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CA INTER

AS PER NEW COURSE

Cost and Management Accounting

Theory & MCQ Book

Jan 25 Attempt & Onwards

CA AMIT SHARMA

Hey my buddies !!

How are you all ?? All good ? I hope everything is going very - very - very good

I am presenting to you all COLOURFUL QUESTION BANK for CA Intermediate COST MANAGEMENT

It took a lot of efforts . dedication . patience and obviously some hardwork to combine all PP , RTP , MTP and SM Questions and then group them on the basis of concepts asked. This book is a one - stop solution for all your COST related doubts and I assure that this single book will make you READY - TO - GO and score the marks that you desire to achieve.

Don't worry . be assured and we will give you all the Tips and Tricks to solve and also the list of all important and tough Questions which you must practice.

So thank you so much ❤ for choosing me for this interesting subject and now GET READY AND FASTEN YOUR SEAT BELTS as you are going to witness a super exciting journey.

Thanking you all :
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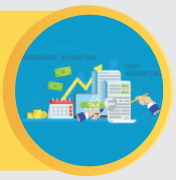




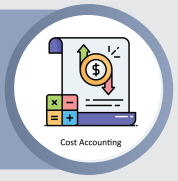


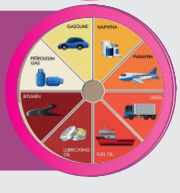

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Let's fall in love..
With every chapter, With every page, With every concept.
Let's make it more interesting & fun in our own ways.
Let's open our hearts for this book in a new way.

CA AMIT SHARMA

1 CHAPTER

INTRODUCTION TO COST MANAGEMENT ACCOUNTING

Q.N.	Questions
1.	**What are the main objectives of Cost and Management Accounting ??**

(i) **Ascertainment of Cost:** The main objective of Cost Accounting is accumulation and ascertainment of cost. Costs are accumulated, assigned and ascertained for each cost object. This cost object may be a unit, job, operation, process, department or service.

(ii) **Determination of Selling Price and Profitability:** The Cost Accounting System helps in determination of selling price and thus profitability of a cost object. Though in a competitive business environment selling prices are determined by external factors but cost accounting system provides a basis for price fixation and rate negotiation.

(iii) **Cost Control:** Maintaining discipline in expenditure is one of the main objectives of a good cost accounting system. It ensures that expenditures are in consonance with predetermined set standard and any variation from these set standards is noted and reported on continuous basis.

(iv) **Cost Reduction:** It may be defined "as the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without impairing their suitability for the use intended or diminution in the quality of the product."

(v) **Assisting Management in Decision Making:** Cost and Management Accounting by providing relevant information, assist management in planning, implementing, measuring, controlling and evaluating of various activities. A robust cost and management accounting system provides internal and external information to the industry which will be relevant for decision making.

2.	**To exercise control over cost, which steps are followed ?**

(a) **Determination of pre-determined standard or results:** Standard cost or performance targets for a cost object or a cost centre are set before initiation of production or service activity. These are desired cost or result that need to be achieved.

(b) **Measurement of actual performance:** Actual cost or result of the cost object or cost centre is measured. Performance should be measured in the same manner in which the targets are set i.e., if the targets are set up operation-wise, and then the actual costs should also be collected and measured operation-wise to have a common basis for comparison.

(c) **Comparison of actual performance with set standard or target:** The actual performance so measured is compared against the set standard and desired target. Any deviation (variance) between the two is noted and reported to the appropriate person or authority.

(d) **Analysis of variance and action:** The variance in results so noted is further analysed to know the reasons for variance and appropriate action is taken to ensure compliance in future. If necessary, the standards are further amended to take developments into account.

3. Which are the three-fold assumptions involved in the definition of cost reduction may be summarised as under:

The three-fold assumptions involved in the definition of cost reduction may be summarised as under:

(a) There is a saving in unit cost.

(b) Such saving is of permanent nature.

(c) The utility and quality of the goods and services remain unaffected, if not improved.

4. What is the difference between Cost Control and Cost Reduction ?

Cost Control	Cost Reduction
1. Cost control aims at maintaining the costs in accordance with the established standards.	**1.** Cost reduction is concerned with reducing costs. It challenges all standards and endeavours to improvise them continuously
2. Cost control seeks to attain lowest possible cost under existing conditions.	**2.** Cost reduction recognises no condition as permanent, since a change will result in lower cost.
3. In case of cost control, emphasis is on past and present	**3.** In case of cost reduction, it is on present and future.
4. Cost control is a preventive function	**4.** Cost reduction is a corrective function. It operates even when an efficient cost control system exists.
5. Cost control ends when targets are achieved.	**5.** Cost reduction has no visible end and is a continuous process.

5. Explain the Scope of Cost Accounting.

Scope of Cost Accounting consists of the following functions:

(i) Costing: Costing is the technique and process of ascertaining costs of products or services. The cost ascertainment procedure is governed by some cost accounting principles and rules. Generally, cost is ascertained using historical costs, standard costs, process cost, operation cost etc.

(ii) Cost Accounting: This is a process of accounting for cost which begins with the recording of expenditure and ends with the preparation of periodical statement and reports for ascertaining and controlling cost. Cost Accounting is a formal mechanism of cost ascertainment.

(iii) Cost Analysis: It involves the process of finding out the factors responsible for variance in actual costs from the budgeted costs and accordingly fixation of responsibility for cost differences. This also helps in taking better cost management and strategic decisions.

(iv) Cost Comparisons: Cost accounting also includes comparisons of cost involved in alternative courses of action such as use of different technology for production, cost of making different products and activities, and cost of same product/ service over a period of time.

(v) Cost Control: It involves a detailed examination of each cost in the light of advantage received from the incurrence of the cost. Thus, we can state that cost is analyzed to know whether cost is not exceeding its budgeted cost and whether further cost reduction is possible or not.

(vi) Cost Reports: This is the ultimate function of cost accounting. These reports are primarily prepared for use by the management at different levels. Cost Reports helps in planning and control, performance appraisal and managerial decision making.

(vii) Statutory Compliances: Maintaining cost accounting records as per the rules prescribed by the statute to maintain cost records relating to utilization of materials, labour and other items of cost as applicable to the production of goods or provision of services as provided in the Act and these rules.

6. Explain Difference between Cost Accounting & Management Accounting.

Basis	Cost Accounting	Management Accounting
Nature	It records the quantitative aspect only.	It records both qualitative and quantitative aspect.
Objective	It records the cost of producing a product and providing a service.	It provides information to Management for planning and co-ordination.
Area	Only deals with cost ascertainment.	It is wider in scope as it includes financial accounting, budgeting, taxation, planning etc.
Recording of Data	Uses both past and present figures.	It is focused with the projection of figures for future.
Development	Its development is related to industrial revolution.	Its development is related to the need of modern business world.
Rules & Regulations	It follows certain principles and procedures for recording costs of different products.	It does not follow any specific rules and regulations.

7. Explain Difference between Cost Accounting & Financial Accounting.

Basis	Cost Accounting	Financial Accounting
Nature	It classifies records, present and interprets transactions in monetary terms.	It classifies, costs records, present, and interprets it in a significant manner.
Objective	It provides information about the financial performance of an entity.	Ascertainment of cost for the purpose of cost control and decision making.
Users of Info	The users of financial accounting statements are shareholders, creditors, financial analysts and government and its agencies, etc.	The cost accounting information Is generally used by internal management. But sometimes regulatory authorities also.
Recording of Data	It records Historical data.	It makes use of both historical and pre- determined costs.

Analysis of cost and profit	It shows profit or loss of the organization either segment wise or as a whole.	It provides the cost details for each cost object i.e. product, process, job, operation, contracts etc.
Time Period	Prepared usually for an year.	Prepared as & when required

8. What is the role of a cost and management accounting system ?

Cost Accounting is concerned with accumulation and allocation of costs to different cost objects, whereas, Management Accounting concerned with provision of information to internal users for decision making. The role of a cost and management accounting system is to:

- Provide relevant information to management for decision making,
- Assist management for planning, measurement, evaluation and controlling of business activities,
- Help in allocation of cost to products and inventories for both external and internal users.

9. Explain the functions of Cost and Management Accounting.

The functions of Cost and Management Accounting include:

(i) Collection and accumulation of cost for each element of cost.

(ii) Assigning costs to cost objects to ascertain cost.

(iii) Cost and Management Accounting Department sets budget and standards for a particular period or activity beforehand and these are compared with the assigned and ascertained cost. Any deviation with the set standards are analysed and reported to control costs.

(iv) The main function is provision of relevant information to the management for decision making. An Information system environment is set up which is popularly known as Management Information System (MIS) which provides relevant and timely information related to both internal and external to the organisation to enable management at all levels to take decisions. Decisions include cost optimisation, price fixation, implementation of any plan related with product, process, marketing etc.

(v) The performance of a responsibility centre is measured and evaluated against the set standards. The function of Cost and Management Accounting is to gather data like time taken, wastages, process idleness etc., analyse the data, prepare reports and take necessary actions.

10. Who are Internal Users of Cost and Management Accounting.

Internal users, who use the Cost and Management Accounting information may include the followings:

(a) Policy Makers- The policy makers are those who formulate strategies

- to achieve the goals (short & long term both) to fulfil the objectives of the organisation.
- to position the organisation into the competitive market environment.
- to design the organisational structure to get the policy and strategies implemented. Etc.

(b) Managers- The managers use the information

- to know the cost of a cost object and cost centre
- to know the price for the product or service
- to measure and evaluate performance of responsibility centres
- to know the profitability-product-wise, department-wise, customer-wise etc.

- to evaluate the strategic options and to make decisions

(c) **Operational level staff-** The operational level staff like supervisors, foreman, team leaders require information

- to know the objectives and performance goals for them
- to know product and service specifications like volume, quality and process etc.
- to know the performance parameters against which their performance is measured and evaluated.
- to know divisional (responsibility centre) profitability etc.

(d) **Employees-** Employees are concerned with the information related with time and attendance, incentives for work, performance standards etc.

11. Who are External Users of Cost and Management Accounting.

External users, who use the Cost and Management Accounting information may include the followings:

(a) **Regulatory Authorities-** Regulatory Authorities are concerned with cost accounting data and information for different purpose which includes tariff determination, providing subsidies, rate fixation etc. To do this the regulatory bodies require information on the basis of some standards and format in this regard.

(b) **Auditors-** The auditors while conducting audit of financial accounts or for some other special purpose audit like cost audit etc. require information related with costing and reports reviewed by management etc.

(c) **Shareholders-** Shareholders are concerned with information that effect their investment in the entity. Management communicates to the shareholders through periodic communique, annual reports etc. regarding new orders received, product expansion, market share for products etc.

(d) **Creditors and Lenders-** Creditors and lenders are concerned with data and information which affects an entity's ability to serve lenders or creditors. For example, any financial institutions which provides loan to an entity against book debts and inventories are more concerned with regular reporting on net debt position and stock balances.

12. What are the essential features, which a good Cost Accounting System should possess ?

The essential features, which a good Cost Accounting System should possess, are as follows:

(a) **Informative and simple:** Cost accounting system should be tailor-made, practical, simple and capable of meeting the requirements of a business concern. The system of costing should not sacrifice the utility by introducing inaccurate and unnecessary details.

(b) **Accurate and authentic:** The data to be used by the cost accounting system should be accurate and authenticated; else it may distort the output of the system and a wrong decision may be taken.

(c) **Uniformity and consistency:** There should be uniformity and consistency in classification, treatment and reporting of cost data and related information. This is required for benchmarking and comparability of the results of the system for both horizontal and vertical analysis.

(d) **Integrated and inclusive:** The cost accounting system should be integrated with other systems like financial accounting, taxation, statistics and operational research etc. to have a complete overview and clarity in results.

(e) **Flexible and adaptive:** The cost accounting system should be flexible enough to make necessary amendment and modifications in the system to incorporate changes in technological, reporting, regulatory and other requirements.

(f) **Trust on the system:** Management should have trust on the system and its output. For this, an active role of management is required for the development of such a system that reflects a strong conviction in using information for decision making.

13. Explain the factors to be studied before setting up a system of cost accounting.

Before setting up a system of cost accounting the factors mentioned below should be studied:

(a) **Objective:** The objective of setting up the costing system, for example whether it is being introduced for fixing prices or for establishing a system of cost control.

(b) **Nature of Business or Industry:** The industry in which the business is operating. Every business or industry has its own uniqueness and objectives. According to its cost information requirement, cost accounting methods are followed. For example, an oil refinery maintains process wise cost accounts to find out the cost incurred on a particular process, say in crude refinement process etc.

(c) **Organisational Hierarchy:** Costing system should fulfil the information requirements of different levels of management. Top management is concerned with the corporate strategy, strategic level management is concerned with marketing strategy, product diversification, product pricing etc.

(d) **Knowing the product:** Nature of the product determines the type of costing system to be implemented. The product which has by-products requires costing system which accounts for by-products as well. In case of perishable or short self- life products, marginal costing is appropriate to know the contribution and minimum price at which products could be sold.

(e) **Knowing the production process:** A good costing system can never be established without the complete knowledge of the production process. Cost apportionment can be done on the most appropriate and scientific basis if a cost accountant can identify degree of effort or resources consumed in a particular process. This also includes some basic technical know-how and process peculiarity.

(f) **Information synchronisation:** Establishment of a department or a system requires substantial amount of organisational resources. While drafting a costing system, information needs of various other departments should be taken into account. For example, in a typical business organisation accounts department needs to submit monthly stock statement to its lender bank, quantity wise stock details at the time of filing returns to tax authorities etc.

(g) **Method of maintenance of cost records:** The organization must determine beforehand the manner in which Cost and Financial Accounts could be inter-locked into a single integral accounting system and how the results of separate sets of accounts i.e. cost and financial, could be reconciled by means of control accounts.

(h) **Statutory compliances and audit:** Records are to be maintained to comply with statutory requirements and applicable cost accounting standards should be followed.

(i) **Information Attributes:** Information generated from the Costing system should possess all the attributes of useful information i.e. it should be complete, accurate, timely, relevant. to have an effective management information system (MIS).

14. Explain Digital Costing System.

Digital costing system links different business functions such as production, procurement, inventory management with the digital costing system of its suppliers, customers and the market through data sharing and network interaction.

Digital Costing System provides data to get the following information:

(i) Cost incurred on a cost object.
(ii) Data on time spent.
(iii) Data on resource consumption.
(iv) Data on current market price of final product and raw materials.
(v) Data on lead time and availability of materials.
(vi) Data on product demand and trend.

15. Explain benefits of Digital Costing System.

With the help of Artificial Intelligence (AI) and Machine learnings (ML) which helps in analysis of the Big data and apprehend the consumption and demand pattern, the following benefits can be achieved:

(i) Ascertainment of cost with certainty on a cost object (the cost object is discussed in later paragraph). This helps to analyse the activities for cost allocation and apportionment.
(ii) Analysis of data on time spent on each activity to study and formulate incentive plans.
(iii) Helps in material requirement planning and scheduling the material procurement. Data on resource consumption can be analysed for resource optimisation and finding the possibilities for zero wastage and Just-in Time (JIT).
(iv) Helps to identify and eliminate the non-value-added activities.
(v) Data on resource consumption is helpful in setting the standards and measurement of variances on real time basis.
(vi) Data on current market prices of material and consumables helps to estimate cost and setting standards on Marked to Market (M2M) basis.
(vii) Extrapolation of data on customer behaviour towards the products to predict the market demand. It is helpful is preparation of budgets and planning of production.
(viii) A better analysis of cost behaviour improves the cost benefit analysis and equipping the management in informed decision making.

16. What is a Responsibility Centre and its different types ?

To have a better control over the organisation, management delegates its responsibility and authority to various departments or persons. These departments or persons are known as responsibility centres and are held responsible for performance in terms of expenditure, revenue, profitability and return on investment. Performance of these responsibility centres are measured against some set standards (input-output ratio, budgets etc.) and evaluated against organisational goal and performance targets.

(i) Cost Centres: The responsibility centre which is held accountable for incurrence of costs which are under its control. The performance of this responsibility centre is measured against pre-determined standards or budgets. The cost centres are of two types:

(a) Standard Cost Centre: Cost Centre where output is measurable and input required for the output can be specified. Based on a well-established study, an estimate of standard units of

input to produce a unit of output is set. The actual cost for inputs is compared with the standard cost. Any deviation (variance) in cost is measured and analysed into controllable and uncontrollable cost. The manager of the cost centre is expected to comply with the standard and held responsible for adverse cost variances. The input-output ratio for a standard cost centre is clearly identifiable.

(b) Discretionary Cost Centre: The cost centre whose output cannot be measured in financial terms, thus input-output ratio cannot be defined. The cost of input is compared with allocated budget for the activity. Examples of discretionary cost centres are Research & Development department, Advertisement department where output of these department cannot be measured with certainty and co-related with cost incurred on inputs.

(ii) Revenue Centres: The responsibility centres which are accountable for generation of revenue for the entity. Sales Department for example, is responsible for achievement of sales target and revenue generation. Though, revenue centres do not have control on expenditures it incurs but sometimes expenditures related with selling activities like commission to sales person etc. are incurred by revenue centres.

(iii) Profit Centres: These are the responsibility centres which have both responsibility of generation of revenue and incurrence of expenditures. Since, managers of profit centres are accountable for both costs as well as revenue, profitability is the basis for measurement of performance of these responsibility centres. Examples of profit centres are decentralised branches of an organisation.

(iv) Investment Centres: These are the responsibility centres which are not only responsible for profitability but also have the authority to make capital investment decisions. The performance of these responsibility centres are measured on the basis of Return on Investment (ROI) besides profit. Examples of investment centres are Maharatna, Navratna and Miniratna companies of Public Sector Undertakings of Central Government.

17. What are the limitations of cost accounting ?

The limitations of cost accounting are as follows:

1. **Expensive:** It is expensive because analysis, allocation and absorption of overheads requires considerable amount of additional work, and hence additional money.

2. **Requirement of reconciliation:** The results shown by cost accounts differ from those shown by financial accounts. Thus preparation of reconciliation statements is necessary to verify their accuracy.

3. **Duplication of work:** It involves duplication of work as organization has to maintain two sets of accounts i.e. Financial Accounts and Cost Accounts.

18. Explain various methods of Costing.

Single or Output Costing :- Under this method, the cost of a product is ascertained, the product being the only one produced like bricks, coals, etc.

Batch Costing :- This method is the extension of job costing. A batch may represent a number of small orders passed through the factory in batch. Each batch here is treated as a unit of cost and thus separately costed. Here cost per unit is determined by dividing the cost of the batch by the number of units produced in the batch.

Job Costing:- Under this method of costing, cost of each job is ascertained separately. It is suitable in all cases where work is undertaken on receiving a customer's order like a printing press, motor workshop, etc.

Contract Costing:- Under this method, the cost of each contract is ascertained separately. It is suitable for firms engaged in the construction of bridges, roads, buildings etc.

