III YEAR – V SEMESTER
COURSE CODE: 7BCSE2A

ELECTIVE COURSE - II (A) – COST ACCOUNTING

Unit I

Definition of costing – Importance – uses of Costing – objects and advantages – Difference between Cost and Financial Accounts – Installation of Costing System – Analysis and Classification of Costs – Preparation of Cost sheet.

Unit II

Materials: purchase procedures – Requisition for material control – Recording and Controlling of material department – Maintenance of Stores: Minimum level, Maximum level, Reorder level, Economic Order Quantity – perpetual Inventory – Control over wastage and scrap and spoilage.

Unit III

Methods of remunerating Labour: Incentive schemes – Idle time Control over idle time – job evaluation – Merit rating – Time study – Labour Turn Over – Meaning and Measurement.

Unit IV

Accounting Overheads: Fixed and Variable Overheads – Basis of Charging overheads –Allocation – Apportionment and Absorption – Distinction between works overhead, Administration overhead, selling Overhead and Distribution Overhead – Distribution of Service overhead.

Unit V

Job Costing and Contract accounts – Profit on incomplete contracts – (Simple problems only excluding estimated contracts) – Process Costing – Normal loss – Abnormal loss and Abnormal gains – Effectiveness – Equivalent Production (excluding By – Products and Joint Products).

Books for Reference:

1. Das Gupta, Cost Accounting, Sultan Chand and Sons, New Delhi.
2. SP. Jain and K.L Narang, Cost Accounting, kalyani Publishers, Ludhiyana
3. R.S.N. Pillai & Bagwathi, Cost Accounting, S.Chand, Delhi.

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UNIT-I

INTRODUCTION

- **Cost, Costing and Cost Accounting – Meaning and Definition**
- **Objectives and Limitations of Cost Accounting**
- **Distinction between Financial and Cost Accounting**
- **Installation of a Costing System**
- **Cost unit and Cost centre**
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- **Methods of Costing**
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UNIT-I

Meaning of cost:

It is the total sum of all expenditures incurred in the production of goods or services rendered.

Meaning of costing:

It is a systematic producer for ascertaining the cost per unit of output produced or service rendered.

Meaning of cost accounting:

It is the process of accounting for cost which begins with the recording of income and expenditure and ends with the preparation of periodical statements and reports.

Define cost, costing and cost accounting.

Cost:

"Cost is a measurement in monetary terms, of the amount of resources used for some purpose".

-Anthony

Costing:

"Costing is the classification, recording and appropriate allocation of expenditure for the determination of costs of products or service, the relation of these costs to sales values and the ascertainment of profitability".

-Wheldon

Cost Accounting:

"Cost accounting is the process of recording, classifying, allocating and reporting the various costs incurred in the operating of an enterprise".

-Fremgen

Objective /function of cost accounting.

The following are the main objectives or cost accounting:

1. To ascertain the cost per unit of the products and to ensure that all the expenses have been included in the cost of products.
2. To provide necessary data and serve as a guide to price fixing of product manufactured.
3. To control the cost with the help of fixing standards and by preparing budgets for the guidance of management.
4. To advice management on future planning and policies.
5. To present and interpret data for managerial decision making.
6. To organise an effective information system so as to get information from different levels of management, at the right time.
7. To organise cost reduction programme with the help of various departmental heads.
8. To organise the internal audit system to ensure effective working of different department.

Advantage of cost accounting.

The following are the advantages of sound system of cost accounting:

1. It discloses the profitable or unprofitable activities. The management can take steps to eliminate or reduce the activities which are the unprofitable and make them profitable.
2. It provides relevant information necessary for finding out estimates and tenders.
3. It enables a concern to measure the efficiency and then to improve it.
4. It show the cost incurred and profit made in the business and provide data, which will be helpful for future planning.
5. The perpetual inventory system helps determine the profit or loss without any stock taking.
6. It helps in controlling the cost, by comparing the actual cost with the standard cost.
7. It discloses the efficiency of the different workers, which facilitates implementation of suitable plans of wage payment.
8. It helps the government and trade unions by providing data for price fixation, price control, tariff protection, wage level fixation. Payment of dividends and settlement of disputes

Limitation of cost accounting.

The following are the main limitation of cost accounting:

i) It is dynamic. Hence, it changes with the change of circumstances and time.
ii) It is difficult derive correct costs because of the different pricing methods of material apportionment of overhead etc.
iii) Since, the valuation of stock, work-in-progress are calculated on the basis of estimation the actual cost may vary from the estimated cost.

Distinguish between cost accountingand financial accounting.

The following are the main differences between financial accounting and cost accounting:

	Financial Accounting	**Cost Accounting**
1	It gives information about the profit and loss and financial position of the business to owners and outside parties	It gives information for planning, control and decision making to the management.
2	Financial accounts are compulsory and kept according to companies act and income tax Act.	Cost records are voluntary. Recently Government made it obligatory for some manufacturing industries.
3	Financial records are prepared according to the nature of expenses.	Cost records are prepared according to the purpose for which costs are incurred.

4	It gives the profits of the business as a whole.	It show the profit of each job/process/product.
5	It reports the results at the end of the accounting period.	It gives information to the management as and when required.
6	Only monetary transactions are recorded.	Both monetary and non-monetary transaction are recorded.
7	Stocks are valued at cost or market price whichever is less.	Stocks are valued at cost price.
8	It deals with actual figures.	It deals with partly actual figures and partly with estimates.

Various steps to be taken at the time of installing of a costing system.

According to the requirement of the management, each organisation should choose and design its own costing system. The following steps should be taken at the time of installation:

i) The system should be designed after analysing the nature of operation, the object of costing and the type of cost data required by the management.
ii) It should be framed to suit the general organisation of the business.
iii) It should be simple and easy to operate. All the technical aspects of the business should be taken into consideration.
iv) It should ensure that cost reports are prepared and presented promptly and regularly to serve all the requirements of management.

Cost unit:

Cost unit is a unit of quantity in terms of which costs may be computed. For example, the cost of textile is identified with per metre and the cost of carrying a passenger in terms of per kilometer.

Cost centre:

Cost centre is a part of an organization to which costs can be charged. For example, in a laundry, activities such as collecting, marking and washing of clothes are considered as a separate cost centres.

Cost estimation:

Cost estimation is the process of pre-determining the cost of products or services. These cost are addressed well before production and

operating process. Estimated costs are future costs which are based on the past actual cost, adjusted with the expected changes in future.

Cost ascertainment:

Cost ascertainment refers to the methods used in the process of finding cost. It is the process of determining costs on the basis of actual costs after the cost has been incurred.

Method of costing.

