrying cost of materials.
10. Adequate records to control materials during production should be maintained to ensure that there is minimum possible wastage.

1 I. Stores control measures like ABC analysis, perpetual inventory system, stock verification etc. should be introduced.

12. Communication system should be geared to facilitate quick and prompt reporting in printed forms of the data concerning inventory transaction.

13 A system of internal check should be introduced to ensure that all transactions involving materials are checked by authorised and independent persons.

1.4.3 PURCHASING OF MATERIAL

Effective material control demands a good deal of attention to be paid to activities and procedures relating to purchasing of materials as it has considerable influence on cost, quality of the product, prompt delivery, volume of production and efficiency of manufacture. Efficient buying procedure enhances competitive strength of business through reduction in material order, in cost of storage and buying and also through reduced wastage. It builds up goodwill because of better quality output and timely delivery.

Thus, if the size of business concern permits there should be a separate purchasing department and the responsibility for purchasing all types of materials should be entrusted to this department. The head of this department is usually known as the 'Purchase manager'.

1.4.3.1 Centeralised Purchasing

For efficient buying a Centralised Purchase Department should be established under an expert officer for purchasing all the requirements of a undertaking. Centralised purchasing :

1. Ensures better controlled purchases and benefits of expert knowledge of the Buyer (i.e. Purchase Manager).
2. Avoids excessive and reckless buying by several persons.
3. Enables buying in bulk to obtain trade discount, concession on packing and transport charges, regular supply and favourable treatment from the suppliers.
4. Eliminates possibility of overstocking and locking up of capital in the stock, of materials. On the other hand, limitation of centralised purchasing are :
   (a) Delay in getting materials;
   (b) High cost of maintaining a central purchase department;
   (c) Chances of wrong purchases owing to lack of proper co-ordination and communication between purchase department and requisitioning department; and
   (d) Inability in taking advantages of local buying by branches;

Local buying by branches have certain merits, viz, quick delivery, contacts with local sellers, saving in transportation, octroi and insurance expenses. But it may lead to reckless buying by, several persons, overstocking, more capital blocked in inventory, loss of economies of large-scale buying and week control over purchasing function. However, where purchasing quantity is small and/or urgent and immediate supply of materials is needed, local buying may advantageously be resorted to.

Thus, it is evident that centralised purchasing is advantageous. But if the industrial undertaking consists of a number of works or plants which are situated for apart, centralised purchasing may be inconvenient and in such a case, local or decentralised purchasing should be allowed if materials and supplies are required urgently or better terms can be secured from local supplies or the purchases involved are of small value.

1.4.3.2 Purchasing Procedure

The sole function of the purchase department is "to buy and supply the material and stores, required for various departments (including tools equipment and stationeries) of right quality, in right quantity, at right time and at right price". This responsibility involves the determination of what to buy, time, quantity, price of buying and supplier from whom purchases are to be made.

To carry out this responsibility, the purchasing department follows the procedures outlined below:

1.4.3.2.1 Determination of Purchase Budget.
1.4.3.2.2 Receiving the purchase requisition.
1.4.3.2.3 Determination of quantity to be purchased.
1.4.3.2.4 Exploring the sources of supply and choosing the suppliers.
1.4.3.2.5 Placing orders.
1.4.3.2.6 Receiving and Inspecting Materials.
1.4.3.2.7 Checking and Passing of Bills for Payment.
1.4.3.2.8 Return of Materials to suppliers.

(1) Determination of Purchase Budget :

Generally, purchase manager, with the help of production planning department, prepare a purchase budget in the beginning of the year. This budget guides him in knowing what he has to buy, what should be the quality, size and quantity and also when he has to buy.

Apart from budget, the Bill of Materials (also called as specification of Materials] prepared by drawing office, is also helpful in knowing the requirements of the company for which the purchase manager has to buy.

(2) Receiving Purchase Requisition :

Purchase of material is initiated through purchase requisition. Guided by stock position, the storekeeper usually initiates 'Purchase Requisition' (i.e. indent) for materials required to replenish the stock of an item. These are 'regular' purchase requisitions. In case special items are required for a job, departmental head may send a special (also called as occasional) purchase requisition.

A purchase requisition is a formal request to buy materials. It is usually a printed form with columns meant for description, quantity, size and grade of materials required. It must be authorised by a responsible officer like works manager, departmental head or storekeeper. It is prepared in three copies, for ruting to :

(i) The Purchase Department
(ii) Production control department, and
(iii) For retaining one for record.

Specimen of Purchase Requisition

<table>
<tr><td colspan="7">Date   Regular   Date of which material is
No.   Occasional   required</td></tr>
<tr><td colspan="4">To be filled by Requisition</td><td colspan="3">For Purchase department's use</td></tr>
<tr><td>Sr. No.</td><td>Description</td><td>Code No.</td><td>Qty.</td><td>Purchase</td><td>Supplier</td><td>Remarks</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="7">Sd.   Sd.   Sd.
Requisitioner   Approved by   Purchase Manager</td></tr>
</table>

(3) Determination of Quantity :

Now the buyer; has to determine the quantity of purchase. Larger order has the merits of obtaining more trade discounts, less ordering cost, economy in packaging and transport expenses, credit facilities, regular supply and other concessions from the suppliers. But it involves more capital, increased storage space and expenses, possibility of loss due to obsolescence and price fall etc. The merits and demerits are reverse in case of small order quantity. Therefore, considering both aspects, an ideal quantity of buying is determined which is known as "ordering quantity".