Process Costing:- Under this method, the cost of completing each stage of work is ascertained, like cost of making pulp and cost of making paper from pulp. In mechanical operations, the cost of each operation may be ascertained separately; the name given is operation costing.

Operating Costing:- It is used in the case of concerns rendering services like transport, supply of water, retail trade etc.

Multiple Costing:- It is a combination of two or more methods of costing outlined above. Suppose a firm manufactures bicycles including its components; the parts will be costed by the system of job or batch costing but the cost of assembling the bicycle will be computed by the single or output costing method. The whole system of costing is known as multiple costing.

19. Explain various techniques of Costing.

Uniform Costing:- When a number of firms in an industry agree among themselves to follow the same system of costing in details, adopting common terminology for various items and proc- esses they are said to follow a system of uniform costing. Advantages of such a system are:(i) A comparison of the performance of each of the firms can be made with that of another, or with the average performance in the industry. (ii) Under such a system, it is also possible to determine the cost of production of goods which is true for the industry as a whole.

Marginal Costing:- It is defined as the ascertainment of marginal cost by differentiating between fixed and variable costs. It is used to ascertain effect of changes in volume or type of output on profit.

Standard Costing and Variance Analysis :- It is the name given to the technique whereby standard costs are pre-determined and subsequently compared with the recorded actual costs. It is thus a technique of cost ascertainment and cost control. This technique may be used in conjunction with any method of costing.

Historical Costing:- It is the ascertainment of costs after they have been incurred. This type of costing has limited utility.

- Post Costing : It means ascertainment of cost after production is completed.
- Continuous costing : Cost is ascertained as soon as the job is completed or even when the job is in progress.

Absorption Costing:- It is the practice of charging all costs, both variable and fixed to operations, processes or products. This differs from marginal costing where fixed costs are excluded.

2 CHAPTER

MATERIAL COSTING

Q.N	QUESTIONS
1.	**Explain the importance of proper recording and control of material.**

Importance of proper recording and control of material are as follows:

(a) **Quality of final product:** The quality of output depends on the quality of inputs.

(b) **Price of the final product:** Material constitutes a significant part of any product and the cost of final product is directly related with cost of materials used to produce the product.

(c) **Production continuity:** The production firms need to ensure that production process runs smoothly and should not be paused for the want of materials. In order to avoid production interruptions, an adequate level of stock of materials should be maintained.

(d) **Cost of Stock holding and stock-out:** An entity has to incur stock holding costs in the form of interest and/or opportunity cost for the fund used, stock handling losses like evaporation, obsolescence etc. Under-stocking causes in loss of revenue due to stock-out and breach of commitment.

(e) **Wastage and other losses:** While handling and processing of materials, some wastage and loss arise. Based on the nature of material and process, these are classified as normal and abnormal for efficient utilisation and control.

(f) **Regular information about resources:** Regular and updated information on availability and utilisation of materials are necessary for the entity for timely and informed decision making.

2.	**What are the objectives of a system of material control ?**

The objectives of a system of material control are as following:

(i) **Minimising interruption in production process:** Material Control system ensures that no activity, particularly production, suffers from interruption for want of materials and stores. It requires constant availability of every item that may be needed in production process

(ii) **Optimisation of Material Cost:** The overall material costs includes price, ordering costs and holding costs. Since all the materials and stores are acquired at the lowest possible price considering the required quality and other relevant factors.

(iii) **Reduction in Wastages:** Material Control System has an objective of avoidance of unnecessary losses and wastages that may arise from deterioration in quality due to defective or long storage or from obsolescence. It may be noted that losses and wastages in the process of manufacture are a concern of the production department.

(iv) **Adequate Information:** The system of material control maintains proper records to ensure that reliable information is available for all items of materials and stores. This not only helps in detecting losses and pilferages but also facilitates proper production planning.

(v) **Completion of order in time:** Proper material management is very necessary for fulfilling orders of the firm. This adds to the goodwill of the firm.

3. Explain the requirements of Material Control.

Material control requirements can be summarised as follows:

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

4. What are the elements of Material Control

Material control involves efficient functioning of the following operations:

- Purchasing of materials
- Inspection of materials
- Issuing materials
- Stock audit
- Receiving of materials
- Storage of materials
- Maintenance of inventory records

5. What are uses of Bills of Materials ??

- **Marketing (Purchase) Dept:-** Materials are procured (purchased) on the basis of specifications mentioned in it.
- **Production Dept:-** Production is planned according to the nature, volume of the materials required to be used. Accordingly, material requisition lists are prepared.
- **Stores Dept:-** It is used as a reference document while issuing materials to the requisitioning department.
- **Cost/ Accounting Dept:-** It is used to estimate cost and profit. Any purchase, issue and usage are compared/verified against this document.

6. Explain difference between Bill of Materials and Material Requisition Note

Bill of Material	Material Requisition Note
1. It is the document prepared by the eng. or planning dept.	1. It is prepared by the production or other consuming department.

2. It is a complete schedule of component parts and raw materials required for a particular job or work order.	**2.** It is a document asking Store-keeper to issue materials to the consuming department.
3. It shows the complete schedule of materials required for a particular job i.e. it can replace material requisition.	**3.** It cannot replace a bill of materials.
4. It can be used for the purpose of quotations.	**4.** It is useful in arriving historical cost only.
5. It helps in keeping a quantitative control on materials drawn through material req.	**5.** It shows the material actually drawn from stores.

7. What are duties of Store Keeper ?

These can be briefly set out as follows:

(i) **General control over store:** Store keeper should keep control over all activities in Stores department. He should check the quantities as mentioned in Goods received note and with the purchased materials forwarded by the receiving department and to arrange for the storage in appropriate places.

(ii) **Safe custody of materials:** Store keeper should ensure that all the materials are stored in a safe condition and environment required to preserve the quality of the materials.

(iii) **Maintaining records:** Store keeper should maintain proper record of quantity received, issued, balance in hand and transferred to/ from other stores.

(iv) **Initiate purchase requisition:** Store keeper should initiate purchase requisitions for the replacement of stock of all regular stores items whenever the stock level of any item of store approaches the re-order level fixed.

(v) **Maintaining adequate level of stock:** Store keeper should maintain adequate level of stock at all time. He/ she should take all the necessary action so that production could not be interrupted due to lack of stock. Further he/ she should take immediate action for stoppage of further purchasing when the stock level approaches the maximum limit.

(vi) **Issue of materials:** Store keeper should issue materials only against the material requisition slip approved by the appropriate authority. He/ she should also refer to bill of materials while issuing materials to requisitioning department.

(vii) **Stock verification and reconciliation:** Store keeper should verify the book balances with the actual physical stock at frequent intervals by way of internal control and check the any irregular or abnormal issues, pilferage, etc.

8. Explain Advantages & Disadvantages of Bin Cards.

Advantages:

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

(ii) Control over stock can be more effective, as comparison of the actual quantity in hand at any time with the book balance is possible.

(iii) Identification of the different items of materials is facilitated by reference to the Bin Card, the bin or storage receptacle.

Disadvantages

(i) Store records are dispersed over a wide area.

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

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

9. Explain Advantages & Disadvantages of Stores Ledger.

Advantages:

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

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

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

Disadvantages:

(i) On the spot comparison of the physical stock of an item with its book balance is not facilitated.

(ii) Physical identification of materials in stock may not be as easy as in the case of bin cards, as the Stock Control Cards are housed in cabinets or trays.

10. Explain difference between Bin Card & Stores Ledger.

Bin Card	Stores Ledger
It is maintained by the storekeeper in the store.	It is maintained in cost accounting department.
It contains only quantitative details of material received, issued and returned to stores.	It contains information both in quantity & value.
Entries are made when transaction takes place.	It is always posted after the transaction.
Each transaction is individually posted.	Transactions may be summarized and then posted.
Inter-department transfers do not appear in Bin Card.	Material transfers from one job to another job are recorded for costing purposes.

11. Explain Just In Time (JIT Inventory System).

JIT is a system of inventory management with an approach to have zero inventories in stores. According to this approach material should only be purchased when it is actually required for production.

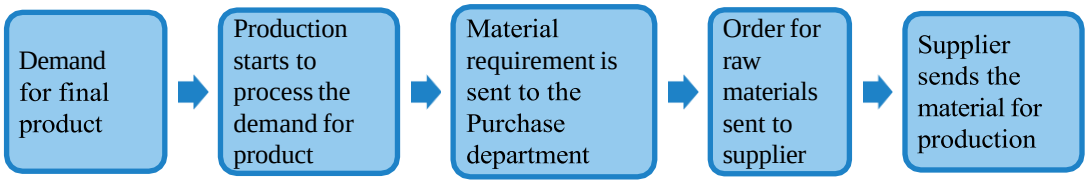
JIT is based on two principles

(i) Produce goods only when it is required and

(ii) The products should be delivered to customers at the time only when they want.

It is also known as 'Demand pull' or 'Pull through' system of production. In this system, production process actually starts after the order for the products is received. Based on the

demand, production process starts and the requirement for raw materials is sent to the purchase department for purchase. This can be understood with the help of the following diagram:



12. Explain Advantages of ABC

Advantages of ABC analysis: The advantages of ABC analysis are the following:

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

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

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

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

13. Explain Fast, Normal and Slow moving items.

It is also known as FNS (Fast, Normal and Slow moving) classification of inventory analysis. Under this system, inventories are controlled by classifying them on the basis of frequency of usage. The classification of items into these three categories depends on the nature and managerial discretion. A threshold range on the basis of inventory turnover is decided and classified accordingly.

(i) Fast Moving- This category of items is placed nearer to store issue point and the stock is reviewed frequently for making of fresh orders.

(ii) Slow Moving- This category of items is stored little far and stock is reviewed periodically for any obsolescence, and may be shifted to Non-moving category.

(iii) Non-Moving- This category of items is kept for disposal. This category of items is reported to the management and an appropriate provision for loss may be created.

Some of the reasons for slow moving and non-moving inventories are stated below:

(i) Failure of production management to communicate the updated requirement to the stores management

(ii) Technological upgradation in terms of new machine requiring new kind of material or existing material becoming obsolete.

(iii) Lack of periodic review of inventories.

14. Explain Vital, Essential and Desirable (VED) items.

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

(i) **Vital-** Items are classified as vital when its unavailability can interrupt the production process and cause a production loss. Items under this category are strictly controlled by setting re-order level.

(ii) **Essential-** Items under this category are essential but not vital. The unavailability may cause sub standardisation and loss of efficiency in production process. Items under this category are reviewed periodically and get the second priority.

(iii) **Desirable-** Items under this category are optional in nature, unavailability does not cause any production or efficiency loss.

15. Success of Perpetual Inventory System depends on which factors ?

The success of perpetual inventory depends upon the following:

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

(b) Stock Control cards (or Bin Cards).

(c) Reconciling the quantity balances shown by (a) & (b) above.

(d) Checking the physical balances of a number of items every day systematically and by rotation.

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

(f) Making corrective entries wherever required after step (e) and

(g) Removing the causes of the discrepancies referred to in step (e)

16. What are the advantages of perpetual inventory system ?

The main advantages of perpetual inventory are as follows:

(1) Physical stocks can be counted and book balances adjusted as and when desired without waiting for the entire stock-taking to be done.

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

(3) Discrepancies are easily located and thus corrective action can be promptly taken to avoid their recurrence.

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

(5) Fixation of the various stock levels and checking of actual balances in hand with these levels assist the store keeper in maintaining stocks within limits and in initiating purchase requisitions for correct quantity at the appropriate time.

17. What are the advantages of continuous stock-taking ?

Advantages of continuous stock-taking:

1. Closure of normal functioning is not necessary.

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

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

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

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

18. Explain Specific Price Method & Its advantages and Disadvantages

Specific Price Method: This method is useful, especially when materials are purchased for a specific job or work order, as such materials are issued subsequently to that specific job or work order at the price at which they were purchased.To use this method, it is necessary to store each lot of material separately and maintain its separate account.

Advantages	Disadvantages
The cost of materials issued for production purposes to specific jobs represent actual and correct costs.	This method is difficult to operate, specially when purchases and issues are numerous.
This method is best suited for non-standard & specific products	

19. Explain FIFO Method & Its advantages and Disadvantages

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

This method is considered suitable in times of falling price because the material cost charged to production will be high while the replacement cost of materials will be low. But, in the case of rising prices, if this method is adopted, the charge to production will be low as compared to the replacement cost of materials. Consequently, it would be difficult to purchase the same volume of material (as in the current period) in future without having additional capital resources.

Advantages	Disadvantages
• It is simple to understand and easy to operate.	• If the prices fluctuate frequently, this method may lead to clerical error.
• Material cost charged to production represents actual cost with which the cost of production should have been charged.	• Since each issue of material to production is related to a specific purchase price, the costs charged to the same job are likely to show a variation from period to period.
• In the case of falling prices, the use of this method gives better results.	• In the case of rising prices, the real profits of the concern being low, while the profits in the books will appear high. This may lead to inability of the firm to meet the materials purchase demand at the current market price.
• Closing stock of material will be represented very closely at current market price.	

20. Explain LIFO Method & Its advantages and Disadvantages

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

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

Advantages	Disadvantages
• The cost of materials issued will be either nearer to and or will reflect the current market price. Thus, the cost of goods produced will be related to the trend of the market price of materials. Such a trend in price of materials enables the matching of cost of production with current sales revenues.	• Calculation under LIFO system becomes complicated and cumbersome when frequent purchases are made at highly fluctuating rates.
• The use of the method during the period of rising prices does not reflect undue high profit in the income statement as it was under the first-in-first-out or average method. In fact, the profit shown here is relatively lower because the cost of production takes into account the rising trend of material prices.	• Costs of different similar batches of production carried on at the same time may differ a great deal.
• In the case of falling prices profit tends to rise due to lower material cost, yet the finished products appear to be more competitive and are at market price.	• In time of falling prices, there will be need for writing off stock value considerably to stick to the principle of stock valuation, i.e., the cost or the market price whichever is lower.
• Over a period, the use of LIFO helps to iron out the fluctuations in profits.	• This method of valuation of material is not acceptable to the income tax authorities.

21. What is Base Stock Method ??

Minimum quantity of stock under this method is always held at a fixed price as reserve in the stock, to meet the state of emergency, if it arises. This minimum stock is known as base stock and is valued at a price at which the first lot of materials is received and remains unaffected by subsequent price fluctuations.

This method of valuing inventory is different from other methods of valuing issues, as the base stock of materials are valued at the original cost, whereas, materials other than the base are valued using other methods like FIFO, LIFO etc. This method is not an independent method as it uses FIFO or LIFO. Advantages and disadvantages of this method depend upon the use of the other method viz., FIFO or LIFO.

22. Explain Simple Average Price Method & Its Advantages and Disadvantages

Under this method, materials issued are valued at average price, which is calculated by dividing the total of rates at which different lot of materials are purchased by total number of lots. In this method quantity purchased in each lot is ignored. However, the price of stock of that lot which is completely sold out is not considered for taking average price.

Advantages	Disadvantages
• This method is simple to use for an entity which orders materials in a lot of standard quantity, as only price per lot is taken to calculate average price	• This method does not provide right stock valuation when standard quantity for purchase in a lot is not specified.
• In a stable price environment, this method gives a price which approximates to the current market price.	• When price of materials fluctuates and the entity chooses to customise the order quantity, the price under this method may differ substantially from the current market price.

23. Explain Weighted Average Price Method & Its Advantages and Disadvantages

Unlike Simple Average Price method, this method gives due weightage to quantities also. Under this method, issue price is calculated by dividing sum of products of price and quantity by total number quantities. This method is useful in case when quantity purchased under each lot is different and price fluctuates frequently.

Advantages	Disadvantages
• It smoothens the price fluctuations, if at all it is there, due to material purchases.	• Material cost does not represent actual cost price and therefore, a different profit or loss will arise out of such a pricing method.
• Issue prices need not be calculated for each issue unless new lot of materials is received.	• It may be difficult to compute, since every time lot is received, it would require re-computation of issue prices.

24. Explain Standard Price Method & Its Advantages and Disadvantages

Under this method, materials are priced at some predetermined rate or standard price irrespective of the actual purchase cost of the materials. Standard cost is usually fixed after taking into consideration the following factors:

(i) Current prices,
(ii) Anticipated market trends, and
(iii) Discount available and transport charges etc.

Standard prices are fixed for each material and the requisitions are priced at the standard price. This method is useful for controlling material cost and determining the efficiency of purchase department. In the case of highly fluctuating prices of materials, it is difficult to fix their standard cost on long-term basis.

Advantages	Disadvantages
• The use of the standard price method simplifies the task of valuing issues of materials	• The use of standard price does not reflect the market price and thus results in a different or incorrect profit or loss.
• It facilitates the control of material cost and the task of judging the efficiency of purchase department.	• The fixation of standard price becomes difficult when prices fluctuate frequently

25. Explain difference betweeen Waste & Scrap.

WASTE	SCRAP
1. It is connected with raw material or inputs to the production process.	**1.** It is the loss connected with the output
2. Waste of materials may be visible or invisible.	**2.** Scraps are generally identifiable and has physical substance.
3. Generally, waste has no recoverable value.	**3.** Scraps are termed as by-products and has small recoverable value.

26. Explain difference between Scrap & Defective.

SCRAP	DEFECTIVE
1. It is the loss connected with the output	**1.** This type of loss is connected with the output as well as the input.
2. Scraps are not intended but cannot be eliminated due to the nature of material or process itself.	**2.** Defectives also are not intended but can be eliminated through a proper control system.
3. Generally, scraps are not used or rectified.	**3.** Defectives can be used after rectification.
4. Scraps have insignificant recoverable value.	**4.** Defectives are sold at a lower value from that of the good one.

ICAI MCQs

	Questions
Q.1	Which of the following is not an assumption for the calculation of economic order quantity:
	(a) Ordering cost per order and carrying cost per unit per annum are known. (b) Cost per unit of the material is to be derived. (c) Anticipated usage of material in units is known. (d) The quantity of material ordered is received immediately. Solution: Cost per unit of the material is constant and is known as well.
Q.2	A Ltd. produces a final product X, which requires two components, A and B. The following are the information related to both the components: Normal usage 50 per week each Maximum usage 75 per week each Minimum usage 25 per week each Re-order quantity A: 300; B: 500 Re-order period A: 4 to 6 weeks B: 2 to 4 weeks. Average stock level for the component B is:
	(a) 350 units (b) 425 units (c) 450 units (d) 300 units Solution: Average stock level for component A = ½ (150 units + 750 units) =450 units.
Q.3	Maximum level for the component A is
	(a) 650 units (b) 750 units (c) 450 units (d) 300 units Solution: Maximum level for component A = (450 units + 300 units) - (25 units x 4 weeks) = 650 units
Q.4	Maximum level for the component B is:
	(a) 650 units (b) 750 units (c) 450 units (d) 300 units Solution: Maximum level for component B = (300 units + 500 units) - (25 units x 2 weeks) = 750 units
Q.5	Minimum level for the component B is
	(a) 300 units (b) 250 units (c) 150 units

(d) 200 units
Solution: Minimum level for component B = 300 units - (50 units x 3 weeks) = 150 units

Q.6 Which of the following method of inventory valuation is useful when materials are purchased for a specific job or work order:

(a) Standard cost method
(b) Cost price method
(c) FIFO method
(d) LIFO method
Solution:
Under Cost price method materials are issued to specific job or work order at the price at which they were purchased.