It is essential to apply a suitable costing method according to the nature and characteristics of n industry and type of manufacture. Hence, the method to be used for cost ascertainment differ from industry to industry. As per the latest CIMA terminology there are two methods of costing such as specific order costing and operation costing.

I. Specific order costing :

Specific order costing methods are applied to the work consisting to separate job, batches or contracts. They are:

i) Job costing:
Under this method costs are collected and accumulated for each job or work order. As each job can be separately identified a separate job cost sheet is prepared for each job. This method is applicable to printing presses, repairing shops and ship building companies.

ii) Batch costing:
Under this method, the product orders are arranged in batches and each batch is treated as one job. Cost is collected for each batch separately. This method is applied in biscuit manufacturing and garments manufacturing organization.

iii) Contract costing:
Contract is a big job which spreads over long periods of time. A separate cost sheet it kept for each contract. This method is used by building contractors and civil engineering contractors.

iv) Unit/Output costing:
This method is applicable to the industries where the production is continuous and units are identical. This method is applied in industries like brick –making, flour mill, paper mill and the like.

II. **Operationcost:**

Operation costing methods are applicable to mass production industries. They are:

i) Process costing:

This method of costing is suitable for industries where productions continue and it passes through different stages. The finished product of one process becomes raw material of the subsequent process. Hence, a separate account is opened for each process. It is followed in textile, chemical industries etc.

ii) Service/Operating cost:

This method is suitable for industries which render service such as bus companies, electricity and railway. The cost of service is determined by tonne-kilometre, kilowatt – Hour and passenger – kilometer respectively.

iii) Multiple/Composite costing:

This method is applicable to industries where a number of components are produced separately and assembled subsequently Intoa final product. Each component differs from others, so it is necessary to ascertain the cost of each component. This method is used in cycle manufacturing industries and automobile industries.

Classification of cost.

Cost classification is the process of grouping costs according to their characteristics. A suitable classification is vital in order to identify the cost with cost centres or units. The following are the important classification:

i) Classification on the basis of Nature:

According to this classification, the costs are sub-classified into material, labour and overhead. This classification helps to find out the total cost of production and work-in-progress.

ii) Classification on the basis of function:

According to the function-wise classification, costs are divided into the following:

a) Production costs:

The cost incurred in making the raw materials into finished output is known as production costs.

Example: materials, wages, power, factory rent and the like.

b) Administration costs:

The cost incurred in policy formulation, directing and controlling the operation are called administration costs.

Example: salaries, office rent audit fees etc.

c) Selling and distribution cost:

The costs incurred in creating and stimulation demand and making order is known as selling costs. They include advertising and showroom expenses, salesmen commission and the like. Expenditure incurred in the product after its completion till it reaches the customer is known s distribution costs.

Example: godown rent, delivery van expenses and the like.

d) Research and development costs:

The costs of searching for new and improve products and methods are known as research cost. The costs incurred in the implementation of decision and formal production of the product and method are known as development cost.

iii) Classification on the basis of degree of traceability:

a) Direct costs:

The expenses which are easily identified and allocated to the cost centre or production units are called direct costs.

Example: material used and labour employed in manufacturing goods.

b) Indirect costs:

The expenses which are not chargeable to production and cannot be easily identified with the product or cost centre are called indirect costs.

Example: salaries of time keepers, store keepers, foremen and rent of building.

iv) Classification on the basis of change in Activity:

a) Fixed costs:

Costs which remain unchanged are with the increase or decrease in the volume of production is known as fixed costs

Example: rent, insurance of factory building etc.

b) Variable costs:

Costs which vary almost in direct proportion to the volume of production are known as variable costs. Although, the total amount of variables costs vary with the output, the variable costs per unit of production remain constant.

c) Semi-variable costs:

Costs which are partly fixed and partly variable re known as semi-variable costs.

Example: telephone rent (fixed) and its call charges (variable), depreciation, repair and the like.

v) Classification on the basis of controllability:

a) Controllable costs:

Costs which are party within the control of management are called controllable costs. Variable costs/Direct costs are generally controllable by departmental heads.

b) Uncontrollable costs:

Costs which are not within the control of management are called uncontrollable costs. Most of the fixed/indirect costs are uncontrollable. It is difficult to distinguish between the controllable and uncontrollable costs because costs which are uncontrollable at one level may be controllable at another level. Also, in the long run all costs are controllable.

vi) Classification on the basis of time:

a) Historical Costs:
   Costs which are ascertained after the cost incurred are known as historical costs are nothing but actual costs.
b) Pre-determined costs:
   Costs which are ascertained before the costs incurred re known as pre-determined costs. Pre-determined costs determined on scientific basis become standard costs. Such costs when compared with actual costs will give the reasons of variance and will help the management take remedial action.

Classification for managerial decision:

a) Marginal cost:
   It is nothing but the total of variable costs. Fixed costs are ignored and only variable costs are taken into consideration for the cost of production.
b) Out of pocket cost:
   Costs which involve payment to outsiders, give rise to cash expenditure are known as out of pocket cost. Such costs are relevant for price fixation during trade recession.
c) Imputed cost:
   Costs which appear only in cost account and do not involve any cash outlay are known as imputed costs. They are called hypothetical costs, which are computed only for managerial decision making.
   Example: rent on own building, salaries of the proprietor.
d) Differential cost:
   The change in cost due to change in the level of activities or method of production is known as differential cost. If the change increases the cost it is called incremental cost and if it decreases it is called decremental cost.
e) Sunk costs:
   Sunk costs are historical or past costs. Costs which have been created by a decision made in the past, and which cannot be changed by any decision in future fall under this category. They

are irrecoverable costs. Investment in plant and machinery, building are prime exaamples.

f) Opportunity cost:

It is an earning that might have been earned if the productive capacity or service had been put to some alternative use. This cost is helpful to take managerial decision.

Example: if any owned building is to be used for a work and the rent of the building is the opportunity cost, it should be taken into consideration for the profitability of the project.

g) Conversion cost:

The total of direct labour cost, direct expenses and factory overhead is called conversion cost.

h) Replacement cost:

Cost incurred in the purchase of an asset identical to that, which is being replaced. This is the cost at the present market price.

Element of cost

The element of cost include direct materials, direct labour and direct overheads and indirect materials, labour and expenses like overhead.

Cost sheet

"It is a document which provides for the assembly of the estimated detailed cost in respect of a cost centre or cost unit".