(4) Exploring the Sources of Supply and Choosing the Supplier :

A source of supply material must be selected after the receipt of the purchase requisition. The purchase department usually maintains for every group of materials a list of the supplier's names and addresses. Quotations may be invited from these suppliers by issuing tenders to them. On receipt of the quotations form the suppliers, a comparative statement of various quotations received should be prepared and the desirable suppliers should be selected.

While selection the supplier to whom order is to be given for the purchase of materials, the purchase department should keep in mind: (i) manufacturing capacities, (ii) reliability of the supplier, (iii) financial condition of the supplier, (iv) the management of the supplier firm, (v) price quotes, (vi) quantity for which price quoted is applicable, (vii) terms of payment, (viii) terms of delivery, and (ix) specification to which the products are manufactured. All the other factors being the same, the purchase price should be the lowest price at which a particular material is to be purchased. Thus, the supplier from whom material is purchased should be dependable and capable of supplying materials of uniform quality at right time at reasonable price. The purchase officer should keep in mind all the criteria given above in making a choice of supplier.

The Purchase Manager will obtain necessary information form, schedule of quotations, past records, catalogues, buyers, guides and other books.

There should be periodic evaluation of suppliers and those whose performance is found to be bad in regard to quality delivery time, sales policies and competitive prices, should be removed from the list of suppliers. In future quotations should not be invited from such suppliers till their performance is found good.

(5) Placing an Order :

After choosing the supplier, the purchase department, prepares a purchase order for the supply of stores. The order is the written authorisation to the supplier to supply the particular material or materials. It is the evidence of the contract between the buyer and the supplier that binds both the buyers and suppliers to the terms under which the order is placed. Moreover, it is the document which gives authority to the receiving department to receive the materials ordered for and to the accounts department to accept the bill from the supplier for payment.

The number of copies of the purchase order to be prepared varied from organisation to organisation.

(a) The original copy is sent to the supplier.

(b) One copy is sent to the receiving department.

(c) One copy is sent to the person who initiated the purchase requisition.

(d) One copy is sent to the accounting department.

(e) The last copy is retained by the purchase department for further reference. A purchase form of the purchase order is given as below :

Purchase Order

No .... Dated .... Purchase Requisition No.

To (Suppliers)

Your quotation niimber .... dated.................. has been accepted.

Please supply the following items of store in accordance with the instructions mentioned therein and terms and conditions listed on the reserve of this purcahse order.

Sr. No.	Description	Code No.	Qty.	Purchase	Supplier	Remarks

Terms of Delivery
Terms
Packing and Despatch instructions
Discount Allowed

Purchase Officer

There should be a regular follow-up of the purchase order placed so that materials may be received in time. Enquiries should be made at regular intervals at the delivery date agreed upon. Suitable remedial measures may be taken or alternative sources of supply may be tapped if they face any difficulty in supplying the materials at the promised delivery dates.

(6) Receiving and Inspecting Materials :

In small and medium sized manufacturing concerns, function of receipt and inspection of materials are to be performed by the stores department. But in case of large manufacturing concerns, generally a separate receiving Department is set up. The main functions of Receiving Department are to receive the materials, to check for their quality and quantity and to arrange movements of materials within the factory. In case of large manufacturing concerns, sometimes specialised staff is attached to the Receiving Department for testing the quality of materials. The Receiving Department, after receiving the materials, will prepare a Goods Received Note.

Specimen of Goods Received Note

G.R. Note No................. Date ....Inspection Report No: ....
Purchase Order No.............Date................ Deliver Note No..........Date...........................
Received form......................goods mentioned as under :

Sr.No.	Code No.	Description	Qty.	Price	Amount	Remarks

Sd.	Sd.	Sd.	Sd.
Receiver by	Checked by	Storekeeper	Store Ledger Clerk

(7) Checking and Passing of Bills for Payment :

When the invoices received from the supplier, it is sent to the stores accounting section to check both the authenticity, as well as the arithmetical accuracy. The quantity and price mentioned in the invoice are checked with reference to stores received note and the purchase order respectively. The arithmetical accuracy of the invoice is also checked and verified. Having thus verified all respects of the invoice, the stores accounting section certifies and passes (he invoice for payment and on this basis, the cashier can make the payment.

(8) Return of Materials to Suppliers :

If the goods received are not according to the standard or are in excess of the quantity ordered, they are to be returned to the supplier. In such as case a Debit Note is prepared in quadruplicate. The copies are to be sent to the supplier, Accountant and Purchasing Department respectively, the fourth copy is retained by the receiving Department for future reference.