Q.7 This is a document which is used for making a formal request to the purchasing department to purchase materials.

(a) Purchased Order
(b) Bill of Material
(c) Material Requisition
(d) Purchase Requisition
Solution: purchase requisition is a form used for making a formal request to the purchasing department to purchase materials.

Q.8 Which of the following is Not deducted from cost of material:

(a) Subsidy
(b) Cash discount
(c) Govt. Incentives
(d) Trade discount
Solution: Cash discount is not deducted from the purchase price. It is treated as interest and finance charges.

Q.9 Which of the following is not a normal reason of material shortage:

(a) Evaporation
(b) Spillage
(c) Pilferage
(d) Bulk breaking
Solution: Pilferage is a theft of material, which is not a normal reason for material shortage.

Q.10 Which of the following is Not added with cost of material:

(a) Demurrage paid
(b) Freight paid
(c) Transit insurance paid

(d) Brokerage paid

Solution: Demurrage is a penalty imposed by the transporter for delay in uploading or offloading of materials. It is an abnormal cost and not included with cost of purchase

Q.11 Identify the correct sequence of material procurement amongst the followings

(a) Request for proposal (RFP), Purchase Order, Bill of Material, Goods Received Note (GRN)
(b) Material Requisition Note (MRN), Request for proposal (RFP), Purchase Order, Goods Received Note (GRN)
(c) Notice Inviting Tender (NIT), Purchase Requisition, Purchase Order, Goods Received Note (GRN)
(d) Purchase Requisition, Notice Inviting Tender (NIT), Purchase Order, Bill of Materials.

Solution: Material requisition causes the requirement of purchase and the rest follow.

Q.12 This system of inventory classification, classify inventory according to their relative importance, namely, their value and frequency of replenishment during a period.

(a) Fast, Slow and Non-moving (FSN)
(b) ABC Analysis
(c) Vital, Essential and Desired (VED)
(d) High, Medium and Low {HML)

Solution: ABC system exercises discriminating control over different items of inventory on the basis of the investment involved.

Q.13 At which of the following level fresh order should be placed for replenishment of stock:

(a) Minimum stock level
(b) Maximum stock level
(c) Re-order level
(d) Danger stock level

Solution: This level lies between minimum and the maximum levels in such a way that before the material ordered is received into the stores.

Q.14 Which of the following is NOT true about Government e Marketplace (GeM):

(a) It aims to enhance transparency, efficiency and speed in public procurement.
(b) It provides the tools of e-bidding, reverse e-auction and demand aggregation to facilitate the government users.
(c) The participants of this marketplace are public sector undertakings.
(d) The purchases through GeM are authorised by the Ministry of Finance.

Solution: Though GeM is mandatory for purchases made by public sector undertakings but participants can be anybody.

Q.15 Minimum level for the component A is:

(a) 300 units
(b) 250 units
(c) 150 units
(d) 200 units

Solution: Minimum level for component A = 450 units - (50 units x 5 weeks) = 200 units

Q.16 A Ltd. produces a final product X, which requires two components, A and B. The following are the information related to both the components: Normal usage 50 per week each Maximum usage 75 per week each Minimum usage 25 per week each Re-order quantity A: 300; B: 500 Re-order period A: 4 to 6 weeks B: 2 to 4 weeks Re-order level for the component A is:

(a) 300 units
(b) 150 units
(c) 450 units
(d) 200 units

Solution: Re-ordering level for component A= 75 units 6 weeks = 450 units

Q.17 While setting the quantity to be re-ordered, consideration is given to:

(a) maintenance of minimum level of stock
(b) maintenance of maximum level of stock
(c) maintenance of average stock level.
(d) maintenance of minimum carrying cost.

Solution: While setting the quantity to be re-ordered, consideration is given to the maintenance of minimum level of stock, re-order level, minimum delivery time and the cost.

Q.18 Which of the following method of inventory valuation is considered suitable in times of falling price:

(a) Standard cost method
(b) Cost price method
(c) FIFO method
(d) LIFO method

Solution: the material cost charged to production is high while the replacement cost of materials remains low.

Q.19 The document which specifies the standard quantities and qualities of materials required for producing a product is known as:. The document which specifies the standard quantities and qualities of materials required for producing a product is known as:

(a) Purchased Order
(b) Bill of Material
(c) Material Requisition
(d) Purchase Requisition

Solution: Bill of material is a detailed list specifying the standard quantities and qualities of materials and components required for producing a product or carrying out of any job

Q.20 JIT inventory management is also known as:

(a) Demand Push system of production
(b) Supply Push system of production
(c) Demand Pull system of production
(d) Supply Pull system of production

Solution: JIT inventory is also known as 'Demand pull' or 'Pull through' system of production.

Answers:

1	2	3	4	5	6	7	8	9	10
B	C	A	B	C	B	D	B	C	A
11	12	13	14	15	16	17	18	19	20
B	B	C	C	D	C	A	C	B	C

3 CHAPTER

EMPLOYEE COST

Q.N	QUESTIONS

1. Explain the difference between Direct & Indirect Employee Cost.

DIRECT EMPLOYEE COST	INDIRECT EMPLOYEE COST
1. It is the cost incurred in payment of employees who are directly engaged in the production process.	**1.** Cost incurred for payment of employees who are not directly engaged in the production process.
2. It is the cost incurred in payment of employees who are directly engaged in the production process.	**2.** Indirect employee cost is apportioned on some appropriate basis.
3. Direct employee cost varies with the volume of production and has positive relationship with the volume.	**3.** Indirect employee cost may not vary with the volume of production.

2. What are the main points which need consideration for controlling employee costs ?

The main points which need consideration for controlling employee costs are the following:

(i) Assessment of manpower requirements. **(ii)** Control over time-keeping and time-booking.
(iii) Time & Motion Study. **(iv)** Control over idle time and overtime.
(v) Control over employee turnover. **(vi)** Wage and Incentive systems.
(vii) Job Evaluation and Merit Rating. **(viii)** Employee productivity.

3. What are the Objectives of Time-keeping ?

Correct recording of employees' attendance time is of utmost importance where payment is made on the basis of time worked. Where payment is made by results viz; straight piece work, it would still be necessary to correctly record attendance for the purpose of ensuring that proper discipline and adequate rate of production are maintained. The objectives of time-keeping are as follows:

(i) For the preparation of payrolls. **(ii)** For calculating overtime.
(iii) For ascertaining and controlling employee cost. **(iv)** For ascertaining idle time.
(v) For disciplinary purposes. **(vi)** For overhead distribution.

4. What are the Manual methods of Time Keeping ?

(a) Attendance Register Method- Under this method, an attendance register is kept to record the arrival and departure time of an employee. This method is simple and inexpensive and is suitable for small organisations. However, this method may lead to dishonest practice of time manipulation by way of recording wrong time and back date entry in collusion with time keeper.

(b) Metal Disc/ Token Method- This method of time recording is very old and is almost obsolete in practice. Under this method, each employee is allotted a metal disc or a token with a hole bearing his identification number. The token is kept or handed to the time keeper who record the token number in his register. Like attendance register method, this method also has some disadvantages like error in recording, proxy attendance etc.

5. What are the Mechnical methods of Time Keeping ?

(a) Punch Card Attendance- Under this method, each employee is provided a card for marking attendance. A punch card contains data related with the employee in digital form. In punch card attendance system, an employee needs to either insert or wave his card to a card reader which then ensures whether the correct person is logging in and/or out. This system does not require to employ any time keeper and minimises the risk of recording error and time manipulation.

(b) Bio-Metric Attendance system- Under bio-metric attendance system attendance is marked by recognizing an employee on the basis of physical and behavioral traits. An employee's unique identity like fingerprint, face and retina image etc. are kept in a database which is matched at the time of marking of attendance before the attendance device for this purpose. Bio-metric attendance system includes fingerprint recognition system, face recognition system, Time and attendance tracking technology etc. This system reduces the risk of time manipulation and proxy attendance. However, it may not be suitable for small organizations due to cost associated with set-up and maintenance.

6. What are requisites of a Good Time-Keeping System ?

A good time-keeping system should have following requisites:

1. System of timekeeping should be such which should not allow proxy for another employee under any circumstances.
2. There should also be a provision of recording of time of piece employees so that regular attendance and discipline may be maintained. This is necessary to maintain uniformity of flow of production.
3. Time of arrival as well as time of departure of employees should be recorded so that total time of employees may be recorded and wages may be calculated accordingly.
4. As far as possible, method of recording of time should be mechanical so that chances of disputes regarding time may not arise between employees and the time-keeper.
5. Late-comers should record late arrivals. Any relaxation by the time- keeper in this regard will encourage indiscipline.
6. The system should be simple, smooth and quick. Unnecessary queuing for marking attendance should be avoided.
7. The system should be reviewed and maintained periodically to prevent any error.

7. What are the Advantages & Disadvantages of Rowan Premium Plan ?

Advantages	Disadvantages
1. It is claimed to be a fool-proof system in as much as a worker can never double his earnings even if there is bad rate setting.	1. The system is a bit complicated.
2. It is admirably suitable for encouraging moderately efficient workers as it provides a better return for moderate efficiency than under the Halsey Plan.	2. The incentive is weak at a high production level where the time saved is more than 50% of the time allowed.

3. The sharing principle appeals to the employer as being equitable.	**3.** The sharing principle is not generally welcomed by employees.

8. What are the Advantages & Disadvantages of Halsey Premium Plan ?

Advantages	Disadvantages
1. Time rate is guaranteed while there is opportunity for increasing earnings by increasing production.	**1.** Incentive is not so strong as with piece rate system. In fact the harder the worker works, the lesser he gets per piece.
2. The system is equitable in as much as the employer gets a direct return for his efforts in improving production methods and providing better equipment.	**2.** The sharing principle may not be liked by employees.

ICAI MCQs

	Questions
Q.1	Idle time which arises due to time interval between one job and another is:
	(a) Normal idle time and is treated as part of cost of production. (b) Abnormal idle time and is treated as item of profit & loss a/c. (c) Normal idle time and is not treated as part of cost of production. (d) Normal idle time and is treated as item of profit & loss a/c. Solution: It is the time which cannot be avoided or reduced in the normal course of business.
Q.2	If overtime is resorted to make up a shortfall in production due to wrong estimation of sales department, the overtime premium paid is charged to:
	(a) The production department as overhead cost. (b) All the departments on the basis of labours hours. (c) The Sales department as overhead cost. (d) Costing profit and loss account. Solution: If overtime is worked in a department due to the fault of another department, the overtime premium should be charged to the latter department.
Q.3	Idle time which arises due to non-availability of raw materials, strikes, lockouts, poor supervision, fire, flood etc.
	(a) Normal idle time and is treated as part of cost of production. (b) Abnormal idle time and is treated as item of profit & loss a/c. (c) Normal idle time and is not treated as part of cost of production. (d) Normal idle time and is treated as item of profit & loss a/c. Solution: Time lost due to the above reasons are abnormal and the cost of the idle time is not treated as cost of production.
Q.4	Idle time which arises due to setting up for the machine is:
	(a) Normal idle time and is treated as part of cost of production. (b) Abnormal idle time and is treated as item of profit & loss a/c. (c) Normal idle time and is not treated as part of cost of production. (d) Normal idle time and is treated as item of profit & loss a/c. Solution: It is the time which cannot be avoided or reduced in the normal course of business.
Q.5	If overtime is resorted to meet the sudden demand on account of an earthquake, the overtime premium paid is charged to:
	(a) the production department as overhead cost. (b) all the departments on the basis of labour hours. (c) the sales department as overhead cost.

(d) costing profit and loss account.

Solution: Overtime worked on account of abnormal conditions such as flood, earthquake etc., should not be charged to cost, but to costing profit and loss account.

Q.6 If the time saved is less than 50% of the standard time, then the wages under Rowan and Halsey premium plan on comparison gives -

(a) More wages to workers under Rowan plan than Halsey plan
(b) More wages to workers under Halsey plan than Rowan plan
(c) Equal wages under two plans
(d) None of the above

Solution: Self Explanatory

Q.7 Idle time which arises due to power failure, breakdown of machines is:

(a) Normal idle time and is treated as part of cost of production.
(b) Abnormal idle time and is treated as item of profit & loss a/c.
(c) Normal idle time and is not treated as part of cost of production.
(d) Normal idle time and is treated as item of profit & loss a/c.

Solution: Failure of power and breakdown of machine is controllable and can be avoided.

Q.8 Idle time which arises due to loss of time between factory gate and the place of work is:

(a) Normal idle time and is treated as part of cost of production.
(b) Abnormal idle time and is treated as item of profit & loss a/c.
(c) Normal idle time and is not treated as part of cost of production.
(d) Normal idle time and is treated as item of profit & loss a/c.

Solution: Cash discount is not deducted from the purchase price. It is treated as interest and finance charges.

Q.9 If overtime is resorted at the desire of the customer, the overtime premium paid is charged to:

(a) the concerned department as overhead cost.
(b) the job (customer order) directly.
(c) all the departments on the basis of labour hours.
(d) costing profit and loss account.

Solution:

If Overtime is resorted to at the desire of the customer, then overtime premium may be charged to the job directly.

Answers:

1	2	3	4	5	6	7	8	9
A	C	B	A	D	A	B	A	B

4 CHAPTER

OVERHEADS

Q.N	QUESTIONS
1.	**What are the Advantages of Departmentalisation ?**

The collection of overheads department wise gives rise to the following advantages:

(a) Better Estimation of Expenses: Some expenses which relate to the departments will be estimated almost on an exact basis and, to that extent, the accuracy of estimation of overheads will be higher.

(b) Better Control: For the purpose of controlling expenses in a department, it is obviously necessary that the figures in relation to each department should be separately available. It is one of the main principles of control that one should know for each activity how much should have been spent and how much is actually spent. If information about expenses is available only for factory as a whole, it will not be possible to know which department has been over spending.

(c) Ascertainment of Cost for each department: From the point of view of ascertaining the cost of each job, the expenses incurred in the departments through which the job or the product has passed should be known. It is only then that the cost of the job or the product can be charged with the appropriate share of indirect expenses. It is not necessary that a job must pass through all the departments or that the work required in each department should be the same for all jobs. It is, therefore, necessary that only appropriate charge in respect of the work done in the department is made. This can be done only if overheads for each department are known separately.

(d) Suitable Method of Costing: A suitable method of costing can be followed differently for each department e.g., batch costing when a part is manu- factured, but single or output costing when the product is assembled.

2. Explain Advantages and Disadvantages of Percentage of Labour Cost Method for recovery of Overheads.

ADVANTAGES	DISADVANTAGES
(i) The method is simple and economical to apply.	**(i)** It gives rise to certain inaccuracies due to the time factor not being given full importance.
(ii) The time factor is given recognition even if indirectly.	**(ii)** Where machinery is used to some extent in the process of manufacture, an allowance for such a factor is not made.
(iii) Total expenses recovered will not differ much from the estimated figure since total wages paid are not likely to fluctuate much.	**(iii)** It does not provide for varying skills of workers

3. Explain Different types of machine Hour Rate.

Machine hour rate implies, cost of running a machine for an hour to produce goods. There are two methods of computing machine hour rates:

(i) Direct Machine hour rate: According to the first method, only the expenses directly or immediately connected with the operation of the machine are taken into account e.g., power, depreciation, repairs and maintenance, insurance, etc. The rate is calculated by dividing the estimated total of these expenses for a period by the estimated number of operational hours of the machines during the period.

(ii) Comprehensive Machine hour rate: It will be obvious, however, that in addition to the expenses stated above there may still be other manufacturing expenses such as supervision charges, shop cleaning and lighting, consumable stores and shop supplies, shop general labour, rent and rates, etc. incurred for the department as a whole and, hence, not charged to any particular machine or group of machines. In order to see that such expenses are not left out of production costs, one should include a portion of such expenses to compute the machine hour rate. Alternatively, the overheads not directly related to machines may be absorbed on the basis of Productive Labour Hour Rate Method or any other suitable method.

By the machine hour rate method, manufacturing overhead expenses are charged to production on the basis of number of hour machines are used on jobs or work orders. Here each machine or group of machines is treated as a cost centre. Overheads apportioned to a production department are further apportioned to machines or group of machines. These apportioned costs are divided by the estimated productive machine hour to get machine hour rate.

The steps involved in determining of Machine hour rate are as follows:

Step1: Calculate total of overheads apportioned to a production department (as discussed earlier in this chapter)

Step 2: Apportion further these overheads to machines or group of machines in the department.

Step 3: Allocate machine specific costs (directly identifiable with the machine)

Step 4: Estimate total productive hours for the machine

Step 5: Aggregate overheads as apportioned in step-2 and allocated in step-3 and divide it by Estimated total productive hours

Step 6: The resultant figure is machine hour rate

4. Explain Advantages & Disadvantages of Machine Hour Rate.

ADVANTAGES	DISADVANTAGES
(1) Where machines are the main factor of production, it is usually the best method of charging machine operating expenses to production.	**(1)** Additional data concerning the operation time of machines, not otherwise necessary, must be recorded and maintained.
(2) The under-absorption of machine overheads would indicate the extent to which the machines have been idle.	**(2)** As general department rates for all the machines in a depart- ment may be suitable, the computation of a separate machine hour rate for each machine or group of machines would mean further additional work.
(3) It is particularly advantageous where one operator attends to several machines (e.g. automatic screw manufacturing machine), or where several operators are engaged on the machine e.g. the belt press used in making conveyer belts.	

5. Explain Different types of Capacity.

(i) Installed/ Rated capacity: It refers to the maximum capacity of producing goods or providing services. Installed capacity is determined either on the basis of technical specification or through a technical evaluation. It is also known as theoretical capacity and is could not be achieved in normal operating circumstances.

(ii) Practical capacity: It is defined as actually utilised capacity of a plant. It is also known as operating capacity. This capacity takes into account loss of time due to repairs, maintenance, minor breakdown, idle time, set up time, normal delays, Sundays and holidays, stock taking etc. Generally, practical capacity is taken between 80 to 90% of the rated capacity. It is also used as a base for determining overhead rates. Practical capacity is also called net capacity or available capacity.

(iii) Normal capacity: Normal capacity is the volume of production or services achieved or achievable on an average over a period under normal circumstances taking into account the reduction in capacity resulting from planned maintenance.

(iv) Actual capacity: It is the capacity actually achieved during a given period. It is presented as a percentage of installed capacity.

(v) Idle capacity: It is that part of the capacity of a plant, machine or equipment which cannot be effectively utilised in production.