SPECIMEN COST SHEET

Particulars	Total cost	Cost per unit
Direct materials Direct labour Direct expenses	Xxx Xxx Xxx	Xxx Xxx Xxx
Prime cost Add: Factory overheads	Xxx Xxx	Xxx Xxx
FACTORY or WORK COST	Xxx	Xxx

Add: Administration overheads	Xxx	Xxx
COST OF PRODUCTION Add: selling and distribution overheads	Xxx Xxx	Xxx Xxx
TOTAL COST or COST OF SALE Add: profit	Xxx Xxx	Xxx Xxx
SALES	Xxx	xxx

Adjustment of opening and closing stock:

While preparing a cost sheet opening and closing stock of raw materials, work-in-progress and finished goods require special treatment. The above items should be adjusted in the cost sheet as shown below:

SPECIMEN COST SHEET

Ascertain the cost and selling price from the following

Particulars	Rs.	Total cost Rs.
Opening stock of raw materials	Xxx	
Add: Purchase of raw materials	Xxx	
Carriage on purchase	Xxx	
	Xxx	
Less: closing stock of raw materials	xxx	
Direct materials consumed		Xxx
Direct Labour		Xxx
Direct Expenses		Xxx
PRIME COST		Xxx
Add: Factory on cost/factory overheads	Xxx	
Add: Opening stock of work-in-progress	Xxx	
	Xxx	
Less: Closing stock of work –in-progress	Xxx	
Sale of factory scrap	xxx	Xxx
FACTORY COST/WORK COST		Xxx
Add: Administration overhead		Xxx
COST OF PRODUCTION		Xxx
Add: Opening stock of finished goods	Xxx	
Less: Closing stock of finished goods	xxx	Xxx
COST OF GOODS SOLD		Xxx
Add: Selling and distribution overheads		xxx
COST OF SALES OR TOTAL COST		Xxx
Add: Profit		xxx
SALES		XXX

Ascertain the cost and selling price from the following

Materials consumed Rs.6,000

Wages paid Rs.9,000

Works on cost 50% on wages.

Ofice on cost 20% on work cost.

Selling on cost 10% on work cost.

Profit 20% on cost.

SOLUTION:

COST SHEET

Particulars	Total cost
Material consumed	Rs. 6,000
Wages paid	9,000
Prime cost	15,000
Add: work cost (9,000 x50%)	4,000
Work cost	19,000
Add: Office Expenses (19,000x20%)	3,000
Cost of production	23,400
Add: Selling cost (19,500x10%)	1,950
Cost of sales	25,350
Add: Profit (25,350x20%)	5,070
Selling Price	30,420

A Factory produces 100 units of a commodity. The cost of production is:

Direct materials	Rs. 10,000
Direct wages	5,000
Direct Expenses	1,000
Factory overheads	6,500
Administrative overheads	3480

If profit of 25% on Sales is to be realised, what would be the selling price of each unit of the commodity? Prepare the cost sheet.

SOLUTION:

COST SHEET

Particulars	**Rs.**
Materials	10,000
Wages	5,000
Direct expenses	1,000
Prime cost	16,000
Add: Factory overheads	6,500
Work cost	22,500
Add: Administrative overheads	3,480
Cost of production	25,980
Expected profit 25,980 x 25/75	8,660
Total sales	34,640

Selling price per unit =34640/100= Rs.346.40

WORKING NOTE:

Cost(75)+profit(25)=sales (100)

UNIT-II

- **Material**
- **Meaning**
- **Techniques of Material Control**
  - **ABC Analysis**
  - **Stock Levels**
  - **E.O.Q**
  - **Purchasing Procedure**
  - **Store Keeping**
  - **Perpetual Inventory System**
- **Inventory Turnover Ratio**
- **Wastage, Scrap and Spoilage**
- **Methods of Pricing Material Issues**
- **Solved Problems**

UNIT II

MATERIALS

Meaning of Inventory:

Inventory are goods maintained in an organisation to have continuous production and sales.

Various Kinds of inventory:

i) Raw materials:

Raw materials include materials which are in their natural or raw form.

Example: sugar cane for sugar industry.

ii) Direct material:

Direct material can be easily identified with a particular cost unit and it becomes a part of the finished product.

Example: cotton used in textile industry.

iii) Indirect materials:

Indirect materials cannot be easily identified with a particular cost unit but used in small quantities which are included in the finished goods.

Example: thread used in the manufacturing of shoes.

iv) Stores:

Stores covers not only the raw materials consumed for production but also the other items held in stock in the store room.

v) Supplies:

Supplies are materials used in production but they do not become part of finished goods.

Example: oil and grease used in machines.

vi) Work-in-progress:

It is a kind of inventory which is in between raw material and finished goods.

Material control:

Inventory control may be defined as, “Systematic control over the purchasing, storing and using of materials, so as to have the minimum possible cost of material”.

Objective of inventory control:

i) To ensure the availability of all type of material in the stores for continuous production.
ii) To avoid over or under or out-of-stock danger by maintaining the stock levels.
iii) To use the financial resources effectively by using economy in purchasing.
iv) To reduce the risk of spoilage and obsolescence.
v) To maintain sufficient stock of products to meet the requirements of the customers.

Techniques:

The various techniques used in inventory control are as follow:

a) ABC Analysis
b) Maintaining the stock levels.
c) Economic order quantity
d) Just-in-Time inventory system
e) Proper storage
f) Perpetual inventory system
g) Inventory turnover ratio

ABC analysis of material control:

ABC analysis is the technique of selective control over inventory. It is based on the assumption that a firm should not exercise the same degree of control on all items of inventory. It should keep greater control over the costly items than on the less costly items. Hence, the inventories are divided into three categories: A,B and C.

Category A:

The cost of these materials is high in value, and the number of items is less. Therefore it requires maximum attention failing which there will be an increase in the production cost.

Category B:

The cost and the number of items of these materials are less. Therefore normal control procedures may be followed.

Category C:

The cost of these materials is very low whereas the number of items is high. Hence it needs simple and economic control procedures.

The development in the ABC analysis are:

VED analysis - Vital, Essential and Desirable.

XYZ analysis - High value, Normal Value and Low Value.

FSN analysis - Fast moving, Slow moving and Non-moving.

Just-in Time Inventory system.

Just-in-Time inventory system means the purchase of materials or goods or components in such a way that delivery of purchased items is assured before their use or demand.

The various types of stock level:

In order to avoid over or under stocking of materials and for an effective control, it is necessary for the management to maintain the stock levels of materials. The various types of stock levels are:

a) Minimum level
b) Maximum level
c) Re – order level
d) Average stock level
e) Danger level

a) Minimum level :

This is the level, below which the stock should not be allowed to fall. If it falls below, there is a change of stoppage of production. The formula is:

Minimum level = Re-order level - (Normal consumption x Normal re-order period)

b) Maximum level:

This is the level above which the stock should not be allowed to rise. If it goes, it leads to unnecessary lock of funds, increases the storage cost, insurance, risk of obsolescence and the like. The formula is:

Maximum level = Re-order level + Re-order quantity – (Minimum consumption x Minimum re-order period)

c) Re-order level:

This is the level at which the management should make an order to purchase the materials. In other words, this is the level at which the store keeper makes a purchase requisition.