1.4.3.3 Just-In-Time Purchasing

'Just-in-time' is said to be the managerial philosophy of elimination of waste. It is directed towards production or procurement of products or components as they are required by the customer or for use rather than for stock. It seeks to eliminate inventory holding costs.

Official Terminology defines Just-in-time purchasing as, a purchasing system in which material purchases are contracted so that the receipt and usage of material, to the maximum extent possible, coincide

Thus, under this system, receipt and usage i.e. supply and demand for every item of material arc made to coincide. Necessary arrangements are made with limited number of suppliers by entering into long-term contracts for the supply of materials as and when required. Stocks of materials are thus avoided.

Self Check Exercise

Q.1 Discuss the steps involved in the purchase procedure of material.

Q.2 What do you mean by condification? Also discuss in detail various methods of codification.

1.4.4 CODIFICATION OF MATERIALS

Codification means assigning a code, symbol or alphabet or a number to, different materials for each identification, e.g. 6" steel screw may be codified as "SS6" and Brass screw of 3" may be denoted as "BS3".

In giving "codes" the materials, their nature, quality, size, weight, measurement should be borne in mind. A good code system should be simple, definite, elastic and easy to memorise.

1.4.4.1 Benefits of Codification

Following are the benefits of Codification :

(i) Easy identification of material.

(ii) EIimination of chances of wrong issue of materials.

(iii) Saving of time in material handling.

(iv) Secrecy of materials used.

(v) Facility of preparation of "Bill of Materials", "Materials Requisitions" and "Purchase Requisitions",

(vi) Brevity and comprehensiveness in stores list.

(vii) Essential for Merchandised Accounting.

1.4.4.2 Methods of Codification

1. Alphabetical Method : An alphabet is used to identify a particular material for instance 'A' for coal. 'B' for belts etc. The method is simple but lacks Flexibility and expansion. The combination of two or more alphabets may be used to lend flexibility to some extent.

2. Mnemonic Method : This method is an improvement over simple alphabetical method. Here, the material is given that alphabet which indicates the first sound of its name, e.g. copper wire may be coded as CW. It is called a mnemonic system as it assists memory in remembering code words.

3. Numerical Method : Under numerical method a number is assigned to each item. The numbering may be straight or in blocks. Straight numbering means giving separate number to each item, whereas under the latter method a particular class of items is given in block numbers e.g.

Straight Numbering			Block Numbering		
	Code	Steel	Nuts	Nos.	1-10
Steel Nuts	½	01	-do-	1/2 cm	01
do	¾	02	-do-	3/4 cm	02
do	1 cm	03	-do-	1 cm	03
do	1.5 cm	04	-do-	1.5 cm	04
Brass Nuts	'1/2 cm	05	Brass Nuts	Nos.	11 20
do	1 cm	06	-do-	1/2 cm	11
do	1.5 cm	07	-do-	1.5 cm	12

Now a days, a variation in this method, viz, decimal system has gained more popularity especially on account of its flexibility. An item is given full number, its grade, colour, size etc. are indicated by decimal figures. Suppose an automobile concern uses two types of screw and it has given the following code numbers :

Screw-94, brass-3, Steel-5, and sizes 1/2 cm as 12, 1/3 cm as 13, 1/4 cm as 14, 3/8 as 38 on. Now the coding of the following item will appear as under :

	Code
Screw of brass 1/2 cm	94.312
Screw of brass 1/3 cm	94.313
Screw of brass 3/8 cm	94.538
Screw of brass 1/4 cm	94.514

The numerical method is also simple, capable of expansion to pay limit. II does not create confusion in identification but as code number cannot be remembered an elaborate index is necessary.

Alphabetical-cum-Numerical Method :

Under this method, the principal underlines in both the above methods have been combined advantageously for the coding e.g. aluminium wire of 1/2 cm. May be coded as AW 12.

1.4.5 SUMMARY

With a view of promoting specialisation consequent upon division of labour, material control is organised, in modern times. By the creation of a number of departments, each department comes under a separate functional head, to perform each function of material control independently. The framework of material control is known as organisation of material control. This framework consists of interrelated functions in connection with materials and supplies. These functions involved in material control are co-ordinated in such a way as to achieve the objectives of material control.

1.4.6 ANSWER TO SELF CHECK EXERCISE

Ans.1 Following are the steps involved in purchasing procedure of material:

1. Receipt of purchase requisition
2. Selection of supplier
3. Preparation, placement and follow up of purchase order
4. Receipt of materials
5. Inspection of materials
6. Return of rejected materials
7. Checking and passing of purchase invoices for payment
8. Making payment to supplier.

Ans.2 Assigning a code, symbol, alphabet or a number to different materials for each identification is known as codification.

Methods of codification :

1. Alphabetical Method
2. Mnemonic Method
3. Numerical Method
4. Alphabetical-cum-numerical Method

1.4.7 GLOSSARY

1. Inventory Raw, semi-finished or finished stock.
2. Codification of material - Assigning a code, symbol or number.
3. JIT - Just in time purchasing.
4. Mnemonic method- One method of codification.
5. Purchase requisition - A formal request to buy materials

1.4.8 EXERCISE

(A) Short Questions :

Q.1 Give the meaning of term "material control." What are its objectives ?