- **(a) Normal Idle Capacity:** It is the difference between Installed capacity and Normal capacity.
- **(b) Abnormal Idle Capacity:** It is the difference between Normal capacity and Actual capacity utilization where the actual capacity is lower than the normal capacity.

6. Explain difference between Allocation & Apportionment.

ALLOCATION	APPORTIONMENT
(i) Allocation deals with the whole items of cost, which are identifiable with any one department. For example, indirect wages of three departments are separately obtained and hence each department will be charged by the respective amount of wages individually.	**(i)** Apportionment deals with the proportions of an item of cost for example; the cost of the benefit of a service department will be divided between those departments which has availed those benefits.
(ii) Allocation is a direct process of charging expenses to different cost centres.	**(ii)** Apportionment is an indirect process because there is a need for the identification of the appropriate portion of an expense to be borne by the different departments benefited.

7. Explain Treatment of Idle capacity costs.

Idle capacity costs can be treated in product costing, in the following ways:

(a) If the idle capacity cost is due to unavoidable reasons such as repairs, maintenance, changeover of job etc. a supplementary overhead rate may be used to recover the idle capacity cost. In this case, the costs are charged to the production capacity utilised.

(b) If the idle capacity cost is due to avoidable reasons such as faulty planning, power failure etc.; the cost should be charged to costing profit and loss account.

(c) If the idle capacity cost is due to seasonal factors, then, the cost should be charged to the cost of production by inflating overhead rates.

8. Explain treatment of Following Items in Costing.

(i) Interest and financing charges: It includes any payment in nature of interest for use of non-equity funds and incidental cost that an entity incurs in arranging those funds. Example of interest and financing charges are interest on borrowings, financing charges in respect of finance leases, cash discount allowed to customers. The term interest and financing charges, finance costs and borrowing costs are used interchangeably. It does not include imputed costs.
Interest and financing charges shall be presented in the cost statement as a separate item of cost of sales.

(ii) Depreciation: Depreciation "is the diminution in the intrinsic value of an asset due to use and/or the lapse of time." Depreciation is thus the result of two factors viz., the use, and the lapse of time. We know that each fixed asset loses its intrinsic value due to their continuous use and as such the greater the use the higher is the amount of depreciation. The loss in the intrinsic value may also arise even if the asset in question is not in service. It shall be traced to the cost object to the extent economically feasible. Where it is not directly traceable it should be assigned using either or two principles i.e. (i) Cause and Effect and (ii) Benefit received.

(iii) Packing expenses: Cost of primary packing necessary for protecting the product or for convenient handling, should become a part of the production cost. The cost of packing to facilitate

the transportation of the product from the factory to the customer should become a part of the distribution cost. If the cost of special packing is at the request of the customer, the same should be charged to the specific work order or the job. The cost of fancy packing necessary to attract customers is an advertising expenditure. Hence, it is to be treated as a selling overhead.

(iv) Fringe benefits: These are the additional payments or facilities provided to the workers apart from their salary and direct cost-allowances like house rent, dearness and city compensatory allowances. These benefits are given in the form of overtime, extra shift duty allowance, holiday pay, pension facilities etc. These indirect benefits stand to improve the morale, loyalty and stability of employees towards the organisation. If the amount of fringe benefit is considerably large, it may be recovered as direct charge by means of a supplementary wage or labour rate; otherwise these may be collected as part of production overheads.

(v) Expenses on removal and re-erection of machines: Expenses are sometime incurred on removal and re-erection of machinery in factories. Such expenses may be incurred due to factors like change in the method of production; an addition or alteration in the factory building, change in the flow of production, etc. All such expenses are treated as production overheads. When amount of such expenses is large, it may be spread over a period of time. If such expenses are incurred due to faulty planning or some other abnormal factor, then they may be charged to costing Profit and Loss Account.

(vi) Bad debts: There is no unanimity among different authors of Cost Accounting about the treatment of bad debts. One view is that 'bad debts' should be excluded from cost. According to this view bad debts are financial losses and therefore, they should not be included in the cost of a particular job or product. According to another view it should form part of selling and distribution overheads, especially when they arise in the normal course of trading. Therefore bad debts should be treated in cost accounting in the same way as any other selling and distribution cost. However extra ordinarily large bad debts should not be included in cost accounts.

(vii) Training expenses: Training is an essential input for industrial workers. Training expenses in fact includes wages of workers, costs incurred in running training department, loss arising from the initial lower production, extra spoilage etc. Training expenses of factory workers are treated as part of the cost of production. The training expenses of office; sales or distribution workers should be treated as office; sales or distribution overhead as the case may be. These expenses can be spread over various departments of the concern on the basis of the number of workers on roll.

Training expenses would be abnormally high in the case of high labour turnover such expenses should be excluded from costs and charged to the costing profit and loss account.

(viii) Canteen expenses: The subsidy provided or expenses borne by the firm in running the canteen should be regarded as a production overhead. If the canteen is meant only for factory workers therefore this expenses should be apportioned on the basis of the number of workers employed

in each department. If office workers also take advantage of the canteen facility, a suitable share of the expenses should be treated as office overhead.

(ix) Carriage and cartage expenses: It includes the expenses incurred on the movement (inward and outwards) and transportation of materials and goods. Transportation expenses related to direct material may be included in the cost of direct material and those relating to indirect material (stores) may be treated as factory overheads. Expenses related to the transportation of finished goods may be treated as distribution overhead.

(x) Expenses for welfare activities: All expenses incurred on the welfare activities of employees in a company are part of general overheads. Such expenses should be apportioned between factory, office, selling and distribution overheads on the basis of number of persons involved.

(xi) Night shift allowance: Workers in the factories, which operate during night time are paid some extra amount known as 'night shift allowance'. This extra amount is generally incurred due to the general pressure of work beyond normal capacity level and is treated as production overhead and recovered as such.

If this allowance is treated as part of direct wages, the jobs/production carried at night will be costlier than jobs/production performed during the day. However, if additional expenditure on night shift is incurred to meet some specific customer order, such expenditure may be charged directly to the order concerned. If night shifts are run due to abnormal circumstances, the additional expenditure should be charged to the costing profit and loss account.

(xii) Research and Development Expenses: The Terminology defines research expenses as "the expenses of searching for new or improved products, new application of materials, or new or improved methods." Similarly, development expenses are defined as "the expenses of the process which begins with the implementation of the decision to produce a new or improved product."

If research is conducted in the methods of production, the research expenses should be taken separately while computing cost of production; while the expenditure becomes a part of the administration overhead if research relates to administration. Similarly, market research expenses are charged to the selling and distribution overhead.

Development costs incurred in connection with a particular product should be charged directly to that product. Such expenses are usually treated as "deferred revenue expenses," and recovered as a cost per unit of the product when production is fully established.

General research expenses of a routine nature incurred on new or improved methods of manufacture or the improvement of the existing products should be charged to the general overhead.

Even in this case, if the amount involved is substantial it may be treated as a deferred revenue expenditure, and spread over the period during which the benefit would accrue. Expenses on fundamental research, not relating to any specific product, are treated as a part of the administration overhead. Where research proves a failure, the cost associated with it should be excluded from costs and charged to the costing Profit and Loss Account.

ICAI MCQs

	Questions
Q.1	Primary packing cost is a part of:
	(a) Direct material cost (b) Production Cost (c) Selling overheads (d) Distribution overheads
Q.2	Director's remuneration and expenses form part of:
	(a) Production overhead (b) Administration overhead (c) Selling overhead (d) Distribution overhead
Q.3	The allotment of whole items of cost to cost centres or cost units is called:
	(a) Overhead absorption (b) Cost apportionment (c) Cost allocation (d) None of the above
Q.4	refers to the maximum capacity of producing goods or services
	(a) Rated Capacity (b) Normal Capacity (c) Practical capacity (d) Actual Capacity Solution: Self Explanatory
Q.5	Which of the following is not the classification of overhead based on its functionality?
	(a) Factory Overhead (b) Administrative Overhead (c) Fixed Overhead (d) Selling Overhead
Q.6	Charging to a cost centre those overheads that result solely for the existence of that cost Centre is known as
	(a) A. Apportionment (b) B. Allocation (c) C. Absorption (d) D. Allotment

Solution: Self Expanatory

Q.7 Normal capacity of a plant refers to the difference between:

(a) Maximum capacity and practical capacity
(b) Practical capacity and normal capacity
(c) Practical capacity and estimated idle capacity as revealed by long term sales trend.
(d) Maximum capacity and actual capacity

Solution: Self Explanatory

Q.8 "Fixed overhead costs are not affected in monetary terms during a given period by a change in output". But this statement holds good provided:

(a) Increase in output is not substantial
(b) Increase in output is substantial
(c) Both (a) and (b)
(d) None of the above

Q.9 Which of the following overhead cost may not be apportioned on the basis of direct wages?

(a) Worker's Holiday Pay
(b) Perquisites to worker
(c) ESI contribution
(d) Managerial Salaries

Solution: Self Explanatory

Q.10 Bad debt is an example of:

(a) Distribution overhead
(b) Production overhead
(c) Selling overhead
(d) Administration overhead

Solution: Self Explanatory

Q.11 When the amount of under-or-over-absorption is significant, it should be disposed of by

(a) Defer it to the next accounting year
(b) Calculate supplementary rates and charge it to Cost of goods sold, WIP, Finished Goods
(c) Transfer it to costing profit and loss A/c
(d) None of above

Solution: Self Explanatory

Q.12 Capacity is defined as actually utilised capacity of a plant.

(a) Theoretical
(b) Installed
(c) Practical

(d) Normal

Q.13 The difference between actual factory overhead and absorbed factory overhead will be usually at the minimum level, provided pre- determined overhead rate is based on:

(a) Maximum capacity
(b) Direct labour hours
(c) Machine hours
(d) Normal capacity

Solution: Self Explanatory
37,500 = 25,000.

Q.14 The accountant for Brilliant Tools Ltd applies overhead based on machine hours. The budgeted overhead and machine hours for the year are 130,000 and 8,000, respectively. The actual overhead and machine hours incurred were 137,500 and 10,000. The cost of goods sold and inventory data compiled for the year is as follows:- Direct Material 25,000 Cost of Goods Sold 225,000 Units: WIP
50,000 and Finished Goods 75,000 What is the amount of over/underapplied overhead for the year?

(a) Overapplied by 25,000
(b) Underapplied by 25,000
(c) Overapplied by 32,500
(d) Underapplied by 32,500

Solution: Predetermined Overhead Rate = Budgeted Overhead / Budgeted hours i.e. 130,000 / 8,000 = 16.25 per hour. Hence, applied overhead= 10,000 X 16.25 = 162,500. Since actual overhead incurred were 137,500, hence the overhead were over applied by 162,500 -

Answers:

1	2	3	4	5	6	7
B	B	C	A	C	B	C
8	9	10	11	12	13	14
A	D	D	C	B	C	A

5 CHAPTER ABC

Q.N	QUESTIONS
1.	**Explain the suitability or Usefulness of ABC.**

ABC is particularly needed by organisations for product costing in the following situations:

1. High amount of overhead: When production overheads are high and form significant costs, ABC is more useful than traditional costing system.

2. Wide range of products: ABC is most suitable, when, there is diversity in the product range or there are multiple products.

3. Presence of non-volume related activities: When non-volume related activities e.g. material handling, inspection set-up, are present significantly and traditional system cannot be applied, ABC is a superior and better option. ABC will identify non-value-adding activities in the production process that might be a suitable focus for attention or elimination.

4. Stiff competition: When the organisation is facing stiff competition and there is an urgent req. to compute cost accurately and to fix the selling price according to the market situation, ABC is very useful. ABC can also facilitate in reducing cost by identifying non-value-adding activities in the production process that might be a suitable focus for attention or elimination.

2. Explain Difference between Traditional and Absorption Costing.

ACTIVITY BASED COSTING	TRADITIONAL ABSORPTION COSTING
1. Overheads are related to activities and grouped into activity cost pools.	**1.** Overheads are related to cost centers/ departments.
2. Costs are related to activities and hence are more realistic.	**2.** Costs are related to cost centers and hence not realistic of cost behaviour.
3. Activity–wise cost drivers are determined.	**3.** Time (Hours) are assumed to be the only cost driver governing costs in all departments.
4. Activity–wise recovery rates are determined and there is no concept of a single overhead recovery rate.	**4.** Either multiple overhead recovery rates (for each department) or a single overhead recovery rate may be determined for absorbing OHs.
5. Cost are assigned to cost objects, e.g. customers, products, services, departments, etc.	**5.** Costs are assigned to Cost Units i.e. to products, or jobs or hours.
6. Essential activities can be simplified and unnecessary activities can be eliminated. Thus, the corresponding costs are also	**6.** Cost Centers/ departments cannot be eliminated. Hence, not suitable for cost control.

reduced/ minimized. Hence ABC aids cost control.	

3. What are the different stages IN ABC ?

The different stages in ABC calculations are listed below:

(1) Identify the different activities within the organisation: Usually the number of cost centres that a traditional overhead system uses is quite small, say up to fifteen. In ABC, the number of activities will be much more, say 200; the exact number will depend on how the management subdivides the organisation's activities. It is possible to break the organisation down into many very small activities.

(2) Relate the overheads to the activities, both support and primary, that caused them. This creates 'cost pools' or 'cost buckets'. This will be done using resource cost drivers that reflect causality.

(3) Support activities are then spread across the primary activities on some suitable base, which reflects the use of the support activity. The base is the cost driver that is the measure of how the support activities are used.

(4) Determine the activity cost drivers that will be used to relate the overheads collected in the cost pools to the cost objects/products. This is based on the factor that drives the consumption of the activity. The question to ask is – what causes the activity to incur costs? In production scheduling, for example, the driver will probably be the number of batches ordered.

(5) Calculate activity cost driver rates for each activity, just as an overhead absorption rate would be calculated in the traditional system.The activity driver rate can be used not only to identify cost of products, as in traditional absorption costing, but it can also be used for costing other cost objects such as customers/customer segments and distribution channels.

4. What are Level of Activities under ABC ?

Level of Activities	Meaning	Example
1. Unit Level Activities	These are those activities for which the consumption of resources can be identified with the number of units produced.	•The use of indirect materials /consumables tends to increase in proportion to the number of units produced. •The inspection or testing of every item produced, if this was deemed necessary or, perhaps more likely, every 100th item produced.
2. Batch Level Activities	The activities such as setting up of a machine or processing a purchase order are performed each time a batch	•Material ordering–where an order is placed for every batch of production •Machine set-up costs–where

	of goods is produced. The cost of batch related activities varies with number of batches made, but is common (or fixed) for all units within the batch.	machines need resetting between each different batch of production. •Inspection of products where the first item in every batch is inspected rather than every 100th item quoted above.
3. Product Level Activities	These are the activities which are performed to support different products in product line	• Designing the product, • Producing parts specifications • Keeping technical drawings of products up to date.
4. Facilities Level activities	These are the activities which cannot be directly attributed to individual products. These activities are necessary to sustain the Mnf. process and are common and joint to all products manufactured	• Maintenance of buildings • Plant security

5. What are Advantages of ABC ?

The main advantages of using Activity Based Costing are:

(i) More accurate costing of products/services.
(ii) Overhead allocation is done on logical basis.
(iii) It enables better pricing policies by supplying accurate cost information.
(iv) Utilizes unit cost rather than just total cost
(v) Help to identify non-value added activities which facilitates cost reduction.
(vi) It is helpful to the organizations with multiple products.
(vii) It highlights problem areas which require attention of the management.

6. What are Dis-Advantages or Limitations of ABC ?

The main limitations using Activity Based Costing are:

(i) It is more expensive, particularly in comparison with traditional costing system.
(ii) It is not helpful to the small organizations.
(iii) It may not be applied to organizations with limited products.
(iv) Selection of the most suitable cost driver may not be easy/ may be difficult or complicated.

7. What are the requirements to Implement ABC ?

A number of distinct practical stages are required in the ABC implementation which are given as below:

(1) **Staff Training:** The co-operation of the workforce is critical to the successful implementation of ABC. Staff training should be done to create an awareness on the purpose of ABC.
(2) **Process Specification:** Informal, but structured interviews with key members of personnel will identify the different stages of the production process, the commitment of resources to each, processing times and bottlenecks.
(3) **Activity Definition:** The activities must be defined clearly in the early stage in order to manage the problems, if any, effectively. There might be overloading of information from the new data, but the same is needed in codification.

(4) **Activity Driver Selection:** Cost driver for each activity shall be selected.

(5) **Assigning Cost:** A single representative activity driver can be used to assign costs from the activity pools to the cost objects.

8. Explain applicability of ABC as Decision Making tool.

ABC can act as a decision making tool in the following ways:

(i) ABC along with some other cost management technique can be utilized to improve performance and profitability of an organization.

(ii) Wholesale distributors can gain significant advantage in the decision- making process through implementation of ABC concepts by correlating costs to various activities. Introduction of new product or vendor can be better decided through ABC.

(iii) ABC can assist in decisions related to facility and resource expansion. Often the basis for relocation or opening of a new distribution center is based on cost associations. Reduction in freight or other logistic costs can offset the expense of the new facility, staff or equipment. The ABC model can identify the specific cost elements being targeted, providing a much clearer picture which aids in management actions.

(iv) ABC augments decision support for human resources. Since the activity (and therefore costs) can be associated to an individual, new levels of financial performance can be determined. This might be evident in the case of branch management or sales.

(v) Companies who wish to determine price based on cost plus markup basis find ABC method of costing very relevant and are able to determine competitive prices for their products.

9. Explain ABM (Activity Based Management).

The term Activity Based Management (ABM) is used to describe the cost management application of ABC. The use of ABC as a costing tool to manage costs at activity level is known as Activity Based Management (ABM). ABM is a discipline that focuses on the efficient and effective management of activities as the route to continuously improving the value received by customers. ABM utilizes cost information gathered through ABC.

The various types of analysis involved in ABM are as follows:

(1) **Cost Driver Analysis:** The factors that cause activities to be performed need to be identified in order to manage activity costs. Cost driver analysis identifies the causal factors.

(2) **Activity Analysis.**

- **(a)** **Value-Added Activities (VA):** The value-added activities are those activities which are indispensable in order to complete the process. The customers are usually willing to pay (in some way) for these services. For example, polishing furniture by a manufacturer dealing in furniture is a value added activity.
- **(b)** **Non-Value-Added Activities (NVA):** The NVA activity represents work that is not valued by the external or internal customer. NVA activities do not improve the quality or function of a product or service, but they can adversely affect costs and prices. Moving materials and machine set up for a production run are examples of NVA activities.

(3) **Performance Analysis:** Performance analysis involves the identification of appropriate measures to report the performance of activity centres or other organisational units, consistent with each unit's goals and objectives.

10. Explain uses of ABM.

Activity Based Management can be used in the following ways

(i) Cost Reduction: ABM helps the organisation to identify costs against activities and to find opportunities to streamline or reduce the costs or eliminate the entire activity, especially if there is no value added.