The formula is:

Re – order level = Maximum consumption x Maximum re-order period.

d) Average stock level:

This level is calculated s follows:

Average stock level = Minimum level +Maximum level / 2 Or =Minimum level + ½ of Re – order quantity

e) Danger level:

Danger level is below the minimum level. Stock should not be allowed to fall to this level except under emergency conditions. If the stock reaches this level, quick and urgent action for purchase should be taken.

The formula is:

Danger level = Average consumption x maximum re-order period for emergency purchases.

The various factor that affect the stock levels:

The following factors affect the stock levels:

1) Rate of consumption
2) Time lag between inspecting and receiving materials.
3) Storage capacity
4) Availability of funds.
5) Cost of maintenance
6) Possibility of loss due to theft, fire and the like
7) Fluctuation in market price
8) Insurance
9) Seasonal fluctuation

Economic order quantity:

Economic order quantity is the quantity of material to be ordered at one time. Both the cost of order and the cost of carry the stock will be minimum at the level.

Ordering cost includes cost of stationery, salaries given to the persons engaged in receiving and inspecting the material and preparing the purchase orders and the like.

Cost of carrying or storage includes the cost of store keeping, insurance cost, risk of obsolescence, wastage of materials, depreciation, maintenance of building and the like.

The following formula helps in calculating EOQ:

$$\text{E.O.Q} = \sqrt{2AB/CS}$$

A: Annual consumption of units

B: Buying cost per order/cost of placing an order

C: Cost per unit of material

S: Storage and carrying cost

Distinguish between ordering cost and carrying cost:

	Ordering cost	**Carrying cost**
i)	It is associated with placing an order.	It is associated with storing the goods or holding the inventory
ii)	It moves in direct proportion to the number of orders placed.	It moves in direct proportion to inventory size.
iii)	It decreases with higher size of inventory and increases with lower size of inventory.	It increses with higher size of inventory and decreases with lower size of inventory.

The procedure for purchasing materials from outside:

The purchase department follows the following the following procedure to make the purchase effectively:

i. Purchase Requisition
ii. Choosing the supplier
iii. Purchase order
iv. Receiving and inspection materials
v. Approval of invoices and preparation of vouchers

The document used in connection with materials control:

The various document used in connection with material control are as follows:

i. Purchase Requisition
ii. Goods Received Note
iii. Material (Stores) Requisition Note
iv. Bill of Materials
v. Materials Return Note
vi. Materials Transfer Note
vii. Material Abstract

The various types of stores:

The stores may be classified as under:

i. Centralised Stores
ii. Decentrlised Stores
iii. Central stores with sub-stores

Bin card/Bin tag:

Bin means container, shelf or space where goods re kept. A card is placed outside each bin and whenever the materials are issued or received, an entry is made on the card. These cards are maintained by the storekeeper

Store ledger:

This ledger is kept in the costing department. This ledger contains the receipts, issues and balances of materials in stock, both in quantity and money values. All the entries re made after the transaction took place. This ledger provides the information for the pricing of materials issued and the stock valuation of various stores items at any time.

Define perpetual Inventory system.

"A method of recording stores balances after every receipt and issue to facilities regular checking and to obviate closing down for stock taking".

-**Wheldon**

Inventory turnover ratio:

Inventory turnover ratio is the ratio of cost of materials consumed to cost average stock. It is useful to find out the slow moving and fast moving stocks. Low ratio indicates slow moving stock, which leads over-stocking and capital look. A high ratio indicate fast moving stock and less investment in stock. The formula is:

Inventory turnover ratio = Cost of materials consumed /cost of average stock

Wastage:

Materials lost during handling, storage and production process are known as wastages. It may occur due to evaporation, loading and unloading, leakage, fire, theft etc. there can be two types of wastages, namely normal and abnormal.

Scarp:

It is an incident residue from the materials used in the manufacturing process. It is material loss but has small value without further processing. Scrap result from operations like boring, punching and administrative action like change in productive methods and defective use of inferior quality of material, defective machines etc. scrap can be realized and is always visible.

Spoilage:

When goods are damaged during the course of manufacturing process it is known as spoilage. It cannot be rectifiable with some additional cost. Sometime materials can be used again as raw material in the same process or another process. The cost of the spoilage is the different between cost incurred up to rejection point less and savage value or cost of materials used.

The methods of pricing materials issues, it advantages and disadvantage:

Material re issued to production work or to different jobs from the stores. These materials consists of different lots received at different dates and prices. Therefore, it is necessary to decide the price at which the jobs are to be charged, when it is issued.

Following re the important methods of valuing material issues:

I. First In First Out (FIFO) Method:

Under this method, materials received first are issued first. It is on the assumption that old stocks should be used first and new stocks should be used next or later. Hence, under this method the value of closing stock will be at the current market price.

Advantage:

a) It is simple to understand and easy to operate.
b) The valuation of closing stock reflect the current market price.
c) It is a logical system of first come, first served.
d) Obsolescence can be avoided.

e) When prices are falling, this system gives better results.

Disadvantage:

a) When prices fluctuate, calculation becomes complicated.
b) It increses the possibility of clerical errors.
c) The issue price does not reflect current market prices.

II. Last In First Out (LIFO) Method:

This method is opposite to FIFO method. Under this method, materials received last are issued first. It is on the assumption that, the latest purchases are to be issued to production to reflect the current market price.

Advantage:

a) It is simple to operate.
b) Material cost represent current price.
c) It is most suitable during price rising.
d) In the period of increasing prices, this system gives the correct profit.
e) There is better matching of cost and revenues.

Disadvantage:

a) The value of closing stock will not reflect market prices.
b) It increases the possibilities of clerical errors.
c) It is not accepted by tax authorities.

III. High In First Out (HIFO) Method:

Under this method, the highest priced materials are used first irrespective of the date of purchase. It is on the assumption that, the closing stock should always remain in the minimum price or as low as possible. This method is not popular because it always under values the stock. It is suitable only for cost plus contract.

IV. Base Stock Method:

It is not a separate method. It works with FIFO and LIFI methods. Under this method in stock, which is known as "Base Stock". The stock is valued at a price at which it is received. The base stock is created from the first lot and it should not be issued until emergency arises.

V. Simple Average Price Method:

Under this method, the issue price is calculated by diving the total purchase prices of different lots in stock on the date of issue by the number of the prices used in that total. This method is simple to operate but not generally followed because, it does not take into consideration the quantity of materials purchased.