Q.2 What is meant by centralised purchasing.

Q.3 What is meant by Just-in-time Purchasing.

(B) Long Questions :

Q.1 Describe the various benefits and methods of codification of material.

Q.2 Briefly explain the procedure followed for the purchase of materials.

1.4.9 SUGGESTED READINGS

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INVENTORY CONTROL AND EVALUATION

STRUCTURE OF THE LESSON

1.5.0 Objective
1.5.1 Introduction
1.5.2 Standard Procedure of material issue
1.5.3 Methods of Inventory Control
1.5.3.1 ABC Method
1.5.3.2 Perpetual Inventory System
1.5.3.3 Inventory Turnover Ratio
1.5.4 Valuation of Material (Pricing of Material)
1.5.4.1 Cost Price Methods
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1.5.4.4 Specific Price Methods
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Self Check Exercise
1.5.6 Wastage,. Scrap, Defective work and spoilage
1.5.7 Control over Waste, Scrap, Spoilage and Defectives
1.5.8 Summary
1.5.9 Answers to self check Questions
1.5.10 Glossary
1.5.11 Exercise
1.5.12 Suggested Readings

1.5.0 OBJECTIVES

The main objective of the lesson is to give an idea about :

1. Methods of Inventory Control;
2. Methods of valuation of material; and

Methods to Control the waste, scrap, defectives and spolige

1.5.l INTRODUCTION

Another department charged with the function of material control is the stores department. Materials are received into the stores department after inspection. This is held by the stores department until it is demanded by the user departments. The material cost depends upon not merely the purchase price of materials, but also their issue price. The general principle of valuing purchases is, “all cost of whichever nature incurred up to the point of placing materials and supplies in a condition suitable for issuance from the stock room should comprise the cost value of materials."

1.5.2 STANDARD PROCEDURE OF MATERIAL ISSUE

Materials are kept in store so that the storekeeper may issue whenever these are required by the production departments. A standard procedure of material issue from stores should be developed keeping in view the following points :

1. Material should be issued only against authorisation (e.g. Material Requisition).
2. Issuing of material should take the least possible time so that there should not be inconvenience or interruption in production process.
3. Material should be kept at accessible and definite place to enable quick issue.
4. Proper system of classification of materials should be adopted for avoiding the issue of wrong materials.
5. Persons who come to take materials should not be allowed to while away the time under lame excuses.
6. Every issue should be recorded immediately in proper records like Bin Card, Stock Register.
7. Material issued should be priced and entered into the Stores Ledger by Costing Department and not by stores personnel.
8. Unauthorised persons should not be allowed to deal with the stocks.

1.5.3 METHODS OF INVENTORY CONTROL

The cost of material is the most important element of the cost, so it is necessary that effective physical control is exercised over the materials lying in stores in "order to avoid loss of materials by theft, pilferage etc. A few methods are available for this purpose which are as follows :

1.5.3.1 ABC Method

ABC analysis is a technique followed for the purpose of exercising control on materials according to their value. Under this method all items of materials are classified into three categories A, B and C according to their value.

I. Category 'A' consists of material which constitute 5% to 10% of the total items in the store and represent 70% to 85%, of total store value;

II. Category 'B' the item constituting 10% to 20% of the total items and 10% to 20% of the store value;

III. Category 'C' the items constituting 70% to 85% of the total items and representing 5% to 10% of the store value.

Items under Category 'A' must be closely controlled by all steps, while in respect of items under category 'C elaborate control procedures are not necessary ABC analysis of materials is also known as Always Better Control Method or Proportional Parts Value.

Advantages of ABC Analysis :

1. It ensures closer control over costly items in which considerable amount of capital is locked up.
2. It leads to reduction in carrying costs.
3. It enables to keep enough safety stock for 'C' items.
4. It enables to maintain high stock turnover rate.

1.5.3.2 Perpetual Inventory System

The Institute of Cost and Management Accounting London, has defined the perpetual inventory system as "a system of records maintained by the controlling department, which reflects the physical movement of stocks and their current balance."

In simple, it involves (a) maintenance of Bin Card and Stores Ledger which shows goods received, issued and stock on hand at any time; (b) continuous stock taking to compare the actual stock with stock shown by Bin Card and Stores Ledger.

Under continuous stock taking system, a permanent stock taking team is appointed. This team daily verifies the physical stock of different items selected at random. The differences found between the Actual Stock and Bin Card balance are noted and an enquiry for finding out causes is made.

Adjustment of differences between Book Stock and Actual Stock :

If the discrepancy is due to clerical error, the Bin Card or Stores Ledger are adjusted to rectify the mistake. But the difference, especially shortage of actual stock, may be due to several reasons, the reasons may be divided into two categories;

(1) Avoidable (2) Unavoidable Causes :

(1) Avoidable

1. Pilferage, theft.;
2. Misplacement of materials.
3. Careless materials handling.
4. Short or excess issue due to negligence or wrong measures.