(ii) Business Process Re-engineering: Business process re-engineering involves examining business processes and making substantial changes to how organisation currently operates. ABM is a powerful tool for measuring business performance, determining the cost of business output and is used as a means of identifying opportunities to improve process efficiency and effectiveness.

(iii) Benchmarking: Benchmarking is a process of comparing of ABC-derived activity costs of one segment of company with those of other segments. It requires uniformity in the definition of activities and measurement of their costs.

(iv) Performance Measurement: Many organisations are now focusing on activity performance as a means of facing competitors and managing costs by monitoring the efficiency and effectiveness of activities.

11. Explain Activity Based Budgeting (ABB)

Activity based budgeting analyse the resource input or cost for each activity. It provides a framework for estimating the amount of resources required in accordance with the budgeted level of activity. Actual results can be compared with budgeted results to highlight both, in financial and non-financial terms, those activities with major discrepancies from budget for potential reduction in supply of resources. It is a planning and control system which seeks to support the objectives of continuous improvement. It means planning and controlling the expected activities of the organization to derive a cost-effective budget that meet forecast workload and agreed strategic goals. ABB is the reversing of the ABC process to produce financial plans and budgets.

Key Elements of ABB

The three key elements of activity based budgeting are as follows:-

- Type of work to be done
- Quantity of work to be done
- Cost of work to be done

Benefits of ABB

Few benefits of activity based budgeting are as follows:-

(i) Activity Based Budgeting (ABB) can enhance accuracy of financial forecasts and increasing management understanding.

(ii) When automated, ABB can rapidly and accurately produce financial plans and models based on varying levels of volume assumptions.

(iii) ABB eliminates much of the needless rework created by traditional budgeting techniques.

ICAI MCQs

	Questions
Q.1	Steps in ABC include:
	(a) Identification of activities and their respective costs (b) Identification of cost driver of each activity and computation of an allocation rate per activity (c) Allocation of overhead cost to products/ services based on the activities involved (d) All of the above
Q.2	A cost driver is:
	(a) An item of production overheads (b) A common cost which is shared over cost centres (c) Any cost relating to transport (d) An activity which generates costs
Q.3	ABC analysis is an inventory control technique in which:
	(a) Inventory levels are maintained. (b) Inventory is classified into A, B and C category with A being the highest quantity, lowest value. (c) Inventory is classified into A, B and C Category with A being the lowest quantity, highest value. (d) Either b or c. Solution: Self Explanatory
Q.4	The steps involved for installation of ABC in a manufacturing company include the following except:
	(a) Borrowing fund (b) Feasibility study (c) Building up necessary IT infrastructure and training of line employees (d) Strategy and value chain analysis Solution: Self Explanatory
Q.5	Which of the following is not a benefit of ABC?
	(a) Accurate cost allocation (b) Improved decision making (c) Better control on activity and costs (d) Reduction of prime cost

Q.6	In activity based costing, costs are accumulated by activity using:
	(a) Cost drivers (b) Cost objects (c) Cost pools (d) Cost benefit analysis Solution: Self Explanatory
Q.7	Transactions undertaken by support department personnel are the appropriate cost drivers. Find the one which is not appropriate:
	(a) The number of purchase, supplies and customers' orders drives the cost associated with new material inventory, work- in-progress and finished goods inventory (b) The number of production runs undertaken drives production scheduling, inspection and material handling (c) The quality of raw material issued drives the cost of receiving department costs (d) The number of packing orders drives the packing costs Solution: Self Explanatory
Q.8	The key elements of activity based budgeting are:
	(a) Type of activity to be performed (b) Quantity of activity to be performed (c) Cost of activity to be performed (d) All of the above
Q.9	Which of the following statements are true: (1) Activity based Management involves activity analysis and performance measurement. (2) Activity based costing serves as a major source of information in ABM.
	(a) (1) True; (2) False (b) (1) True; (2) True (c) (1) False; (2) True (d) (1) False; (2) False
Q.10	A Cost driver:
	(a) Is a force behind the overhead cost (b) Is an allocation base (c) Is a transaction that is a significant determinant of cost (d) All of the above Solution: Self Explanatory

Answers:

1	2	3	4	5
D	D	C	B	D
6	7	8	9	10
C	C	D	B	D

6 CHAPTER

COST SHEET

Q.N	QUESTIONS
1.	**Advantages of Cost Sheet**
	The main advantages of a Cost Sheet are as follows: **(i)** It provides the total cost figure as well as cost per unit of production. **(ii)** It helps in cost comparison. **(iii)** It facilitates the preparation of cost estimates required for submitting tenders. **(iv)** It provides sufficient help in arriving at the figure of selling price. **(v)** It facilitates cost control by disclosing operational efficiency.
2.	**Explain treatment of following items of Cost in Cost Sheet/Statement**
	(i) **Abnormal costs:** Any abnormal cost, where it is material and quantifiable, shall not form part of cost of production or acquisition or supply of goods or provision of service. Examples of abnormal costs are: **(a)** Cost pertaining to or arising out of a pandemic e.g. COVID-19 **(b)** Cost associated with employees due to sudden lockdown. **(ii)** **Subsidy/Grant/Incentives:** Any such type of payment received/ receivable are reduced from the cost objects to which such amount pertains. **(iii)** **Penalty, fine, damages, and demurrage:** These types of expenses are not form part of cost. **(iv)** **Interest and other finance costs:** Interest, including any payment in the nature of interest for use of non-equity funds and incidental cost that an entity incurs in arranging those funds. Interest and finance charges are not included in cost of production. Interest and Financing Charges shall be presented in the cost statement as a separate item of cost of sales.

ICAI MCQs

	Questions
Q.1	A manufacture has set-up a lab for testing of products for compliance with standards, salary of this lab staffs are part of: (a) Works overheads (b) Quality Control Cost (c) Direct Expenses (d) Research & Development Cost Solution: Self Explanatory
Q.2	Material consumed is 8,00,000, Opening stock of raw material is 2,00,000 and Closing stock of raw material is 175,000. What is the cost of raw material purchased? (a) 11,75,000 (b) 7,75,000 (c) 8,25,000 (d) 4,25,000 Solution: Raw material consumed= opening stock+ Purchase - Closing stock
Q.3	Which of the following is not indirect costs? (a) Research and development cost, Primary packing cost, Admin overheard related to production (b) Cost of making a design, pattern for a specific job (c) Factory supervisor salary, Depreciation on Plant and Machinery (d) Stores and spares consumed, repairs and maintenance of plant and machinery
Q.4	Postage and telegram is an example of: (a) A. Prime Cost (b) B. Production Overheads (c) C. Selling and Distribution Overheads (d) D. Office and Administration Overheads Solution: Self Explanatory
Q.5	Salary paid to factory store staff is part of: (a) Factory overheads (b) Production Cost (c) Direct Employee cost (d) Direct Material Cost
Q.6	The following details are given to you: Raw materials consumed 2,40,000

	Factory overheads 3/ 4 of direct wages Quality control cost and research and development cost 20% of factory cost Cost of production 7,50,000 The amount of direct wages will be:
	(a) 2,50,000 (b) 2,20,000 (c) 2,00,000 (d) 3,00,000 Solution: Hint: Let the wages be 'X' Therefore: Material 240000 Wages 'X' Prime cost 240000+X Factory overheads 0.75X Factory cost 240000 + 1.75X Quality control cost and 20% (240000 + 1.75X) research and development cost Cost of Production 75000 288000 + 2.1X = 750000 X = 220000
Q.7	A Ltd. received an order, for which it purchased a special frame for manufacturing, it is a part of:
	(a) Direct Materials (b) Direct expenses (c) Factory Overheads (d) Administration Overheads
Q.8	The production cost incurred for one unit of finished goods was 80. Direct materials were 1/ 4 of the total cost, and direct labour was 45% of the combined total of direct labour and factory overhead. The cost for direct materials, direct labour and factory overhead will be:
	(a) 20, 27 and 33 respectively (b) 20, 33 and 27 respectively (c) 20, 36 and 24 respectively (d) 20, 24 and 36 respectively Solution: Material cost = 80/ 4 = 20 Labour = 60x45% =27
Q.9	Canteen expenses for factory workers are part of:
	(a) Factory overhead (b) Administration Cost (c) Marketing cost (d) None of the above
Q.10	Depreciation of director's laptop is treated as a part of:
	(a) Administration Overheads (b) Factory Overheads (c) Direct Expenses (d) Research & Development cost. Solution: Self Explanatory

Q.10 Which of the following does not form part of prime cost:

(a) Cost of packing
(b) Cost of transportation paid to bring materials to factory
(c) GST paid on raw materials (input credit cannot be claimed)
(d) Overtime premium paid to workers.

Solution: Self Explanatory

Q.11 Audit fees paid to auditors is part of:

(a) Administration Cost
(b) Production cost
(c) Selling & Distribution cost
(d) Not shown in cost sheet.

Q.12 Generally, for the purpose of cost sheet preparation, costs are classified on the basis of:

(a) Functions
(b) Variability
(c) Relevance
(d) Nature

Q.13 Salary paid to plant supervisor is a part of

(a) Direct expenses
(b) Factory overheads
(c) Quality control cost
(d) Administration cost

Q.14 A company pays royalty to State Government on the basis of production, it is treated as:

(a) Direct Material Cost
(b) Factory Overheads
(c) Direct Expenses
(d) Administration cost.

Solution: Self Explanatory

Answers:

1	2	3	4	5	6	7	8	9	10	11	12	13
B	B	B	D	A	B	B	A	A	A	A	A	A

7 CHAPTER

COST ACCOUNTING

Q.N	QUESTIONS
1.	**What are the important ledgers to be maintained under non-integrated accounting system in the Cost Accounting ?**

The important ledgers to be maintained under non-integrated accounting system in the Cost Accounting are the followings:

(a) Cost Ledger - This is the principle ledger of the cost department in which impersonal accounts are recorded. This ledger is made self-balancing by maintaining therein a Control Account for each subsidiary ledger.

(b) Stores Ledger - It contains an account for each item of stores. The entries in each account maintained in this ledger are made from the invoice, goods received note, material requisitions, material received note etc. Accounts in respect of each item of stores show receipt, issue and balance in physical as well as in monetary terms.

(c) Work-in-Process Ledger - This ledger is also known as job ledger, it contains accounts of unfinished jobs and processes. All material costs, wages and overheads for each job in process are posted to the respective job accounts in this ledger. The balance in a job account represents total balance of job/work-in-process, as shown by the job account.

(d) Finished Goods Ledger - It contains an account for each item of finished product manufactured or the completed job. If the finished product is transferred to stock, a credit entry is made in the work-in-process ledger and a corresponding debit entry is made in this ledger.

2.	**What are the main accounts which are usually prepared when a separate Cost Ledger is maintained ?**

The main accounts which are usually prepared when a separate Cost Ledger is maintained are as follows:

(1) Cost Ledger Control Account - This account is also known as General Ledger Adjustment Account. This account is made to complete double entry. All items of expenditure are credited to this account. Sales are debited to this account and net profit/loss from Costing Profit & Loss A/c is transferred to this account. The balance in this account at the end of the particular period represents the net total of all the balances of the impersonal accounts.

(2) Stores Ledger Control Account – This account is debited for the purchase of material and credited for issue of materials from the stores. The balance in this account indicates the total balance of all the individual stores accounts. Abnormal losses or gains if any in this account are transferred to Costing Profit & Loss Account. Entries are made on the basis of goods received notes and stores requisitions etc.

(3) Wages Control Account - This account is debited with total wages paid (direct and indirect). Direct wages are further transferred to Work-in- Process Control Account and indirect wages to Production Overhead; Administration Overhead or Selling & Distribution Overhead Control Accounts, as the case may be. Wages paid for abnormal idle time are transferred to Costing Profit & Loss Account either directly or through Abnormal Loss Account.

(4) Manufacturing/Production/Works/ Factory Overhead Control Account - This account is debited with indirect costs of production such as indirect material, indirect employee, indirect expenses (carriage inward etc.). Overhead recovered (absorbed) is credited to this Account. The difference between overhead incurred and overhead recovered (i.e. Under Absorption or Over Absorption of Overheads) is transferred to Overheads Adjustment Account.

(5) Work-in-Process Control Account - This account is debited with the total cost of production, which includes—direct materials, direct employee, direct expenses, production overhead recovered, and is credited with the amount of finished goods completed and transferred. The balance in this account represents total balances of jobs/works-in-process, as shown by several job accounts.

(6) Administrative Overhead Control Account - This account is debited with overheads incurred and credited with overhead recovered. The overhead recovered are debited to Finished Goods Control Account, if administrative overhead is related with production activities otherwise to Cost of Sales A/c.The difference between administrative overheads incurred and recovered is transferred to Overhead Adjustment Account.

(7) Finished Goods Control Accounts - This account is debited with the value of goods transferred from Work-in-process Control Account and administration costs recovered (if relates to production activities). This account is credited with Cost of Sales Account. The balance of this account represents the value of goods unsold at the end of the period.

(8) Selling and Distribution Overhead Control Account - This account is debited with selling and distribution overheads incurred and credited with the selling and distribution overheads recovered. The difference between overheads incurred and recovered is transferred usually to Overhead Adjustment Account.

(9) Cost of Sales Account - This account is debited with the cost of finished goods transferred from Finished Goods Control Account for sale, General Administrative overhead recovered, Selling and distribution overhead recovered. The balance of this account is ultimately transferred to Sales Account or Costing Profit & Loss Account.

(10) Costing Profit & Loss Account – This account is debited with cost of sales, under-absorbed overheads and abnormal losses and is credited with sales value, over-absorbed overhead and abnormal gains. The net profit or loss in this account is transferred to Cost Ledger Control Account.

(11) Overhead Adjustment Account - This account is to be debited for under- recovery of overhead and credited with over-recovery of overhead amount. The net balance in this account is transferred to Costing Profit & Loss Account.

3. What are advantages of Integrated Accounting ?

The main advantages of Integrated Accounts are as follows:

(a) No need for Reconciliation- The question of reconciling costing profit and financial profit does not arise, as there is only one figure of profit.

(b) Less efforts- Due to use of one set of books, there is a significant saving in efforts made.

(c) Less time consuming- No delay is caused in obtaining information as it is provided from books of original entry.

(d) Economical process- It is economical also as it is based on the concept of "Centralisation of Accounting function".

4. What are the essential pre-requisites for integrated accounts ?

The essential pre-requisites for integrated accounts include the following steps:

1. The management's decision about the extent of integration of the two sets of books. Some concerns find it useful to integrate up to the stage of prime cost or factory cost while other prefers full integration of the entire accounting records.
2. A suitable coding system must be made available so as to serve the accounting purposes of financial and cost accounts.
3. An agreed routine, with regard to the treatment of provision for accruals, prepaid expenses, other adjustment necessary for preparation of interim accounts.
4. Perfect coordination should exist between the staff responsible for the financial and cost aspects of the accounts and an efficient processing of accounting documents should be ensured.

5. List down items included in Cost Accounts only (notional expenses).

(i) Charges in lieu of rent where premises are owned
(ii) Interest on capital at notional figure though not incurred
(iii) Salary for the proprietor at notional figure though not incurred
(iv) Notional Depreciation on the assets fully depreciated for which book value is nil.

6. List down items included in Financial Accounts only.

(a) Purely Financial Expenses:
- **(i)** Interest on loans or bank mortgages.
- **(ii)** Expenses and discounts on issue of shares, debentures etc.
- **(iii)** Other capital losses i.e., loss by fire not covered by insurance etc.
- **(iv)** Losses on the sales of fixed assets and investments
- **(v)** Income tax, donations, subscriptions
- **(vi)** Expenses of the company's share transfer office, if any.

(b) Purely Financial Income
- **(i)** Interest received on bank deposits, loans and investments
- **(ii)** Dividends received
- **(iii)** Profits on the sale of fixed assets and investments
- **(iv)** Transfer fee received.
- **(v)** Rent receivables

ICAI MCQs

	Questions
Q.1	Under Non-integrated accounting system, the account made to complete double entry is
	(a) Stores ledger control account (b) Work in progress control account (c) Finished goods control account (d) General ledger adjustment account
Q.2	Which account is to be debited if materials worth '500 are returned to vendor under Non-integrated accounts
	(a) Cost ledger control account (b) Finished goods control account (c) WIP control account (d) None of the above
Q.3	Which of the following items should be added to costing profit to arrive at financial profit?
	(a) Over-absorption of works overhead (b) Interest paid on debentures (c) Income tax paid (d) All of the above
Q.4	Under the Non-integrated accounting system
	(a) Same ledger is maintained for cost and financial accounts by accountants (b) Separate ledgers are maintained for cost and financial accounts (c) {a) and (b) both (d) None of the above
Q.5	Which of the following items is included in cost accounts?
	(a) Notional rent (b) Donations (c) Transfer to general reserve (d) Rent receivable
Q.6	When costing loss is '5,600, administrative overhead under-absorbed being '600, the loss as per financial accounts should be
	(a) 5,600 (b) 6,200 (c) 5,000 (d) None of the above

Q.7 Under Non-integrated accounts, if materials worth • 1,500 are purchased for a special job, then which account will be debited:

(a) Special job account / Work in Process account
(b) Material Control account
(c) Cost Control account
(d) None of the above

Q.8 Integrated systems of accounts are maintained

(a) In separate books of accounts for costing and financial accounting purposes
(b) In same books of accounts
(c) Both (a) & (b)
(d) None of the above

Q.9 Under Non-integrated system of accounting, purchase of raw material is debited to which account

(a) Material control account / Stores ledger control account
(b) General ledger adjustment account
(c) Purchase account
(d) None of the above

Q.10 National costs

(a) May be included in Integrated accounts
(b) May be included in Non- integrated accounts
(c) Cannot be included in Non-integrated accounts
(d) None of the above

Answers:

1	2	3	4	5	6	7	8	9	10
D	A	A	B	A	B	A	B	A	B

8 CHAPTER

UNIT & BATCH COSTING

Q.N	QUESTIONS

1. Explain Differenece between Job & Batch Costing.

JOB COSTING	BATCH COSTING
1. Method of costing used for non- standard and non- repetitive products produced as per customer specifications and against specific orders.	**1.** Homogeneous products produced in a continuous production flow in lots.
2. Cost determined for each Job.	**2.** Cost determined in aggregate for the entire Batch and then arrived at on per unit basis.
3. Jobs are different from each other and independent of each other. Each Job is unique.	**3.** Products produced in a batch are homogeneous and lack of individuality

2. Write a short note of Batch Costing.

Batch Costing is a type of specific order costing where articles are manufactured in predetermined lots, known as batch. Under this costing method, the cost object for cost determination is a batch for production rather output as seen in unit costing method.

A batch consists of certain number of units which are processed simultaneously to be for manufacturing operation. Under this method of manufacturing, the inputs are accumulated in the assembly line till it reaches minimum batch size. Soon after a batch size is reached, all inputs in a batch is processed for further operations. Reasons for batch manufacturing may be either technical or economical or both. For example, in pen manufacturing industry, it would be too costly to manufacture one pen of a particular design at a time to meet the demand of one customer. On the other hand, the production, of say 10,000 pens, of the same design will reduce the cost to a sizeable extent.