Issue price = Total price materials in stock/Number of price

VI. Weighted Average price Method:

Under this method the issue price is calculated by dividing the value of materials in hand by the number of units in hand. This method is more scientific than simple average price method. It reduces the number of calculations and gives the best results.

Issue price = Value of materials in stock/Quantity in stock

ECONOMIC ORDER QUANTITY

Problem 1:

From the following particular, calculate the economic order quantity.

Annual requirement : 1,600 units

Cost of material per unit : Rs. 40

Cost of placing and receiving one order : Rs. 50

Annual carrying cost of inventory:10% of inventory value.

SOLUTION:

The formula for the calculation of the economic order quantity (EOQ) is:

$$EOQ=\sqrt{2AB}/CS$$

Where; A= Annual requirement of material = 1,600

B= Cost of placing one order = Rs.50

C = cost per unit =Rs.40

S = Carrying and storage cost = 10%

$$EOQ=\sqrt{2 * 1{,}600 * 50}$$

---------- = 200 units

40*10/100

Problem 2:

Following information relating to a type of materials is available:

Annual Demand 2,400 units

Unit price Rs.2.40

Ordering cost per order Rs.4.00

Storage cost 2% per annum

Interest rate 10% per annum

Lead time **Half month**

Calculate EOQ.

SOLUTION:

E.O.Q $=\sqrt{2AB}/CS$

$$=\frac{\sqrt{2*2{,}400*4}\sqrt{2*2{,}400*4}}{2.40*12\%} = \frac{}{2.40*12/100}$$

$$=\frac{\sqrt{2*2{,}400*4}}{0.288} = 258 \text{ units}$$

STOCK LEVELS
Stock levels for single material

Problem 1:

From the following particulars calculate reorder level, minimum level, maximum level and average level of stock.

Normal usage - 50 units per week

Minimum usage – 25 units per week

Maximum usage – 75 units per week

Reorder quantity – 300 units per week

Reorder period – 4 to 6 weeks

SOLUTION:

1. Re-order level = Maximum consumption x Maximum Reorder Period

   = 75 x 6 = units

2. Maximum level = Reorder level + Reorder quantity – (Minimum Consumption x minimum reorder period)

   = 450 + 300 – (25 x 4) =750 – 100 = 650 unit

3. Minimum level = Reorder level – (Normal usage x Normal reorder Period)

4. Average level of stock = Minimum level + Maximum level

   2

   $= \frac{200 + 650}{2} = \frac{850}{2} = 425$ units

Problem 2:

From the following particular, calculate:

(a) Re-order level (b) Minimum level (c) Maximum level

Normal usage	**100 units per day**
Minimum usage	**60 units per day**
Maximum usage	**130 units per day**

Economic order quantity **5,000 units**

Re-order period **25 to 30 days.**

SOLUTION:

(a) Re-order Level = Maximum consumption x Maximum Re-order Period

= 130 units x 30 days

=3,900 units

(b) Minimum Level = Re-order Level – (Normal consumption x Normal Re-order period)

= 3,900 units – (100 units x 27.5 days)

= 3,900 units – 2,750 units =1,150 units

(c) Maximum Level = Re-order Level + Re-order quantity – (Minimum consumption x Minimum Re-order period)

= 3,900 units + 5,000 units – (60 units x 25 Days)

= 3,900 units + 5,000 units – 1,500 units

= 7,400 units

METHOD OF PRICING MATRIAL ISSUES (OR) STORE LEDGER

(A) FIFO METHOD

PROBLEM:

From the following transaction, prepare store ledger a/c.

Oct. 1 Opening balance 100 units at Rs. 5 each

2 Received 500 units at Rs. 6 each

20 Issued 300 units

Nov. 5 Issued 200 units

6 Received 500 unit at Rs. Each

Dec. 10 Issued 300 units

12 Issued 250 units

SOLUTION:

STORES LEDGER ACCOUNT (FIFO)

Receipt				Issues			Balance		
Date	Qty.	Rate Rs.	Amt. Rs.	Qty	Rate Rs.	Amt. Rs.	Qty.	Rate Rs.	Amt. Rs.
Oct.1	-	-	-	-	-	-	100	5.00	500
2	500	6.00	3000	-	-	-	100 500	5.00 6.00	500 3000
20	-	-	-	100 200	5.00 6.00	500 1200	300	6.00	1800
Nov.5	-	-	-	200	6.00	1200	100	6.00	600
6	500	5.00	2500	-	-	-	100 500	6.00 5.00	600 2500
Dec.10	-	-	-	100 200	6.00 5.00	600 1000	300	5.00	1500
12	-	-	-	250	5.00	1250	50	5.00	250

LIFO METHOD

PROBLEM:

From the following particular write up stores Ledger under Last-in-first-out:

Dec. 1. Stock in hand 500 units at Rs. 20

3. Issued 200 units

3 Purchased 150 units at Rs. 22

4 Issued 100 units

5 Purchased 200 units at Rs. 25

6 Issued 300 units

6 Returned to store 10 units (Issued on 4th Dec)

7 Issued 100 units

8 Issued 50 units

On 10th , it was noticed that there is shortest of 10 units.

SOLUTION:

STORES LEDGER ACCOUNT (LIFO)

	Receipts			Issues			Balance		
	Qty.	**Rate Rs.**	**Amount Rs.**	**Qty.**	**Rate Rs.**	**Amount Rs.**	**Qty.**	**Rate Rs.**	**Amount Rs.**
Dec.1							500	20	10,000
Dec.3				200	20	4,000	300	20	6,000
Dec.3	150	22	3,300				300 150	20 22	6000 3,300
Dec.4				100	22	2,200	300 50	20 22	6,000 1,100
Dec.5	200	25	5,000				300 50 200	20 22 25	6,000 1100 5000
Dec.6				200 50 50	25 22 20	5,000 1,100 1,000	250	20	5000
Dec.6	10	22	220				250 10	20 22	5000 220
Dec.7				10 90	22 20	220 1,800	160	20	3,200
Dec.8				50	20	1,000	110	20	2,200
Dec.10				10 shortage	20	200	100	20	2,000

UNIT-III

- **LABOUR**
  - ✓ **Meaning**
  - ✓ **Monetary and Fringe Benefits**
  - ✓ **Time Keeping and Time Booking**
  - ✓ **Idle Time and Over Time**
  - ✓ **Labour Turnover Rate**
  - ✓ **Time Study and Motion Study**
  - ✓ **Job Evaluatoin and Merit Rating**
  - ✓ **Solved Problems**

Unit III

LABOUR

Direct Labour:

Direct Labour is that labour which is directly engaged in the production of goods or services and conveniently allocated to the job, commodity or unit.