Unavoidable Causes :

1. Evaporation, shrinkage.
2. Deterioration of perishable items.
3. Variation in weight, length due to climatic conditions.
4. Loss in weight and quantity due to seasoning, curing and storing.
5. Loss in bulk breaking (i.e. issuing in small quantities of materials brought in bulk).

Advantages of Perpetual Inventory System :

1. This system ensures a detailed and reliable checking of stores items in a methodical manner without interfering in any way with the routine work of the factory.
2. It obviates the necessity of physical stock taking at the end of financial year.

3. It assists in the detection and immediate rectification of clerical errors in the stock records.
4. In case of serious discrepancies, it gives rise to thorough investigation into their causes and prevents the reoccurrence of similar irregularities.
5. It facilitates preparation of periodic Profit and Loss A/c and the balance Sheet.
6. Perpetual checking by surprise, prevents employees from playing mischief with stores materials.
7. Stock level can be revised from time to time to avoid or overstocking of a material.
8. It facilitates proper planning of production programmes, framing buying policies, accepting new order etc., as ready information of stock position is available.

Drawbacks of Perpetual Inventory System :

1. The system is expensive and a small concern cannot adopt it.
2. The information about actual stock of a particular day may not be available. Only book figures are available.

1.5.3.3 Inventory Turnover Ratio (Material Turnover Ratio)

Inventory turnover ratio is also one method of exercising material control. It is the ratio which the value of materials consumed during a period bears to the average stock held during that period. It can be calculated as under :

$$\text{Inventory turnover Ratio} = \frac{\text{Value of Materials consumed during the period}}{\text{Value of Average Stock held during the period}}$$

Average stock is the half of the total of opening and closing stock. The material turnover can also be expressed in terms of day by formula :

$$\text{Material Turnover in days} = \frac{\text{Days during the period}}{\text{Material Turnover Ratio}}$$

The objective of Inventory Turnover Ratio is to ascertain the speed of movement of particular item. A high ratio indicates that the item is fast moving and investment in it is minimum. A lower ratio denotes that the item is not consumed in more quantity it is going out zero demand and had led to overstocking. Such slow moving materials should be disposed off as early as possible.

Of course, this rule cannot be applied to machinery spare parts, which are stored for repairing machinery and equipment. In this case, lower rate of turnover would indicate efficiency of machinery and equipment.

1.5.4 VALUATION OF MATERIAL (PRICING OF MATERIAL)

Material issued to production has to be valued in Costing Department for the purpose of accounting. This is known as material pricing. Pricing becomes a little difficult because of different prices at which material might have been purchased in a particular period. There are different methods for pricing of material value. The method to be used in a particular manufacturing concern depends upon the nature of materials and the nature of business itself. A very careful choice has to be made to the methods of valuing the material issues because it influences the cost of the jobs and the value of the closing balances of material in the stores. It is important to note that whatever method of pricing the material issues is followed; the actual issue of materials will always be from the earliest consignment. The important methods used for Pricing material issues are as follows :

1.5.4.1 Cost Price Method

1 FIFO 2 LIFO 3 H1FO 4 N1FO

1. First-in-First-out Method (FIFO) :

Under this method it is assumed, that issue of materials have been made out of the earliest consignment on hand. The issues of materials therefore, are charged out at the price as was paid for the lot out of which the issues have been made. In other words in this case items on the debit side of stores account (receipts column) are exhausted in chronological order.

Merits : This method has following merits :

(a) Since it is an actual cost method, it recovers entire material cost from production without any over or under recovery,

(b) It appears logical as the material bought earlier is used for earlier jobs.

(c) Stock is valued at recent purchase prices, and hence it closely represents current market price.

(d) This method is useful where the items are bulky, slow moving and costly, because it is easy to identify units belonging to a particular purchase lot.

Demerits :

(a) Calculation becomes complicated when prices fluctuate.

(b) During the period of price fluctuation material cost charges to job vary, therefore comparison between jobs becomes difficult,

(c) When prices decline, jobs (production) are charged at earlier higher prices, with the result that quotations are less competitive, understated and profit margin is reduced.

(d) When prices start rising, profits are inflated creating income tax difficulties. This method is most suitable in times of falling prices because the issue price of materials to jobs or work orders will be high (materials issued from the earliest consignments which were purchased at a higher rate) while the cost of replacement of materials will be low.