To initiate production process, an entity has to incur expenditures on engaging workers for production and supervision, setting-up of machine to run for production etc. These are the minimum level of expenditures which have to be incurred each time a batch is run irrespective of number of units produced.

3. Explain treatment of Spoiled & Defective Work.

Circumstances	Treatement
(1) Loss due to normal reasons	When a normal rate of defectives has already been established and actual number of defectives is within the normal limit, the cost of rectification or loss will be charged to the entire output. If, on the other hand, the number of defective units substantially exceeds the normal limits, the cost of rectification or loss beyond normal limits are written off in Costing Profit and Loss Account.

(2) Loss due to abnormal reasons	In this case cost of rectification and loss is treated as abnormal cost and the cost of rectification or loss is written off as loss in Costing Profit and Loss Account.

ICAI MCQs

	Questions
Q.1	In order to determine cost of the product or service, following are used: (a) Techniques of costing like Marginal, Standard etc. (b) Methods of Costing (c) Comparatives (d) All of the above
Q.2	Batch costing is similar to that under job costing except with the difference that a: (a) Job becomes a cost unit. (b) Batch becomes the cost unit instead of a job (c) Process becomes a cost unit Solution: Self Explanatory
Q.3	Batch costing is a type of: (a) Process costing (b) Job Costing (c) Differential costing (d) Direct costing Solution: Self Explanatory
Q.4	Unit Costing is applicable where: (a) Product produced are unique and no 2 products are same (b) Dissimilar articles are produced as per customer specification (c) homogeneous articles are produced on large scale (d) Products made require different raw materials
Q.5	The main points of distinction between job and contract costing includes: (a) Length of time to complete. (b) Big jobs (c) Activities to be done outside the factory area (d) All of the above Solution: Self Explanatory
Q.6	The production planning department prepares a list of materials and stores required for the completion of a specific Job order, this list is known as: (a) Bin card (b) Bill of material (c) Material requisition slip (d) None of the above

Solution: Self Explanatory

Q.7 Different businesses in order to determine cost of their product or service offering follow:

(a) Different methods of Costing
(b) Uniform Costing
(c) Different techniques of costing
(d) None of the above

Q.8 Economic batch quantity is that size of the batch of production where:

(a) Average cost is minimum
(b) Set-up cost of machine is minimum
(c) Carrying cost is minimum
(d) Both (b) and (c)

Solution: Self Explanatory

Q.9 Job Costing is:

(a) Applicable to all industries regardless of the products or services provided
(b) Technique of costing
(c) Suitable where similar products are produced on mass scale
(d) Method of costing used for non- standard and non- repetitive products

Q.10 In case product produced or jobs undertaken are of diverse nature, the system of costing to be used should be:

(a) Process costing
(b) Operating costing
(c) Job costing
(d) None of the above

Answers:

1	2	3	4	5
B	B	B	C	D
6	7	8	9	10
B	A	D	D	C

9 CHAPTER

JOB & BATCH COSTING

Q.N	QUESTIONS
1.	**Explain suitability of Job Costing.**

- When jobs are executed for different customers according to their specifications.
- When no two orders are alike and each order/job needs special treatment.
- Where the work-in-progress differs from period to period on the basis of the number of jobs in hand.

2. Explain treatment of Spoiled and Defective Work.

Spoiled work is the quantity of production that has been totally rejected and cannot be rectified.
Defective work refers to production that is not as perfect as the saleable product but is capable of being rectified and brought to the required degree of perfection provided some additional expenditure is incurred.

Circumstances	Treatement
(1) Where a % of defective work is allowed in a particular batch as it cannot be avoided.	When a normal rate of defectives has already been established, if the actual number of defectives is within the normal limit or is near thereto the cost of rectification will be charged to the whole job and spread over the entire output of the batch. If, on the other hand, the number of defective units substantially exceeds the normal, the cost of rectification of the number which exceeds the normal will be written off as a loss in the Costing Profit and Loss Account.
(2) Where defect is due to bad Workmanship.	In this case cost of rectification will be abnormal cost, i.e., not a Legitimate element of the cost. Therefore, the cost of rectification shall be written off as a loss, unless by an arrangement, it is to be recovered as a penalty from the workman concerned. It is possible, however that the management did provide for a certain proportion of defectives on account of bad workmanship as an unavoidable feature of production. If that be the case, the cost of rectifying to the extent provided for by the management will be treated as a normal cost and charged to the batch.
(3)Where defect is due to the Inspection Dept.wrongly accepting incoming material of poor quality.	In this case the cost of rectification will be charged to the department and will not be considered as cost of manufacture of the batch. Being an abnormal cost, it will be written off to the Costing Profit and Loss Account.

3. Explain Advantages & Dis-Advantages of Job Costing.

Advantages	Disadvantages
1.The details of Cost of material, labour and overhead for all job is available to control.	**1.**Job Costing is costly and laborious method.
2. Profitability of each job can be derived.	**2.**As lot of clerical process is involved the chances of error is more.
3. It facilitates production planning.	**3.**This method is not suitable in inflationary condition.
4.Budgetary control and Standard Costing can be applied in job costing.	**4.**Previous records of costs will be meaningless if there is any change in market condition.
5. Spoilage and detective can be identified and responsibilities can be fixed accordingly.	

4. Explain differences between Job Costing & Process Costing.

JOB COSTING	PROCESS COSTING
(i) A Job is carried out or a product is produced by specific orders.	**(i)** The process of producing the product has a continuous flow and the product produced is homogeneous.
(ii) Costs are determined for each job.	**(ii)** Costs are compiled on time basis i.e., for production of a given accounting period for each process or department.
(iii) Each job is separate and independent of other jobs.	**(iii)** Products lose their individual identity as they are manufactured in a continuous flow.
(iv) Each job or order has a number and costs are collected against the same job number.	**(iv)** The unit cost of process is an average cost for the period.
(v) Costs are computed when a job is completed. The cost of a job may be determined by adding all costs against the job.	**(v)** Costs are calculated at the end of the cost period. The unit cost of a process may be computed by dividing the total cost for the period by the output of the process during that period.
(vi) As production is not continuous and each job may be different, so more managerial attention is required for effective control.	**(vi)** Process of production is usually standardized and is therefore, quite stable. Hence control here is comparatively easier.

ICAI MCQs

	Questions
Q.1	Job costing is similar to that under Batch costing except with the difference that a:
	(a) Job becomes a cost unit (b) Batch becomes the cost unit instead of a job (c) Process becomes a cost unit (d) None of the above.
Q.2	Which of the following statements is true:
	(a) Job cost sheet may be used for estimating profit of jobs. (b) Job costing cannot be used in conjunction with marginal costing (c) A production order is an order received from a customer for particular jobs. (d) None of these.
Q.3	Which of the following statements is/are correct?
	1. A materials requisition note is used to record the issue of direct material to a specific job. 2. A typical job cost will contain actual costs for material, labour and production overheads, and non - production overheads are often added as a percentage of total production cost 3. The job costing method can be applied in costing batches (a) (1) only (b) (1) and (2) only (c) (1) and (3) only (d) (2) and (3) only Solution: Self Explanatory
Q.4	The production planning department prepares a list of materials and stores required for the completion of a specific job order, this list is known as:
	(a) Bin card (b) Bill of material (c) Material requisition slip (d) None of the above Solution: Self Explanatory
Q.5	The most suitable cost system where the products differ in type of materials and work performed is :
	(a) Job Costing (b) Process Costing (c) Operating Costing

(d) None of these

Q.6 In job costing which of the following documents are used to record the issue of direct material to a job':

(a) Goods received note
(b) Material requisition
(c) Purchase order
(d) Purchase requisition

Q.7 Which of the following statements is true:

(a) Job cost sheet may be prepared for facilitating routing and scheduling of the job
(b) Job costing can be suitably used for concerns producing uniformly any specific product
(c) Job costing cannot be used in companies using standard costing
(d) Neither (a) nor (b) nor (c)

Q.8 In case product produced or jobs undertaken are of diverse nature, the system of costing to be used should be:

(a) Process costing
(b) Operating costing
(c) Job costing
(d) None of the above

Solution: Self Explanatory

Q.9 Which of the following statements is/are correct?

1. A materials requisition note is used to record the issue of direct material to a specific job.
2. A typical job cost will contain actual costs for material, labour and production overheads, and non - production overheads are often added as a percentage of total production cost
3. The job costing method can be applied in costing batches

(a) (1) only
(b) (1) and (2) only
(c) (1) and (3) only
(d) (2) and (3) only

Solution:
Self Explanatory

Answers:

1	2	3	4	5
A	A	C	B	A
6	7	8	9	
B	D	C	C	

10 CHAPTER

JOINT & BY PRODUCT

Q.N	QUESTIONS
1.	**Explain treatment of By-Product Cost in Cost Accounting.**

(a) When they are of small total value: When the by-products are of small total value, the amount realised from their sale may be dealt in any one the following two ways:

1. The sales value of the by-products may be credited to the Costing Profit and Loss Account and no credit be given in the Cost Accounts. The credit to the Costing Profit and Loss Account here is treated either as miscellaneous income or as additional sales revenue.
2. The sale proceeds of the by-product may be treated as deductions from the total costs. The sale proceeds in fact should be deducted either from the production cost or from the cost of sales.

(b) When the by-products are of considerable total value: Where by-products are of considerable total value, they may be regarded as joint products rather than as by-products. To determine exact cost of by-products the costs incurred upto the point of separation, should be apportioned over by-products and joint products by using a logical basis. In this case, the joint costs may be divided over joint products and by-products by using relative market values; physical output method (at the point of split off) or ultimate selling prices (if sold).

(c) Where they require further processing: In this case, the net realisable value of the by-product at the split-off point may be arrived at by subtracting the further processing cost from the realisable value of by-products.

If total sales value of by-products at split-off point is small, it may be treated as per the provisions discussed above under (a).

In the contrary case, the amount realised from the sale of by-products will be considerable and thus it may be treated as discussed under (b).

2.	**Write short note on Joint Product, By-Product & Co-Product.**

(i) Joint Products - Joint products represent "two or more products separated in the course of the same processing operation usually requiring further processing, each product being in such proportion that no single product can be designated as a major product".

In other words, two or more products of equal importance, produced, simultaneously from the same process, with each having a significant relative sale value are known as joint products. For example, in the oil industry, gasoline, fuel oil, lubricants, paraffin, coal tar, asphalt and kerosene are all produced from crude petroleum. These are known as joint products.

(ii) By-Products - These are defined as "products recovered from material discarded in a main process, or from the production of some major products, where the material value is to be considered at the time of severance from the main product." So in a nutshell By product is a

product which is recovered incidentally from the material used in the manufacture of main or desired products, such a by-product having either a net realisable value or a usable value which is relatively insignificant in comparison with the saleable value of the main or desired products. By-product may be further processed to increase their realisable value Thus by-products emerge as a result of processing operation of another product or they are produced from the scrap or waste of materials of a process. In short a by-product is a secondary or subsidiary product which emanates as a result of manufacture of the main product.

(iii) Co-Products - Joint products and co-products are used synonymously in common parlance, but strictly speaking a distinction can be made between two. Co-products may be defined as two or more products which are contemporary but do not emerge necessarily from the same material in the same process. For instance, wheat and gram produced in two separate farms with separate processing of cultivation are the co-products. Similarly, timber boards made from different trees are co-products.

ICAI MCQs

	Questions
Q.1	When a by-product does not have any realisable value, the cost of by-product is:
	(a) Transferred to Costing Profit & Loss A/C (b) By-product cost is borne by the good units (c) By-product cost is ignored (d) By-product cost is determined taking value of similar goods
Q.2	SG Ltd manufactures two products from a joint milling process. The two products developed are Mine support (MS) and Commercial building (CB). A standard product run incurs joint costs of 1,00,000 and results in 60,000 units of MS and 90,000 units of CB. Each MS sells for Rs 200 per unit, and each CB sells for 450 per unit.
	(a) Rs 60,000. (b) Rs 180,000. (c) Rs 225,000. (d) Rs 120,000.
Q.3	Which of the following is an example of by-product
	(a) Diesel and Petrol in an oil refinery (b) Edible oils and oil cakes (c) Curd and butter in a dairy (d) Mustard seeds and mustard oil. Solution: Self Explanatory
Q.4	In sugar manufacturing industries molasses is also produced along with sugar. Molasses may be of smaller value as compared with the value of sugar and is known as:
	(a) Common product (b) By-product (c) Joint product (d) None of them Solution: Self Explanatory
Q.5	In case of joint product, the main objective of accounting of the cost is to apportion the joint costs incurred up to the split off point, For cost apportionment one company has chosen Physical Quantity Method. Three joint products 'A', 'B', and 'C' are produced in the same process. Up to the point of split off the total production of A, B and C is 60,000 kg, out of which 'A' produces 30,000 kg and joint costs are Rs. 3,60,000. Joint allocated to product A is
	(a) Rs 1,20,000 (b) Rs 60,000 (c) Rs 1,80,000

(d) None of the these
Solution: costs allocated to product A is = (60,000 kg/30,000 kg)*3,60,000 = 1,80,000

Q.6 Method of apportioning joint costs on the basis of output of each joint product at the point of split off is:

(a) Sales value method
(b) Physical unit method
(c) Average cost method
(d) Marginal cost and contribution method
Solution: Self Explanatory

Q.7 For the purpose of allocating joint costs to joint products, the sales price at point of sale, reduced by cost to continue after split-off, is assumed to be equal to the:

(a) Joint cost
(b) Sales price less a normal profit margin at point of sale
(c) Net sales value at split off
(d) Total costs.

Q.8 In case product produced or jobs undertaken are of diverse nature, the system of costing to be used should be:

(a) Process costing
(b) Operating costing
(c) Job costing
(d) None of the above
Solution: Self Explanatory

Q.9 In the Net realizable value method, for apportioning joint costs over the joint products, the basis of apportionment would be:

(a) Selling price per unit of each of the joint products
(b) Selling price multiple by units sold of each of the joint products
(c) Sales value of each joint product less further processing costs of individual products
(d) Both (b) and (c)
Solution: Self Explanatory

Q.10 Which of the following statement is not correct in relation to co-products:

(a) Co-products may also have joint products
(b) Costing for co-products are done according to process costing method
(c) Co-products do not have any by-products
(d) Co-products are treated as a separate cost object for costing purpose.

Q.11 Kay Company manufactures two hair care lotions, Livi and Sili, out of a joint process. The joint (common) costs incurred are Rs 6,30,000 for a standard production run that generates 1,80,000 gallons of Livi and 1,20,000 gallons of Sili. Livi sells for Rs 240 per gallon, and Sili sells for Rs 390 per gallon.
If additional processing costs beyond the split-off point are 140 per gallon for Livi and Rs 90 per gallon for Sili, the amount of joint cost of each production run allocated to Livi on a physical-quantity basis is:

(a) Rs 340,000.
(b) Rs 378,000.
(c) Rs 232,000.
(d) Rs 580,000.

Q.12 Under net realizable value method of apportioning joint costs to joint products, the selling of distribution cost is:

(a) Added to joint cost
(b) Deducted from further processing cost
(c) Deducted from sales value
(d) Ignored

Solution: Self Explanatory

Q.13 Which of the following method can be used when the joint products are of unequal quantity and used for captive consumption:

(a) Technical estimates, using market value of similar goods
(b) Net Realisable value method
(c) Physical Units method
(d) Market value of split-off method.

Solution: Self Explanatory

Answers:

1	2	3	4	5
B	A	B	B	C
6	7	8	9	10
B	C	C	D	C
11	12	13		
B	C	A		

11 CHAPTER

SERVICE COSTING & OPERATION COSTING

Q.N	QUESTIONS
1.	**Explain difference between Product & Service Costing.**
	Service costing differs from product costing (such as job or process costing) in the following ways due to some basic and peculiar nature. **(i)** **Tangibility:** Unlike products, services are intangible and cannot be stored, hence, there is no inventory for the services. **(ii)** **Cost units:** Use of Composite cost units for cost measurement and to express the volume of outputs. **(iii)** **Material vs Employee cost:** Unlike a product manufacturing, employee (labour) cost constitutes a major cost element than material cost. **(iv)** **Traceability of costs:** Indirect costs like administration overheads are generally have a significant proportion in total cost of a service as unlike manufacturing sector, service sector heavily depends on support services and traceability of costs to a service may not economically feasible.
2.	**Write short note on Operation Costing.**
	Internal: The service costing is required for in-house services provided by a service cost centre to other responsibility centres as support services. Examples of support services are Canteen and hospital for staff, Boiler house for supplying steam to production departments, Captive Power generation unit, operation of fleet of vehicles for transport of raw material to factory or distribution of finished goods to the market outlets, IT department services used by other departments, research & development, quality assurance, laboratory etc. **External:** When services are offered to outside customers as a profit centre in consonance with organisational objectives as an output like goods or passenger transport service provided by a transporter, hospitality services provided by a hotel, provision of services by financial institutions, insurance and IT companies etc.In both the situation, all costs incurred are collected, accumulated for a certain period or volume, recorded in the cost accounting system and then expressed in terms of a cost unit of service.