Example: wages paid to carpenter, tailor and the like.

Indirect Labour:

Indirect labour is that labour which is not directly engaged in the production. This cannot be identified to particular job or commodity.

Example: wages paid to supervisors, time keepers, watchmen and so on.

Time keeping:

Time keeping is recording of workers' time of coming in and going out of the factory for the purpose of attendance and wage calculations.

Methods of Time keeping

There are two types of time-keeping. They are:

[a] Manual Methods [b] Mechanical Methods.

[a] Manual Methods:

i) Muster Roll

ii) Token Method

[b] Mechanical Methods:

i) Dial Time Recorder

ii) Key Recorder

iii) Card Time Recorder

Time Booking:

Time booking is the recording of time spent by each worker on a job or work order within the factory. To ascertain the cost of a job and idle time, the following methods are used.

i) Daily Time Sheet
ii) Weekly Time Sheet
iii) Job Card
iv) Time and Job Card
v) Labour Cost Card
vi) Piece Work Card

Distinguish between Time Card and Job Card

	Time Card	Job Card
i)	It makes a record of the time of arrival and departure of a worker and gives information of the total time spent by the worker in the factory.	It is used for recording the time spent by a worker on different jobs during the total time he has spent in the factory.
ii)	It becomes a basis of calculating the wages payable on time to a worker.	It becomes a basis of charging labour cost to various jobs.
iii)	It is useful to charge total overheads to various jobs where overheads are absorbed on the basis of time.	It is useful to charge total overheads to various jobs where overheads are absorbed on the basis of output.

Idle Time

The time for which the employer pays, but from which he obtains no production is known as idle time. It is the difference between the total time as recorded in time card and the time spent on various jobs as recorded in job cards.

Define Idle Time

Idle time may be defined as "that time for which wages are paid but no production is obtained".

Causes of idle time

i) Productive causes – maintenance of machine, power failure and the like
ii) Administrative causes – waiting for jobs, instruction, drawings, machine set up and the like
iii) Economic causes – depression, inflation, demand and supply of materials, seasonal factors and like.
iv) Abnormal causes – lock-outs, floods, break down of machinery, strikes and the like.

Define Over time

According to Factories Act, 1949, a worker works for more than 9 hours on any day or for more than 48 hours in a week, he is treated to be engaged in overtime and is given wages at double the basic hourly rate for the overtime.

Labour Turnover

Labour Turnover Rate (L.T.R) may be measured by three methods. They are:

a) Separation Rate Method:

This method is the most commonly used method. Under this method, the actual workers left and discharged are taken into account as separation. The formula for this method is:

L.T.R = Number of worker left (Separation) / Average number of workers *100

b) Replacement Method:

This method takes into consideration only the actual replacement of new workers. It is to be noted that new workers employed on expansion should not be included in the replacement. The formula is:

L.T.R = Number of workers replaced / Average number of workers*100

c) Flux Rate Method:

This method is the combination of the above two methods, that is both separation and replacement are taken into account. The formula is:

L.T.R = Number of workers left + Number of workers replaced / Average number of workers * 100

Causes for Labour Turnover

The causes for labour turnover can be classified into three categories:

i) Personal Causes
ii) Unavoidable Causes
iii) Avoidable Causes

Effect of Labour Turnover

i) Fall in production
ii) Increased in cost, selection, training etc.
iii) Dislocation of even flow of production
iv) Increase of scrap, defective work, additional supervision etc.
v) Higher accident rate
vi) Mishandling of machines
vii) Instability of labour and their low team spirit.

Time Study Meaning:

Time study is to determine the proper time required to complete the job. Before studying the time needed, adjustments are made for time taken by workers for rest, personal requirement etc. It is also known as work measurement.

Motion Study Meaning:

Motion study determines the best way of performing an operation for the purpose of eliminating useless and inefficient movements of men and materials and for improving productivity. It is also known as methods study.

Job Evaluation Meaning:

It is a systematic technique used to determine the worth of a job, for establishing an adequate wage structure. It evaluates the jobs in terms of their characters like skill, education, responsibility, risk and experience.

Merit Rating

It is a systematic evaluation of an employee's personality and performance by his supervisors or other qualified persons. The purpose of merit rating is to reward an employee on the basis of his merit. Merit rating is a scientific tool to evaluate the performance of an employee individually and in comparison with others in his work group.

Methods of Remuneration

Generally speaking, there are two basic methods of wage payment. One method relates to the hours, the employee is at work, regardless of output. This is known as time rate or day rate system. The other method is related to the production or output, regardless of the time taken for production. This is known as piece rate system. Each method has its own merits and demerits. The other methods-premium bonus or incentive schemes are only a variation of the two or combined with the piece rate system. For convenience, the various methods of remuneration may be divided as follows:

1. **Time rate systems:**
   (a) At ordinary levels
   (b) At high wage levels
   (c) Guaranteed time rates.
2. **Piece rate systems:**
   (a) Straight piece rate

(b) Piece rate with guaranteed time rate

(c) Differential piece rates:

(i) Taylor differential piece rate system

(ii) Merrick differential piece rate system

(iii) Gantt task bonus system.

3. Bonus systems:

(a) Individual bonus systems:

(i) Halsey premium plan

(ii) Halsey-Weir premium plan

(iii) Rowan system

(iv) Barth variable sharing plan

(v) Emerson efficiency bonus

(vi) Bedaux point premium system

(vii) Accelerating premium plan etc.

(b) Group bonus

4. Indirect monetary incentives

Calculate Labour Turnover in three methods:

Total No. of employees at the beginning of the month	2010
Total No. of employees at the end of the month	1990
No. of employees who left during the month	50
No. of employees who are recruited during the month	30

Solution:

Average No. of workers = 2010 + 1990 / 2 = 4000 /2 = 2000

(i) Separation method:

L.T.R = No. of workers left / Average No. of workers * 100

= 50/2000*100 = 2.5%

(ii) Replacement method:

L.T.R = No. of workers replaced / Average No. of workers * 100

= 30/2000*100 = 1.5 %

Flux method:

L.T.R = No. of workers replaced + No. of workers left /Average No. of workers * 100

= 30 + 50 / 2000 *100

= 80 / 2000 * 100 = 4 %

UNIT-IV

- **OVERHEAD ANALYSIS**
- **Overhead –Meaning and Definition**
- **Steps in Overhead Accounting**
- **Classification of Overheads**
- **Allocation and Apportionment of Overhead**
- **Reapportionment of Overheads**
- **Solved Problems**
- **OVERHEAD RATES**
- **Absorption of Overhead – Meaning and Definition**
- **Types of Overhead Absorption Rates**
- **Methods of Absorption**
- **Machine Hour Rate**
- **Solved Problems**

UNIT IV

OVERHEAD ANLYSIS

Overhead:

Any expenditure over and above the prime cost is known as overhead. All the indirect expenses are included in overhead.