Example :

Prepare a stores ledger account for materials 'X' showing the issue of material on FIFO method of valuation for April, 2015 from the information below :

April	2015	Quantity	Rate Per Unit
1st	Opening balance	500 units	Rs. 20
8th	Issues	300 units	
16th	Purchases	800 units	Rs. 22
18th	Issues	400 units	
25th	Issues	300 units	
26th	Purchases	400 units	Rs. 25
28th	Issues	600 units	

Stores Ledger

Date	Receipts				Issues				Balance			Remarks
2012	Ref.	Qty.	Rate	Amt.	Ref.	Qty.	Rate	Amt.	Qty.	Rate	Amt.	
		Units	Rs.	Rs.		Units	Rs.	Rs.	Units	Rs.	Rs.	
April	1								500	20	10000	
	8					300	20	6000	200	20	4000	
	16	800	22	17600					200	20	4000	
									800	22	17600	
	18					200	20	4000				
						200	20	4000	600	22	13200	
	25					300	22	6000	300	22	6600	
	26	400	25	10000					300	22	6600	
									400	25	10000	
						300	22	6600				
	28					300	25	7500	100	25	2500	

2. Last-in-first-out method (LIFO)

Under this method, it is assumed that issues of materials have been made out of the latest consignment or latest purchases. Materials are issued at cost and the price of the latest consignment is used for pricing the materials issued.

Merits :

1. Since materials are charged at recent price, cost of production reflects current market trend, and the quotation prices are competitive.
2. Being an actual cost method, it ensures complete recovery of material and cost from production.

Demerits :

1. Like FIFO, this method may lead to clerical errors as every time an issue is made, the store ledger clerk will have to go through this record to ascertain the price to be charged.
2. Like FIFO, comparison between one job and the other job will become difficult.
3. For pricing a single requisition, more than one price has often to be adopted.
4. The stock in hand is valued at price which does not reflect current market price.

The method is suitable in time of rising prices because materials are issued at the current market prices which are high.

Using the same example given under FIFO method, the position or stores ledger under L1FO method shall be as follows :

Solution :

Date		Receipts			Issues				Balance			Remarks
2012	Ref.	Qty.	Rate	Amt.	Ref.	Qty.	Rate	Amt.	Qty.	Rate	Amt.	
		Units	Rs.	Rs.		Units	Rs.	Rs.	Units	Rs.	Rs.	
April	1								500	20	10000	
	8					300	20	6000	200	20	4000	
	16	800	22	17600					200	20	4000	
									800	22	17600	
	18					200	22	8800	200	20	4000	
									400	22	8000	
	25					300	22	6600	200	20	4000	
									100	22	2200	
	26	400	25	10000					200	20	4000	
									100	22	2200	
									400	25	10000	
	28					400	25	10000				
						100	22	2200				
						100	20	2000	100	20	2000	

3. Highest-in-First-out Method (HIFO) :

Under this, method, issues are priced at the highest value of the available consignment in the store. The main object of this method is to ensure that stock values are kept at lowest possible level but this method has not been adopted widely.

This method is based on the assumption that the closing stock of materials should always remain at the minimum value so that the issues priced at the highest value of the available stock in the store. This method is not popular as it always undervalues the stock which amounts to creat a secret reserve. The method is mainly used in case of cost plus contracts or monopoly products as it is helpful in increasing the price of the contract of products. . -

4. Next-in-First-out Method (NIFO) :

Under this, method, issues are made at the next price i.e., the price of material which has been ordered but not, yet been received. In other words, issues of material are priced at the latest/price at which the company has been committed, even though the materials have not yet been actually received. The main object of this method is to value issues at an actual price which is as close as possible to the market price but this method has not been adopted widely.

This method is based on the assumption that the closing stock of the materials should always remain at the minimum value, so that the issues are priced at the highest value, of the available consignments in the store. The method is not popular as it always under values the stock which amounts to create secret reserve. The method is mainly used in case of cost plus contracts or monopoly products as it is helpful in increasing the price of the contract or products.

1.5.4.2 Average Price Methods

1. Simple average price method
2. Weighted average price method

All average cost methods claim certain common merits over actual cost methods viz. easy in calculation, smoothening effect of price fluctuations and better comparison between jobs. Main demerit of those methods is that materials are charged to the jobs at an average price which is not actual cost of purchase of materials. This results in over or under recovery of materials cost from production.

Different methods of average cost valuation have been explained below :

1. Simple Average Price Method

The price under this method is calculated by dividing the total of prices of materials in the stock from which materials are issued, by the number of prices entering in the calculation. For the purpose of calculation the issues are presumed to have been done in chronological order and quantities of purchase are ignored.

It is simple to operate and gives good results when prices are stable. But it leads to profit or loss due over or under charging of material cost to production. Moreover, the valuation of closing stock is not stock.

Example: From the following transactions recorded in respect of materials 'X' used in factory, prepare stores ledger by pricing the issues at simple average method.