ICAI MCQs

	Questions
Q.1	Total passenger km run by VRL logistic Ltd. Was 43,80,480 for the year between Jodhpur and Pali. The bus made 3 round trips per day. Seating capacity of the bus was 52 passengers and average daily occupancy was 75% and the bus runs on an average 26 days in a month. Calculate the distance between Jodhpur and Pali.
	(a) 55km (b) 720 km (c) 65 km (d) 60 km Solution: Let's assume distance between Jodhpur and Pali is 'x' Therefore: Xx39x2x3x26x12 = 4380480 X = 60
Q.2	Cost units used in power sector is:
	(a) Kilo meter (K.M.) (b) Kilowatt-hour(kWh) (c) Number of electric points (d) Number of hours Solution: Self Explanatory
Q.3	Depreciation is treated as fixed cost if it is related to:
	(a) Activity level (b) Related with machine hours (c) Efflux of time (d) None of the above Solution: Self Explanatory
Q.4	Pre-product development activities in insurance companies, include:
	(a) Processing of Claim (b) Selling of policy (c) Provision of conditions (d) Policy application processing Solution: Self Explanatory
Q.5	Absolute Tonne-km. is an example of
	(a) Composite units in power sector (b) Composite unit of transport sector (c) Composite unit for bus operation (d) Composite unit for oil and natural gas Solution: Self Explanatory
Q.6	BOT approach means
	(a) Build, Operate and Transfer (b) Buy, Operate and Transfer (c) Build, Operate and Trash (d) Build, Own and Trash Solution: Self Explanatory

Q.7	Ayush transport service company incurred a total operating cost of Rs. 4,86,000 in June 2023 to operate six buses between two places which are 50 kms apart. Each bus is having a seating capacity of 50 passengers and all buses run on all days with two round trips in a day. If the operating cost per passenger km, is Rs 0.30, then the capacity occupied in each bus is:
	(a) 90% (b) 80% (c) 75% (d) 100% Solution: Lets assume the capacity occupied be 'y' 486000/(50x50yx2x2x6x30) = 0.3 Therefore y= 0.9 or 90%
Q.8	Which of the following is an example of standing charges in transport costing
	(a) Road tax and insurance (b) Petrol (c) Repairs and maintenance (d) Tyres. Solution: Self Explanatory
Q.9	Composite cost unit for a hospital is:
	(a) Per patient (b) Per patient-day (c) Per day (d) Per bed Solution: Self Explanatory
Q.10	Which of the following is an example of standing charges in transport costing
	(a) Road tax and insurance (b) Petrol (c) Repairs and maintenance (d) Tyres.
Q.11	A transport company is running 5 buses between two trains, which are 30 km apart. Seating capacity of each bus is 50 passengers. Normal occupancy in onwards journey is 90% and in return journey is 80% of its seating capacity. All the buses ran on the 30 days of the month. Each bus made 3 round trip per day. Passenger km per month will be:
	(a) 10,51,00 (b) 9,56,250 (c) 11,47,500 (d) None of the above Solution: Calculation of Passenger Km (30km x (50 pasenger x 90%) + {30km x (50 passenger x 80%)} x 3tripsx30daysx5buses = 11,47,500
Q.12	In Service costing, costs are classified as:
	(a) Variable cost, fixed cost & marginal cost (b) Standing charges, running charges & maintenance costs (c) Fixed cost, normal cost & standard cost (d) Standard cost, marginal cost & fixed cost Solution: Self Explanatory

Q.13 Cost of diesel and lubricant is an example of:

(a) Operating cost
(b) Fixed charges
(c) Semi-variable cost
(d) None of the above

Solution: Self Explanatory

Q.14 Sharma Ferry Services Pvt Ltd. Provide ferry services between two towns. Distance one way is 18.52 nautical miles. Seating capacity of a ferry is 125 passengers. Actual passengers carried in each trip is 80% of seating capacity. Ferry run on all days of month (30 days). Ferry makes a round trips in a day. Company is expecting a monthly revenue of 55,56,000. Calculate fare to be charged from a passenger for round trip.

(a) 100
(b) 926
(c) 1852
(d) 50.95

Solution: Calculation of fare per passenger nautical mile: 5556660 18.52 x 100 x 2 x 30 = 50 per passenger nautical mile Fare for round trip = 50 x 18.52 x 2 = 1852

Q.15 Jobs undertaken by IT & ITES organisations are considered as:

(a) Project
(b) Batch work
(c) Contract
(d) All the above

Solution: Self Explanatory

Q.16 In service costing, costs are classified as

(a) Variable cost, fixed cost & marginal cost
(b) Standing charges, running charges & maintenance costs
(c) Fixed cost, normal cost & standard cost
(d) Standard cost, marginal cost & fixed cost

Solution: Self Explanatory

Q.17 A hotel having 200 rooms of which 80% are normally occupied in summer 60 % in Autumn and 25 % in winter. Period of summer, autumn and winter be taken taken as 4 months each and normal days in a month be assumed to be 30. The total occupied room days will be

Ans.

(a) 39200 Room days
(b) 39600 Room days
(c) 39000 Room days
(d) None of the above

Solution: Rooms days Summer 200x80%x30x4 = 19200 winter 200x25%x30x4= 6000 Autumn 200x60% x30x4 = 14400 Total rooms days: 39600

Q.18 Which of the following costing method is not appropriate for costing of educational institutes:

(a) Batch costing
(b) Activity Based Costing
(c) Absorption Costing

(d) Process Costing

Solution: Self Explanatory

Q.19 In case of goods transport, which of the following is suitable cost unit to be used for cost ascertainment –

(a) Kilometre
(b) Per day.
(c) Ton - kilometre
(d) Per litre

Answers:

1	2	3	4	5
D	B	C	C	B
6	7	8	9	10
A	A	A	B	A
11	12	13	14	15
C	B	A	C	A
16	17	18	19	
B	B	D	C	

12 CHAPTER

STANDARD COSTING

Q.N	QUESTIONS
1.	**Why Standard Costing is needed ??**

Standard costing system is widely accepted as it serves different needs of an organisation. The standard costing is preferred for the following reasons:

(a) Prediction of future cost for decision making: Standard costs are set after taking all present conditions and future possibilities into consideration. Hence, standard cost is future cost for the purpose of cost estimation and profitability from a proposed project/ order/ activity.

(b) Provide target to be achieved: Standard costs are the target cost which should not be crossed by the responsibility centres. Performance of a responsibility centre is continuously monitored and measured against the set standards. Any variance from the standard is noted and reported for appropriate action.

(c) Used in budgeting and performance evaluation: Standard costs are used to set budgets and based on these budgets managerial performance is evaluated. This is of two benefits, one managers of a responsibility centre will not compromise with the quality to fulfill the budgeted quantity and second, variances can be traced with the responsible department or person.

(d) Interim profit measurement and inventory valuation: Actual profit can only be known after the closure of the accounts. But an organisation may need to prepare profitability statement for interim periods for managerial reporting and decision making. To arrive at profit figure, standard costs are deducted from the revenue.

2.	**Explain types of Standard.**

(i) Ideal Standards: These represent the level of performance attainable when prices for material and labour are most favourable, when the highest output is achieved with the best equipment and layout and when the maximum efficiency in utilisation of resources results in maximum output with minimum cost.

These types of standards are criticised on three grounds:

(a) Since such standards would be unattainable, no one would take these seriously.

(b) The variances disclosed would be variances from the ideal standards. These would not, therefore, indicate the extent to which they could have been reasonably and practically avoided.

(c) There would be no logical method of disposing of these variances.

(ii) Normal Standards: These are standards that may be achieved under normal operating conditions. The normal activity has been defined as "the number of standard hours which will produce at normal efficiency sufficient good to meet the average sales demand over a term of years".

These standards are, however, difficult to set because they require a degree of forecasting. The variances thrown out under this system are deviations from normal efficiency, normal sales volume, or normal production volume. If the actual performance is found to be abnormal, large variances may result and necessitate revision of standards.

(iii) Basic or Bogey Standards: These standards are used only when they are likely to remain constant or unaltered over a long period. According to this standard, a base year is chosen for comparison purposes in the same way as statisticians use price indices. Since basic standards do not represent what should be attained in the present period, current standards should also be prepared if basic standards are used. Basic standards are, however, well suited to businesses having a small range of products and long production runs. Basic standards are set, on a long-term basis and are seldom revised. When basic standards are in use, variances are not calculated. Instead, the actual cost is expressed as a percentage of basic cost. The current cost is also similarly expressed and the two percentages are compared to find out how much the actual cost has deviated from the current standard. The percentages are next compared with those of the previous periods to establish the trend of actual and current standard from basic cost.

(iv) Current Standards: These standards reflect the management's anticipation of what actual costs will be for the current period. These are the costs which the business will incur if the anticipated prices are paid for the goods and services and the usage corresponds to that believed to be necessary to produce the planned output.The variances arising from expected standards represent the degree of efficiency in usage of the factors of production, variation in prices paid for materials and services and difference in the volume of production.

3. Explain the process of Standard Costing.

The process of standard cost is as below:

(i) Setting of Standards: The first step is to set standards which are to be achieved, the process of standard setting is explained below.

(ii) Ascertainment of actual costs: Actual cost for each component of cost is ascertained. Actual costs are ascertained from books of account, material invoices, wage sheet, charge slip etc.

(iii) Comparison of actual cost with standard cost: Actual costs are compared with the standards costs and variances are determined.

(iv) Investigate the reasons for variances: Variances arises are investigated for further action. Based on this, performance is evaluated and appropriate actions are taken.

(v) Disposition of variances: Variances arise are disposed-off by transferring it the relevant accounts (costing profit and loss account) as per the accounting method (plan) adopted.

4. What do you mean by Physical Standard ?

Physical standards refer to expression of standards in units or hours . At this stage standard quantity and standard hours are determined for a particular product or service. The purpose of setting standards is to secure economies in scale of production and to set selling price for quotation purpose. In manufacturing organisations, the task of setting physical standards is assigned to the industrial engineering department. While setting standards consideration is given to :

- Company's operating plan i.e. budgets
- Final output to be produced
- Material specification, in both quantity and quality provided by the engineering department.
- Proportion of material to be used in case of multiple inputs.
- Method of production i.e. fully automated, semi-automated or manual.
- Skill set of workers and availability of workers.
- Working conditions and internal factors.

5.	Explain the procedure usually followed for setting material quantity standards.
	The following procedure is usually followed for setting material quantity standards. **(a) Standardisation of products:** At this phase, products to be produced are decided based on production plan and customer's order. Generally following questions are answered at this stage: (i) What to be produced? (ii) Which type to be produced and (iii) How much to be produced? **(b) Product study:** Product to be produced is analysed and studied for developments and production. Product study is carried out by the engineering department or product consultants. At this phase answers to the following questions are satisfied: (i) How can it be produced? (ii) What are the pre-requisites? (iii) Which type of materials to be used? (iv) How products can be accepted in the market? **(c) Preparation of specification list:** After the product study a list of material is prepared. It specifies types (quality) and quantity of materials to be used, substitute of the materials, quantity and proportion of materials to be used, process to be followed, pre-requisites and condition required etc. While preparing specification list consideration to expected amount of wastage is given. It must be customised to adopt changes in the product. **(d) Test runs:** Sample or test runs under specified conditions are carried out and sample products are tested for the desired quality and quantity. Any deviation from the specification is noted down and specification list is updated.
6.	Explain the procedure usually followed for setting Labour quantity standards.
	The following are the steps involved in setting labour standards: **(a) Standardisation** of product and product study is carried out as explained above. **(b) Labour specification:** Types of labour and labour time is specified. Labour time specification is based on past records and it takes into account normal wastage of time. **(c) Standardisation of methods:** Selection of proper machines to use proper sequence and method of operations. **(d) Manufacturing layout:** A plan of operation for each product listing the operations to be performed is prepared. **(e) Time and motion study:** It is conducted for selecting the best way of completing the job or motions to be performed by workers and the standard time which an average worker will take for each job. This also takes into account the learning efficiency and learning effect. **(f) Training and trial:** Workers are trained to do the work and time spent at the time of trial run is noted down.
7.	Explain Advantages of Standard Costing.
	Following are the advantages of standard costing. **(i)** It serves as a basis for measuring operating performance and cost control. It is possible by setting standards, proper classification and determination of variances. It serves as a signal for prompt corrective action. It helps to report exceptional variances i.e. the only matters which are not proceeding according to plan are reported. This enables the managers to concentrate on essential matters only. **(ii)** It aids price fixing. Standard costing can be used to predict costs. Although actual cost may vary from day to day, standard costs will remain stable over a period of time and, where demand for a product is elastic, this information can be used as a basis for fixing the selling price.

(iii) Introduction of standard costing facilitates evaluation of jobs and introduction of incentives. Job values can be determined by the use of evaluation and scale of wages fixed according to the responsibility involved in each job.
(iv) Standard costing facilitates the estimation of the cost of new products with greater accuracy.
(v) It serves as a basis for inventory valuation. Standard costs are used for inventory valuation. A further advantage of this procedure is that material stock can be recorded in terms of quantities only.
(vi) Standard costing is used in planning, budgeting and decision making. Standard costs being the pre-determined costs, are particularly useful in planning and budgeting.
(viii) Standard costing is used in standardisation of products, operations and processes, it improves the overall production efficiency and reduces costs.

8. Explain Disadvantages of Standard Costing

The following are some of the criticism which may be leveled against the standard costing system.
(i) Variation in price: One of the chief problem faced in the operation of the standard costing system is the precise estimation of likely prices or rate to be paid. The variability of prices is so great that even actual prices are not necessarily adequately representative of cost. But the use of sophisticated forecasting techniques should be able to cover the price fluctuation to some extent. Besides this, the system provides for isolating uncontrollable variances arising from variations to be dealt with separately.
(ii) Varying levels of output: If the standard level of output set for pre- determination of standard costs is not achieved, the standard costs are said to be not realised. However, the statement that the capacity utilisation cannot be precisely estimated for absorption of overheads may be true only in some industries of jobbing type. In vast majority of industries, use of forecasting techniques, market research, etc., help to estimate the output with reasonable accuracy and thus the variation is unlikely to be very large. Prime cost will not be affected by such variation and, moreover, variance analysis helps to measure the effects of idle time.
(iii) Changing standard of technology: In case of industries that have frequent technological changes affecting the conditions of production, standard costing may not be suitable. This criticism does not affect the system of standard costing. Cost reduction and cost control is a cardinal feature of standard costing because standards once set do not always remain stable. They have to be revised.
(iv) Attitude of technical people: Technical people are accustomed to think of standards as physical standards and, therefore, they will be misled by standard costs. Since technical people can be educated to adopt themselves to the system through orientation courses, it is not an insurmountable difficulty.
(v) Mix of products: Standard costing presupposes a pre-determined combination of products both in variety and quantity. The mixture of materials used to manufacture the products may vary in the long run but since standard costs are set normally for a short period, such changes can be taken care of by revision of standards.
(vi) Level of Performance: Standards may be either too strict or too liberal because they may be based on (a) theoretical maximum efficiency, (b) attainable good performance or (c) average past performance. To overcome this difficulty, the management should give thought to the selection of a suitable type of standard. The type of standard most effective in the control of costs is one which represents an attainable level of good performance.

ICAI MCQs

	Questions
Q.1	A chemical is manufactured by combining two standards items Input-X (Standard price 20 per kg) and input-Y (Standard price 25 per kg) in the ratio 60%:40%. Ten percent of input is lost during processing. If during a month 1,800 kgs. Of chemical is produced incurring a total cost of 45,960, the total material cost variance will be -
	(a) 1,960(A) (b) 6,360(A) (c) 2,400(A) (d) 4,000 (A)
Q.2	Controllable variances are best disposed-off by transferring to:
	(a) Cost of goods sold (b) Cost of goods sold and inventories (c) Inventories of work-in-progress and finished goods (d) Costing profit and loss account Solution: Self Explanatory
Q.3	The standard hourly rate is 7.50 per hour and actual rate 6.80 per hour. If the labour rate variance is 2,800 (F), the actual labour hours worked is-
	(a) 2,800 hours (b) 4,000 hours (c) 3,500 hours (d) 6,150 hours
Q.4	For producing one unit of product X, standard labour hours are 25. Wages rate is Rs 3.5 per hour. In April, 2023, output was 2,000 units. 53,000 labour hours actually paid, costing Rs 2,17,300. These 53,000 hours include 600 hours arise due to machine breakdown. Labour rate variance was:
	(a) Rs. 31,800(A) (b) Rs. 31,440 (A) (c) Rs. 42,300 (A) (d) Rs, 31,440 (A)
Q.5	The standard material required to manufacture one unit of product-A is 4.5 Kgs. and the standard price per kg. of material is 3.2. The cost accountant's records, however, reveal that 16,000 Kgs. of material costing 54,000 were used for producing 3,500 units of Product-A. Material price variance will be
	(a) 2,800 (A)

(b) 2,800 (F)
(c) 3,600 (A)
(d) 3,600 (F)

Q.6 The information relating to the direct material cost of a company is as under: Actual quantity purchased in units 1,800 @ Rs9 per unit. Standard quantity allowed for actual production in units 1,950 Material Price Variance on purchase (Adverse) 2700 What is the Standard price per unit?

(a) 7.62
(b) 10.50
(c) 7.50
(d) 10.38

Q.7 Records of XYZ Ltd, reveal the following data: Fixed overhead capacity variance = 2,000 (F) Fixed overhead efficiency variance = 1,000 (F) Fixed overhead expenditure variance = 5,000 (A) Fixed overhead cost variance will be:

(a) Rs. 8,000 (A)
(b) Rs. 2,000 (A)
(c) Rs. 2,000 (F)
(d) Rs 8,000 (F)

Q.8 Overhead cost variance is Rs 12,000 (A), overhead expenditure is Rs 4,000 (A) and overhead efficiency variance is Rs 4,000 (F), In this case, overhead variance is:

(a) Rs. 12,000 (A)
(b) Rs. 8,000 (A)
(c) Rs. 8,000 (F)
(d) Rs. 12,000 (A)

Q.9 PQR Ltd. has normal monthly machine hour capacity of 120 machines working 8 hours per day for 24 working days in a month. The budgeted fixed overhead is Rs 4,50,000. The actual production was 4,500 units. The actual fixed overhead was Rs 4,75000. Expenditure variance will be

(a) 25,000 (A)
(b) 25,000 (F)
(c) 20,000 (F)
(d) 20,000 (A)

Q.10 Material Price variance can be calculated using the formula-

(a) (Standard quantity for actual output-Actual quantity) x Actual price
(b) (Standard quantity for actual output- Actual quantity) x Standard price
(c) (Standard price – Actual price) x Actual quantity

(d) (Standard price – Actual price) x Standard quantity
Solution: Self Explanatory

Q.11 In a factory where standard costing system is followed, the production department consumed 1500 kgs of a material @ Rs 10 kg for product X resulting in material price variance of Rs 3000 (F) and material cost of actual production of product x?

(a) 10,500
(b) 19,500
(c) 14,500
(d) 16,500

Q.12 The budgeted overheads is 9,600, absorbed overheads is 10,650, fixed overheads at actual hours is 10,000 and actual overheads is 11,650. The overheads volume is -

(a) 600(A)
(b) 2050 (A)
(c) 650 (A)
(d) 1050 (F)

Q.13 The capacity variance is 36,000 (F), calendar variance is 20,850 (A), expenditure variance is 5000 (A). The volume variance will be -

(a) 15,150(F)
(b) 10,150(F)
(c) 10,150(A)
(d) 16,150(F)

Q.14 The information relating to the direct material cost of a company is as follows: Standard price per unit Rs 6.50 Actual quantity purchased in units 2000 Standard quantity allowed for actual production in units 1860 Material price variance on purchase (Favourable) Rs 1000 What is the actual purchase price per unit?

(a) Rs 6.00
(b) Rs 7.00
(c) Rs 6.50
(d) Rs 7.50

Q.15 A company operates a standard absorption costing system. The budgeted fixed production overheads for the company for last year were 5,00,000 and budgeted output was 2,50,000 units. At the end of the company's financial year, the total of the fixed production overheads debited to the fixed Production Overhead Control Account was 4,70,000 and the actual output achieved was 2,00,000 units. The under/over absorption of overhead was

(a) 70,000 under absorbed
(b) 30,000 under absorbed

(c) 70,000 over absorbed
(d) 30,000 over absorbed

Q.16 Material yield variance = ...