Define Overhead:

"The cost of indirect materials, indirect labour and such other expenses including services as cannot conveniently be charged to a specific unit."

-Wheldon

The steps involved in overhead accounting:

The following steps are involved in overhead accounting:

i. Collection of overhead
ii. Classification of overhead
iii. Allocated and apportionment of overhead
iv. Re-apportionment of service department costs to production department.
v. Absorption of overhead by production units.

Classification of overhead:

Classification is the process of grouping costs according to their common characteristics. The various classification are:

I. Function classification:

It is the conventional method of classification to ascertain the cost of each function. They are:

a) Manufacturing/Factory/Production overhead
b) Office/Administration overhead
c) Selling and distribution overhead

II. Element – wise classification:

This classification is made according to the nature and

Source of expenditure. They are:

a) Indirect material

b) Indirect labour
c) Indirect expenses

III. Classification according to Behaviour / Variability:

Under this head, overheads are classified with reference to

Their tendency to vary with the volume of sales or the level of activities.

a) Fixed overhead
b) Variable overhead
c) Semi-variable overhead

The various bases of apportionment of overhead

The following are some of the bases of apportionment.

a) Rent ->Floor are of departments
b) Depreciation ->Value of plant
c) Repairs -> Value of plant
d) Power expenses ->kilowatt Hours or Horse power of plant
e) Lighting ->Meter reading or Light points
f) Insurance ->Value of Assets
g) Fire insurance of stock ->Value of stock
h) Material handling charges ->Value of material
i) Store expenses ->Departmental consumption of materials
j) Supervision expenses ->No. of workers
k) Gas and water expenses ->Gas point or No. of Taps
l) Advertising ->Percentage of sales
m) Labour welfare expenses ->Number of workers
n) Canteen expenses ->No. of employees
o) Labour medical exp. ->No. of employees
p) Creche expenses ->No. of Female employees
q) Employer's Liability ->Direct wages
r) Worker's compensation ->Direct wages/No. of employers
s) Transport ->Direct materials
t) Sundry expenses ->Direct wages/Labour hours

Note: Direct wages & Direct materials of service department are always taken as indirect expenses ie., overheads.

Methods of re-apportionment of service department expenses to production departments:

After the overheads have been classified between production and service. Department, the costs of service departments to be reapportioned to production departments which are benefited by their services. This process is known as “Secondary distribution “. Any one of the following methods may be adopted for this purpose.

i. Direct re-distribution method
ii. Step distribution method
iii. Reciprocal services method

i. Direct Re-distribution method:

Under the re-distribution method, the cost of service department is directly apportioned to production departments without considering any service rendered by one service department to another. Hence, the production department may either be overcharged or under charged.

ii. Step Distribution Method:

Under this method, the cost of most serviceable department’s expenses is first apportioned to other service and production departments. Then the other serviceable departments are taken up, one after another. The department to which apportioning has been done already, is not charged gain. Therefore, the expenses of the last service department is apportioned to only production department.

iii. Reciprocal Services Method:

In order to overcome the limitations of the above methods, this method is adopted. This method can be sub into the following three:

a) Simultaneous equation method
b) Repeated distribution method
c) Trial and error method

ALLOCATION AND APPORTIONMENT
I. Basis of Apportionment

PROBLEM:

Mention the basis for apportioning the following expenses to different departments.

i. Labour Medical Expenses
ii. Factory Supervision Expenses
iii. Gas and Water Expenses
iv. Machine Depreciation
v. Lighting Expenses
vi. Advertising Expenses

SOLUTION:

Basis for apportionment of overhead Expenses

	Expenses	**Basis of Apportionment**
i.	Labour Medical Expenses	Number of workers
ii.	Factory supervision expenses	Number of workers
iii.	Gas and Water Expenses	Gas points and No. of taps
iv.	Machine Depreciation	Value of Machine
v.	Lighting Expenses	Light points (or) Floor area
vi.	Advertising expenses	Percentage of sales

II. OVERHEAD DISTRIBUTION

PROBLEM:

Apportion the following expenses to various departments.

	Total RS.	A	B	C
Rends and Rats General lighting Floor Area (sq.ft) Lighting point	5000 2000	 1000 3	 500 2	 500 5

SOLUTION:

OVERHEAD DISTRIBUTION SUMMRY

Expenses	Basic of Appoinment	A	B	C
Rend and Rates General lighting	Floor Area 2:1:1 Lighting point3:2:5	2500 600	1250 400	1250 1000
Total overhead		3100	1650	2250

Absorption of overhead:

Absorption of overhead is the process of charging all the indirect expenses to the cost unit, to ascertain the total cost of each unit of production.

Overhead absorption rate:

The base at which the overhead costs are applied to the product is known as the overhead absorption rate.

Types of overhead rates:

The following are the different types of overhead rates generally followed in cost accounting:

i) Actual overhead rates
ii) Predetermined overhead rates
iii) Blanket overhead rates
iv) Multiple overhead rates

Methods of absorption of factory overhead:

The methods of absorption of overhead may be put into two catagories, namely, percentage method and hourly rate method. They are calculated by the following main methods.

a) Direct material cost method
b) Direct labour cost method
c) Prime cost method
d) Rate per unit of output method
e) Direct labour hour method
f) Machine hour rate method

Machine Hour Rate:

"An actual or pre-determined rate of cost to be apportioned or absorbed by the number of hours for which a machine is operated or expected to be operated".

- **ICMA LONDON**

Based on Machine Hour Rate

PROBLEM:

Calculate Machine hour rate from the following:

Cost of machine Rs. 19,000
Estimated scrap value Rs. 1,200
Average repair and maintenance charges per month Rs. 150
Standing charges allocated to machine per month Rs. 50
Effective working life of machine 10,000 hours.
Running time per month 166 hours.
Power used by machine: 5 Units per hour @19 paise per unit.