April	2015	Quantity	Rate Per Unit
3rd	Purchases	400 units	Rs. 2.10
15th	Purchases	500 units	Rs. 2.10
20th	Issues	500 units	
26th	Purchase	600 units	
28th	Issues	900 units	

(a) Simple Average Method

Stores Ledger

Date		Receipts			Issues				Balance			Remarks
2012	Ref.	Qty.	Rate	Amt.	Ref.	Qty.	Rate	Amt.	Qty.	Rate	Amt.	
		Units	Rs.	Rs.		Units	Rs.	Rs.	Units	Rs.	Rs.	
April 1												
3		400	2.10	840					400	2.10	840	
15		500	2.20	1100					900		1940	
20						500	2.15	1075	400		865	
26		600	2.50	1500					1000		2365	
28						900	2.35	2115	100		250	

Note : Calculation of average price

I. 15th April : $\left(\frac{Rs. 2.10 + Rs. 2.20}{2}\right)$ = Rs. 2.15

II. 26th April : $\left(\frac{Rs. 2.20 + Rs. 2.50}{2}\right)$ = Rs. 2.35

2. Weighted Average Price

This method considers quantity of materials stock for calculating the issue price. Whenever fresh supply is received, the price is calculated by dividing total cost of stock (including fresh supply) by quantity in stock.

$$\text{Weighted Average Price} = \frac{\textit{Total Cost of Stock}}{\textit{Quantity in Stock}}$$

Weighted Average Price Method Stores Ledger

Date		Receipts				Issues			Balance			
2015	Ref.	Qty.	Rate	Amt.	Ref.	Qty.	Rate	Amt.	Qty.	Rate	Amt.	Remarks
		Units	Rs.	Rs.		Units	Rs.	Rs.	Units	Rs.	Rs.	
April 1												
3		400	2.10	840					400	2.10	840	
15		500	2.20	1100					900	2.16	1940	
20						500	2.15	1080	400	2.16	860	
26		600	2.50	1500					1000	2.36	2360	
28						900	2.36	2124	100	2.36	236	

Note : Calculation of Weighted Average Price :

I. 15th April = $\frac{(400 \times Rs.2.10 + 500 \times Rs.2.50)}{(400 + 500)}$ = Rs. 2.16

II. 26th April = $\frac{(400 \times Rs.2.16 + 500 \times Rs.2.50)}{(400 + 600)}$ = Rs. 2.36

1.5.4.3 Notional Price Methods

1. Inflated Price Method
2. Market Price Method
3. Standard Price Method

1. Inflated Price Method

This method is applied where the materials are subject to normal wastage which is unavoidable. In order to cover the loss arising due to normal wastage, the materials issue are priced at an inflated rate. For example, if 100 units of a certain material are purchased at Rs. 38.80 per-unit and it is expected that there shall be a no final wastage of 5 units, 95 units of the material shall be used at an inflated price of Rs. 40 per unit (Rs. 3800 % 95).

This method is quite specific and reasonable but involves excessive clerical labour.

2. Market price Method

Under this method, the material issues are priced at market price ruling at the date of issues or at the replacement price. The actual cost of the material is ignored under this method.

This method is suitable for giving quotation and competitive basis. It also indicates the buying efficiency, in that the excess of market price charged to the issues over their purchase denotes efficient buying and vice-versa. Not being an actual cost method, it leads to profit or loss in charging materials to production. Moreover, it is not easy to maintain upto date list of revealing market prices.

3. Standard Price Method

Under this method, the material are priced at standard price or fixed price The standard issue price is fixed for a definite period say for a month, quarter or year after considering all factors affecting prices.

Standard Price can be of two types :

I. Basic standard: It is fixed for long period to facilitate perspective planning.

II. Current standard : It is fixed for short period, flexible to accommodate the permanent change likely to take place in the cost of materials. This method possesses the advantage of simplicity, as calculations are minimise and is generally used when market fluctuations are few.

1.5.4.4 Specific Price Method :

When- materials purchased for specific job or work order, they should be issued to the specific job or work order at their actual cost. This method is used where job costing is in operation and the actual material issued can be identified.

1.5.5 PRICING OF RETURNS

Materials returned in the original condition may be valued by anyone of the following two methods :

(I) At the same price at which it was issued :

The returned material is valued at the original price at which, it was issued. This price is ascertained from the original material requisition. This method of pricing of returns is most desirable because the values of the credit given on the return and the original debit given on issue to the production order concerned are identifiable and no further adjustment is needed. The returned material may be kept apart and may be issued according to the specific price method at the original price or the returned materials may be treated as a new entry. After treating the returned materials as a new purchase. It will be issued according to the method of pricing of issue prevalent in the organisation.

(II) At the Current Price of Issue :

According to this method, the returned material is priced at the rate at which any materials requisition, placed on the date would have been priced. In other words, pricing of returns will not be done at the original price. This method is not popular as it will need adjustment in production order on account of different rates being applied on returns.

Scraps, wastes, defectives, etc. do not posses the same value as the original material. So these- are valued separately and then entered in the Bin Card and Stores Ledger. Thus, pricing of scraps, wastes and defective is made according to their value and credit is given to the production order, which returned such scraps, wastes and defectives.

Self Check Exercise:

Q.1 Enumerate the factors which influence the selection of a particularly method of pricing the issues of material from stores.

Q.2 Distinguish between (1) waste and scrap (2) scrap and spoilage.