SOLUTION:

COMPUTATION OF MACHINE HOUR RATE

	Per month Rs.	Per hour Rs.
Standing charges: Standing charges/Running time	50/166	0.30
Machine Expenses: Cost - scrap Depreciation= ---------- Life hours Rs.19,200 – Rs.1,200 / 10,000 = 18,000 / 10,000		
Repair and Maintenance = Rs.150 / 166		0.90
Power (5 units x 19 paise)		0.95
Machine Hour Rate		3.95

UNIT – V

- **JOB COSTING**
  - ✓ **Meaning**
  - ✓ **Features and Objectives**
  - ✓ **Advantages and Disadvantages**
  - ✓ **Procedure for Recording Cost**
  - ✓ **Solved Problems**
- **BATCH COSTING**
- **CONTRACT COSTING**
  - ✓ **Meaning**
  - ✓ **Types of Contracts**
  - ✓ **Work certified and Uncertified**
  - ✓ **Notional Profit**
- **PROCESS COSTING**
  - ✓ **Meaning**
  - ✓ **Normal and Abnormal Wastages**
  - ✓ **Abnormal Gain**
  - ✓ **Solved Problems**
- **EQUIVALENT PRODUCTION, JOINT AND BY – PRODUCTS**
  - ✓ **Equivalent Production – Meaning**
  - ✓ **Computation of Equivalent Production**

UNIT - V

JOB COSTING

Job costing:

Job costing or job order costing means calculation of costs of job, work order or project separately. Job costing system is adopted by the concerns where work is undertaken against specific orders.

It is used in printing presses, engineering concerns, repairing shops, automobile garages and the like.

Main features of job costing:

a) Production is always against customer's order.
b) Each job has its own characteristics and differs from others.

Main objectives of job costing:

a) To determine the cost of each job.
b) To prepare quotations and tenders.

Advantage and limitations of job costing:

Advantage:

a) It helps to know the profitable and non-profitable jobs.
b) It helps in the preparation of tenders, estimates etc.

Disadvantage:

a) It requires more clerical work.
b) It is an expensive one.

Procedure of recording costs under job order cost system:

a) Production order
b) Job order number
c) Job cost card/sheet
d) Completion Repot
e) Profit or Loss

SOLVED PROBLEMS

JOB COST SHEET

PROBLEM:

Prepare job No. 888 cost account:

Raw material Rs. 3,400

Wages 80 hours at Rs.2.50

Variable overheads incurred for all jobs Rs.5000 for 4,000 labour hour.

SOLUTION:

JOB NO.888 ACCOUNT

Particular	Rs.	Particular	Rs.
To materials To wages(80 x2.50) To variable overheads 5,000 ------- x 80 4,000	3,400 200 100	By Balance c/d (Value of the job)	3,700
Total	3,700	Total	3,700

BATCH COSTING

Batch Costing:

Batch costing is a modified form of job costing. Batch costing is used where goods re produced in definite batches. The term batch refers to the 'lot' in which articles are manufactured.

CONTRACT COSTING

Contract:

The agreement between the contractor and the contractee is known as contract.

Contract costing:

Contract costing is a form of specific order costing which applies where the work is undertaken according to contractee's requirement and each work is of long duration as compared to job costing.

Prepare a contract account:

A separate contract account is opened for each contract in general ledger. All expenses like materials used, labour engaged, plant used, site expenses , sub-contract expenses etc., re debited and it is credited with materials at site , plant t site, work-in-progress on work certified and uncertified.

Types of contracts:

There are three types contracts:

i) Fixed price contract
ii) Fixed price contract is subject to escalation clause
iii) Cost plus contract

Work certified and work uncertified:

Work certified is that portion of the work completed, which is approved by the contractee or architect or surveyor. In addition, the certificate issued by these persons for the value of work performed so for is known as work certified.

Work uncertificated is that portion of the work completed, which is not approved by the contractee's architect or surveyor or engineer. It is also known as work done but not certified.

Notional Profit:

The profit earned on incomplete contract is termed as notional profit a portion of which is transferred ton profit and loss a/c and the balance to work in progress reserve a/c.

Job costing differ from contract costing:

	Job costing	Contract costing
i)	It is small in size	It is big in size.
ii)	Work is performed in workshop of the proprietor.	Work is executed mostly at site.
iii)	It takes less time to complete	It takes more time to complete.
iv)	Prise paid after completion.	Price paid in various instalments as the work progress.
v)	Expenses may be direct and indirect.	Most of the expenses are direct in nature.
vi)	Profit transferred to P&L a/c directly.	Only proportionate profit is transferred to P&L a/c as per the stage of completion.

Calculation of notional profit

PROBLEM:

The total contract price in respect of contract is Rs. 50,000. Three fourth of the work has been approved by the contractee. The costs incurred so far for contract A are Rs. 25,000. The contractee pays 80% of the work certified. Calculate the figure of profit which you consider reasonable to be taken to the credit of the profit and loss a/c.

SOLUTION:

Work certified Rs.50,000 x3/4=37,500

Less: Cost of work certified 25,000

Notional Profit12,500

As ¾ of the contract has been completed, 2/3 of the above profit, will be taken to the P&L a/c.

=12,500 x 2/3 x 80/100 = Rs.6,667.

PROCESS COSTING

Process costing:

Process costing is a method of costing used to ascertain the cost of the product at each stages or process or operation of manufacture. A separate account is opened for each process and all expenditure is charged to the process account.

Normal and abnormal wastage:

i) Normal wastage:

It is an unavoidable loss caused due to evaporation, chemical reaction, shrinkage and the like. The normal loss should be charged to the good units produced.

ii) Abnormal loss:

It is an avoidable loss caused due to plant break down, carelessness, accident, fire, sabotage and the like. It is n excess of the normal process loss. Abnormal loss should not be allowed to affect the good units produced.

Abnormal gain:

In case the actual production of a process higher the expected production the excess is known s abnormal gain (or) abnormal effectiveness. If the actual loss is less than the normal loss, a gain is obtained which is also termed as abnormal gain.

SIMPLE PROCESS ACCOUNT

PROBLEM:

Prepare the process account from the following details relating to match 2010.

Materials Rs.25,000

Labour Rs.40,000

Direct Rs.15,000

Overhead Rs.10,000

SOLUTION:

PROCESS ACCOUNT

Particulars	Total cost Rs.	particulars	Total cost Rs.
To Materials	25,000	By finished stock a/c.	90,000
To Labour	40,000		
To Direct expenses	15,000		
To Overhead	10,000		
Total	90,000	Total	90,000

EQUIVALENT PRODUCTION JOINT AND BY-PRODUCTS

Equivalent production:

In process industry, where the production is continuous, the problem of work-in –progress or unfinished goods is quite common. The cost of work-in-progress or unfinished goods is quite common. The cost of work-in-process is determined by calculating equivalent production. Equivalent production represents the production in terms of completed units. It means converting the incomplete production into equivalent completed units. For this purpose the percentage is applied. The formula of equivalent production is:

Equivalent production = Unit of work-in-progress x %of work completed

Methods of computation of equivalent production:

The methods of calculation of equivalent production can be

i) FIRST IN FIRST OUT (FIFO)
ii) AVERAGE COST