1.5.6 WASTAGE, SCRAP, DEFECTIVE WORK AND SPOILAGE

Wastage : "Waste is the portion of a basic raw material lost in processing, having no recovery value", It is a complete loss. A percentage of normal wastage is standardised for the purpose of exercising control over it and this normal waste may be spread over good units by inflating their cost proportionately. If waste is abnormal, or in excess of fixed limit, the excess amounl may be debited to costing Profit and Loss Account.

Scrap :

"Scrap is the incidental residue from certain types of manufacture usually of small amount and low value, recoverable without processing."

Defectives :

"Defectives are that portion of production which may be rectified at an extra expenditure,"

(i) If it is due to inherent defect in production process, and identifiable to a job or process, it may be charged to specific job.

(ii) If it is due to abnormal circumstances it is debited to costing profit and loss account.

Spoilage :

"Spoilage refers to that portion of production which is damaged beyond rectification and as such can be sold out as 'Second' or 'Third' quality goods without further processing. The cost of work spoiled as determined by accumulating material, labour and overhead expenses incurred upto the point of rejection.

1.5.7 CONTROL OVER WASTE, SCRAP, SPOILAGE AND DEFECTIVES

Since it is impossible to eliminate waste, scrap, spoilage and defective it is imperative to follow a rigid procedure of control to keep them down. The control procedure should recognise the following essentials :

(a) Setting Standards or Normal Limits :

Standards are to be established in respect of scrap, waste, spoilage and defectives having regard to the nature of manufacturing process, quality of raw materials and workmanship and working conditions of plant and equipment.

(b) Reporting :

Standard forms printed in different colours are to be used for prompt and accurate reporting. These reports should clearly furnish information such as the name of the department, number of cost centre, date and report number, actual waste, scrap etc., in both quantity and percentage, normal limit, the difference between, the actual and the standard costs calculated, the causes for difference and the action to be taken,

(c) Remedial Action :

Where the reports show deviation of actuals from standards, the reasons should be carefully studied and immediate corrective steps must be taken. These steps may be :

(1) To repair the machinery and equipment.

(2) To replace the parts scrapped.

(3) To return the defective materials to suppliers.

1.5.8 SUMMARY

In a manufacturing concern, inventory is classified as (a) Raw materials, Work-in-Progress, and (c) Finished goods. The particular items included in each classification depend on the particular firm, that what would be classified as raw material or finished goods. The previous lesson gives requirements of material control by covering main areas, that is, ordering, purchasing, receipt, storage and issues of material, and the present lesson is focusing on the important methods followed in pricing of issue of materials, such as, cost price methods, average price methods, notional price methods and specific price methods.

1.5.9 ANSWERS TO SELF CHECK QUESTIONS

Ans1. Selection of a Pricing Method : The choice of a method of selection may be based on the following considerations :

1. The method of costing used.
2. The frequency of receipts and issues.
3. The extent of price fluctuations.
4. The extent of work involved in recording, issuing and pricing materials.
5. Whether cost of materials used should reflect current or historical conditions?
6. Whether issues can be identified with purchased costs?
7. Policy of management regarding the valuation of closing stock.
8. Method being adopted by other firm inthe same industry.

Ans.2(1) Difference betwen waste and scrap :

(i) Scrap always visible whereas waste may be visible or invisible.

(ii) Scrap has always recoverable value but waste has no recoverable value.

(2) Difference between Scrap and Spoilage :

(i) Scrap involves loss of materials only while spoilage involves not only the loss the materials but also of labour and overheads incurred upto the stage where the spoilage has occurred.

(ii) Scrap has relatively low value but the value of spoilage may vary from low to high.

(iii) Scrap arises as a result of the processing of materials while spoilage occurs to defect in materials or processes.

1.5.10 GLOSSARY

1. FIFO - First in first out method
2. LIFO - Last in first out method
3. HIFO - Highest value material first out

4. NIFO - Next in first out method

5 Blanket rate - A single rate for all non-specific cost put together.

1.5.11 EXERCISE

(A) Short Questions

Q.l Write short notes on :-

(a) ABC analysis

(b) Average Stock level

Q.2 The treatment of Scrap and defectives.

Q.3 Define LIFO method.

(B) Long Questions :

Q.1 On 1st March 2015, there are 1500 units of materials at Rs. 12 per unit in stock. The following transactions were made during the month :

March	2	Issued	200 units	
,,	4	Purchased	1,000 units	@ Rs. 15 p.u.
,,	5	Issued	1,200 units	
,,	6	Purchased	600 units	@ Rs. 20 p.u
,,	7	Issued	650 units	
,,	7	Returned to store form issued of 2 march,	100 units	
,,	9	Purchased	300 units	at Rs. 25 p.u.
,,	13	Issued	250 units	
,,	17	Issued	300 units	

Prepare stores Ledger account by FIFO and L1FO methods.

Q.2 What is Inventory Control ? Give various methods of valuation of inventory in details.

Q.3 What is meant by perpetual Inventory System ? Describe its advantages and Disadvantages.

1.5.12 SUGGESTED READINGS

1. V.K. Saxana and CD. Vashist, Advanced Cost and Management Accounting Sultan Chand & Sons, New Delhi,1998.
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