(a) Material usage variance – Material price variance
(b) Material usage variance – Material mix variance
(c) Material mix variance – Material usage variance
(d) Material mix variance – Material price variance

Q.17 The following figures are extracted from the books of a company: Budgeted overheads Rs 20,000 (Fixed Rs 12,000, variable Rs 8,000) Budgeted Hours 2500 Actual Overheads Rs 21,800 (Fixed Rs 11,800, Variable Rs 10,000) Actual Hours 3000 Calculate Variable Overheads fixeds Overheads cost variance will be:

(a) 400 (A) and 200(F)
(b) 400 (F) and 200(A)
(c) 2000(A) and 200(F)
(d) 2000 (F) and 200(A)

Q.18 The budgeted fixed overheads for a budgeted production of 20,000 units is 60,000. For a certain period the actual production was 23,000 units and actual expenditure 62,000. The volume variance is -

(a) 9,000(F)
(b) 9,000 (A)
(c) 2,000 (A)
(d) 2,000 (F)

Q.19 AB Ltd. uses standard cost system. The following information pertains to direct labour for Product X for the month of March, 2023: Standard rate per hour Rs 5. Actual rate per hour Rs 5.50. Standard hours allowed for actual production 2000 hours Labour Efficiency variance Rs 2,500 (Adverse) What were the actual hours worked?

(a) 1,800
(b) 2,500
(c) 2,200
(d) 2,190

Answers:

1	2	3	4	5
A	D	B	A	A
6	7	8	9	10
C	B	D	A	C
11	12	13	14	15
D	D	A	A	A
16	17	18	19	20
B	A	A	B	D

13 CHAPTER

MARGINAL COSTING

ICAI MCQs

	Questions
Q.1	The Following information is given about RS Impex Ltd. dealing in Men's wear:P/V ratio 40% Margin of safety 50% If the sales volume is Rs 60,00,000 the net profit will be
	(a) Rs 18,00,000 (b) Rs 10,00,000 (c) Rs 12,00,000 (d) Rs 9,00,000
Q.2	A company that has a margin of safety of ₹ 8,00,000
	(a) Rs 20.5 lakh (b) Rs 20 lakh (c) Rs 16.2 lakh (d) Rs 15 lakh
Q.3	ABC Limited has current PBIT of ₹ 21.60 lakhs on total assets of ₹ 120 lakhs. The company has decided to increase assets by ₹ 30 lakhs, which is expected to increase the operating profit before depreciation by ₹ 8.60 lakhs. There will be a net increase in depreciation by ₹ 1.70 lakhs. This will result in ROI.
	(a) to decrease by 1% (b) to increase by 1% (c) to decrease by 1.25% (d) to remain the same Solution: Old ROI = 21.6/120 = 18% New ROI = (21.6 + 6 + 8.6-1.7) = 19% Increase in ROI = 1%
Q.4	Which of the following techniques of costing is also known as Direct costing?
	(a) Standard Costing (b) Historical Costing (c) Marginal Costing (d) Uniform Costing Solution: Self Explanatory
Q.5	A company sells its product at ₹ 15 per unit. In a period, it produces, and sells 8,000 units and incurs a loss of ₹ 5 per unit. If the sales volume were to be raised to 20,000 units, it could earn a profit of ₹ 4 per unit. The Break even point (in units) will be

(a) 12,000 units
(b) 18,000 Units
(c) 16,000 Units
(d) 24,000 Units

Q.6 Which of the following formula cannot be used for calculating the contribution

(a) Fixed cost + profit
(b) Fixed cost + loss
(c) Sales – variable cost
(d) Fixed – Minus loss

Q.7 Variable cost:

(a) Nor increase or decrease
(b) Remains fixed per unit
(c) Varies per unit
(d) Remains fixed in total

Q.8 For a given product, the sales of a company @ ₹ 200 per unit is ₹ 40,00,000. Variable cost is ₹ 24,00,000 and fixed cost is ₹ 9,00,000. The capacity of the factory is 30,000 units. Capacity utilization at break-even point level

(a) 37.5%
(b) 66.67%
(c) 62.5%
(d) 100%

Q.9 X ltd manufactures product-G which sells at ₹ 20 per unit. Total fixed costs is ₹ 7,92,000 and marginal cost ₹ 14 per unit. Calculate the no of units to be sold to earn a profit of 10% on sales

(a) 1,98,000 Units
(b) 1,89,000 Units
(c) 1,32,000 Units
(d) 1,23,000 Units

Q.10 XYZ Ltd. had a marginal costing profit of ₹ 1,28,600 in April 2018. The opening stock was 1,600 units and the closing stock was 1,150 units. The company is considering changing to an absorption costing system. The fixed overhead absorption rate is ₹ 4 per unit. Profit under absorption costing will be:

(a) ₹ 1,26,800
(b) ₹ 1,30,400
(c) ₹ 1,15,700
(d) ₹ 1,28,070

Solution: Self Explanatory

Q.11 A Toy manufacturer finds that it costs ₹ 8.5 per unit to make component to C-21 that is used to manufacture a toy. A supplier is ready to provide the same component at ₹ 7.25 each. Continuous supply is also fully assured. The break-down cost per unit as follows: Materials ₹ 3.60, Labour ₹ 2.40 other variable expenses ₹ 1.00, Depreciation and other fixed cost ₹ 1.50.
What would be your decision?

(a) Make
(b) Buy
(c) Sell
(d) None of the above
Solution: Self Explanatory

Q.12 Which of the following assumptions are made while calculating marginal cost?

(a) Total fixed cost is constant at all levels of output
(b) All elements of cost can be divided into fixed and variable components
(c) Total variable cost varies according to the volume of output
(d) All of the above

Q.13 The fixed expenses are ₹ 64,000 and the break-even point is ₹ 1,60,000. The new break-even point, if the selling price is reduced by 10% is

(a) ₹ 1,60,000
(b) ₹ 182,000
(c) ₹ 192,000
(d) ₹ 2,00,000
Solution: Self Explanatory

Q.14 A newspaper presently sells 1,00,000 copies of its morning daily. It wants to publish evening daily. The particulars are: Actual for Morning daily Estimates for Evening Sales Price ₹ 2 per paper ₹ 0.50 per paper Variable cost ₹ 1.20 per paper ₹ 0.22 per paper Fixed cost ₹ 2,40,000 per week ₹ 10,000 per week Sales of Morning daily will daily fall @ 1 copy of every 10 copies sold of Evening daily. Calculate the Break Sales for Evening daily per week.

(a) 3,00,000 Copies
(b) 35,714 Copies
(c) 50,000 Copies
(d) 32,514 Copies

Q.15 Selling price per unit ₹ 40, Trade discount 10% of selling price, cash discount 5% on sales, Material cost ₹ 6, Labour cost ₹ 8, Fixed overheads ₹ 51,600 and variable overheads 60% of labour cost. What would be the net profit if sales are 20% above the BEP?

(a) ₹ 10,318

(b) ₹ 10,526
(c) ₹ 10,320
(d) ₹ 10,800
Solution: Self Explanatory

Q.16 A manufacturer produces 2,00,000 units of a product at a cost of ₹ 4.5 per unit. Later on, he produces 3,50,000 units at a cost of ₹ 4.20 per unit, when its fixed overheads have decreased by 30%. The marginal cost per unit and originally fixed overheads will be:

(a) ₹ 2 and ₹ 80,000 respectively
(b) ₹ 3 and ₹ 90,000 respectively
(c) ₹ 4 and 1,00,000 respectively
(d) ₹ 5 and ₹ 1,20,000 respectively

Q.17 Miss Simran has a sum of ₹ 30,00,000 which is invested in a business. She wishes for a 10% return (after tax) on her fund. It is revealed from the present cost data analysis that the variable cost of operation is 60% of sales and fixed costs are ₹ 1,75,000 p.a. On the basis of this information, you are required to find out the sales volume to earn a 10% return (after tax). Assume tax @20%.

(a) ₹ 13.75 Lakhs
(b) ₹ 13.375 Lakhs
(c) ₹ 7.5 lakhs
(d) ₹ 12.75 lakhs

Q.18 Sales increased from ₹ 700 Lakh to ₹ 900 Lakh. If P/V Ratio is 40%, then the % increase in variable cost per unit and total contribution will be:

(a) Nil and ₹ 200 Lakhs
(b) No Change
(c) 40% and ₹ 80 Lakhs
(d) Nil and ₹ 80 Lakh
Solution: Self Explanatory

Q.19 Prow shirts Ltd. manufactures three types of shirts Standard, Premium and Elite. The unit selling price of these shirts are ₹ 500, ₹ 800 and ₹ 1200 respectively. The corresponding unit variable costs are ₹ 300, ₹ 500 and ₹ 600. The proportions (quantity-wise) in which these products are manufactured and sold are 50%, 30% and 20% respectively. Total fixed costs are ₹ 60,00,000. Overall breakeven quantity is

(a) 19,453 Units
(b) 19,354 Units
(c) 18,194 Units
(d) 19,153 Units

Q.20 In 2022, the variable cost was 8500 per unit and fixed cost ₹ 50 per unit. Production was 1,50,000 units. It is expected that production in 2023 will increase to 1,80,000 units.
The variable cost will increase by 30% and fixed cost by 28% in 2023. The amount of fixed cost in 2023 will be

(a) ₹ 75,00,000

(b) ₹ 70,00,000
(c) ₹ 96,00,000
(d) ₹ 1,15,000

Answers:

1	2	3	4	5
C	A	B	C	A
6	7	8	9	10
B	B	A	A	A
11	12	13	14	15
A	4	C	C	C
16	17	18	19	20
C	A	D	B	C

14 CHAPTER

BUDGETARY CONTROL

Q.N	QUESTIONS
1.	**Explain Budget and Budgeting**
	Budget: A budget is an instrument of management used as an aid in the planning, programming and control of business activity. The Chartered Institute of Management Accountants (CIMA), UK defines budget as "A financial and/or quantitative statement, prepared and approved prior to a defined period of time of the policy to be pursued during that period for the purpose of attaining a given objective. It may include income, expenditure and employment of capital" The budget is a blue-print of the projected plan of action expressed in quantitative terms for a specified period of time. **Budgeting:** Budgeting is the process of designing, implementing and operating of budget. The main emphasis in budgeting process is the provision of resources to support plans which are being implemented. It is a means of coordinating the combined intelligence of an entire organisation into a plan of action based on past performance and governed by rational judgment of factors that will influence the course of business in the future.
2.	**What are the main characteristics of budget**
	The main characteristics of budget are as follows: **1.** A budget is concerned for a definite future period. **2.** A budget is a written document. **3.** A budget is a detailed plan of all the economic activities of a business. **4.** All the departments of a business unit should co-operate for the preparation of a business budget. **5.** Budget is a means to achieve business objectives and it is not an end in itself. **6.** Budget needs to be updated, corrected and controlled every time circumstances change. Therefore, it is a continuous process. **7.** Budget helps in planning, coordination and control. **8.** Different types of budgets are prepared by industries according to business requirements. **9.** A budget acts as a business barometer. **10.** Budget is usually prepared in the light of past experiences. **11.** Budget is a constant endeavour of the Management.
3.	**What are the essential steps for preparing a Budget ?**
	Essential steps for preparing a budget are as follows: **1.** Organisational structure must be clearly defined and responsibility should be assigned to identifiable units within the organisation. **2.** Setting of clear objectives and reasonable targets. Objectives should be in consonance with the long-term plan of the organisation. **3.** Objectives and responsibility should be clearly stated and communicated to the management or person responsible. **4.** Budgets are prepared for the future periods based on expected course of actions.

5. Budgets are updated for the events that were not kept into the mind while establishing budgets. Hence, budgets should flexible enough for mid- term revision.
6. The entire organisation must be committed to the preparation and implementing budgeting.
7. Budgets should be quantifiable and master budget should be broken down into various functional budgets.
8. Budgets should be monitored periodically. Variances of the actual outcomes should be compared with the actuals and variances analysed and responsibility should be fixed.
9. Budgetary performance needs to be linked effectively to the reward system.

4. What is Feedback & Feed Forward Control ?

Feedback Control: The feedback system of budgetary control, the actual results for the budgeted period are collected and compared with the budgeted figures. The exercise of variance identification is done after the completion of the budget period. The variances are reported and based on the report corrective actions are taken, responsibility is fixed and based on experience, modification in future targets is implemented. It is an Ex-post Corrective control system of budget.
This system of budgetary control is common in organistions where Management Information System (MIS) is not so robust and where data is obtained only after the finalisation of books of account. Though this type of control system is less expensive to maintain but has limitations. Organisation has to remain on looser side in today's age of data warfare.

Feedforward Control: This the opposite of feedback control system of budgetary control. It is Ex-Ante Preventive control mechanism of budgetary control. The budgets are set at the inception of the budgeted period and the actual results are continuously monitored and compared. The targets are kept realistic as far as possible and the targets are reviewed and reset if necessary.
This budgetary control system requires a robust MIS supported by integrated ERP system enabling an entity to get data as and when desired basis. This system is very expensive and beneficial for the organisations where the business environment is dynamic and information has important role in getting edge in competition and todays data warfare.

5. What are the main responsibilities of the Budget Committee/Budget Officer

The main responsibilities of the Budget Committee/Budget Officer are to:

1. Assist in the preparation of the separate budget for various departments by coordinating the work of the accounts department, which is normally responsible to compile the budgets—with the relevant functional departments like Sales, Production, Plant maintenance etc.;
2. Forward the budget to the individual departments heads who are re- sponsible to implement the budget. The Budget Officer should guide them in overcoming any practical difficulties, in its working;
3. Prepare the periodical budget reports for circulation to the individuals concerned;
4. Follow-up action to be taken on the budget reports;
5. Prepare an overall budget working report for discussion at the Budget Committee meetings and to ensure follow-up on the lines of action suggested by the Committee;
6. Prepare periodical reports for the Board meeting. Comparing budgeted Profit and Loss Account and the Balance Sheet with the actual results attained.

6. What does Budgetary Control Involves ?

1. Establishment of budgets
2. Continuous comparison of actuals with budgets for achievement of targets.

3. Revision of budgets after considering the changes in the circumstances.
4. Fixation of the responsibility for failure to achieve the budget targets.

7. Explain Objectives of budgetary Control System.

1. **Portraying with precision the overall aims of the business** and determining targets of performance for each section or department of the business.
2. **Laying down the responsibilities** of each of the executives and other personnel so that everyone knows what is expected of him and how he will be judged. Budgetary control is one of the few ways in which an objective assessment of executives or department is possible.
3. **Providing a basis for the comparison** of actual performance with the predetermined targets and investigation of deviation, if any, of actual performance and expenses from the budgeted figures. This naturally helps in adopting corrective measures.
4. **Ensuring optimum use of available resources** to maximise profit or production, subject to the limiting factors. Since budgets cannot be properly drawn up without considering all aspects, usually there is good co-ordination when a system of budgetary control operates.
5. **Co-ordinating various activities** of the business, and centralising control and yet enabling management to decentralise responsibility and delegate authority in the overall interest of the business.
6. **Engendering a spirit of careful forethought,** assessment of what is possible and an attempt at it. It leads to dynamism without being reckless. Of course, much depends on the objectives of the firm and the dynamism r of its management.
7. **Providing a basis for revision** of current and future policies.
8. **Drawing up long range plans** with a fair measure of accuracy.
9. **Providing a yardstick** against which actual results can be compared.

8. What Are the steps for establishing Budgetory Control ?

The following steps are necessary for establishing a good budgetary control system:

1. Determining the objectives to be achieved, over the budget period, and the policy or policies that might be adopted for the achievement of these objectives.
2. Determining the activities that should be undertaken for the achievement of the objectives.
3. Drawing up a plan or a scheme of operation in respect of each class of activity, in quantitative as well as monetary terms for the budget period.
4. Laying out a system of comparison of actual performance by each person, or department with the relevant budget and determination of causes for the variation, if any.
5. Ensuring that corrective action will be taken where the plan has not been achieved and, if that is not possible, for the revision of the plan.

9. What are the advantages of Budgetary Control System ?

1. **<u>Efficiency</u>:-** The use of budgetary control system enables the management of a business entity to conduct its business activities in an efficient manner.

2. **<u>Control on expenditure</u>:-** It is a powerful instrument used by business entity for the control of their expenditure. It provides a yardstick for measuring and evaluating the performance of individuals and their departments.

3. **Finding deviations:-** Budget reveals the deviations of the actual from the budgeted figures after making a comparison and communicating the deviation to management.

4. **Effective utilisation of resources:-** Effective utilisation of various resources like— men, material, machinery and money is made possible, as the production is planned after taking these into account.

5. **Revision of plans:-** Budget helps in the review of current trends and framing of future policies.

6. **Implementation of Standard Costing system:-** Budget creates suitable conditions for the implementation of standard costing system in a business organisation.

7. **Cost Consciousness**:- Budgetary control system encourages cost consciousness and maximum utilisation of available resources.

8. **Credit Rating:-** Management which has developed a well-ordered budget plans and which operate accordingly, receive greater favour from credit agencies.

10. What are the dis-advantages of Budgetary Control System ?

1. **Based on Estimates:-** Budgets are based on a series of estimates, which are based on the conditions prevalent or expected at the time budget is established. It requires revision in plan if conditions change.

2. **Time factor:-** Budgets cannot be executed automatically. Some preliminary steps are required to be accomplished before budgets are implemented. It requires proper attention and time of management. Management must not expect too much during the initial development period.

3. **Co-operation Required:-** Staff co-operation is usually not available during the initial budgetary control exercise. In a decentralised organisation, each unit has its own objective and these units enjoy some degree of discretion. In this type of organisation structure, coordination among different units is required. The success of the budgetary control depends upon willing co-operation and teamwork,

4. **Expensive:-** The implementation of budget is somewhat expensive. For successful implementation of the budgetary control, proper organisation structure with responsibility is prerequisite. Budgeting process start from the collection of information to for preparing the budget and performance analysis. It consumes valuable resources (in terms of qualified manpower, equipment, etc.) for this purpose; hence, it is an expensive process.

5. **Not a substitute for management:-** Budget is only a managerial tool and must be intelligently applied for management to get benefited. Budgets are not a substitute for good management.

11. What are the components of budgetary Control System ?

The policy of a business for a defined period is represented by the master budget, the detailed components of which are given in a number of individual budgets called functional budgets. These functional budgets are broadly grouped under the following heads:

1. **Physical budgets:** Those budgets which contain information in quantitative terms such as the physical units of sales, production etc. This may include quantity of sales, quantity of production, inventories, and manpower budgets are physical budgets.
2. **Cost budgets:** Budgets which provides cost information in respect of manufacturing, administration, selling and distribution, etc. for example, manufacturing costs, selling costs, administration cost, and research and development cost budgets are cost budgets.
3. **Profit budgets:** A budget which enables the ascertainment of profit. For example, sales budget, profit and loss budget, etc.
4. **Financial budgets:** A budget which facilitates in ascertaining the financial position of a concern, for example, cash budgets, capital expenditure budget, budgeted balance sheet etc.

12. How can Budgeting Process be made motivating ?

The budgeting process should have the following consideration to make it motivating one:

(a) Performance measurement: The budget, at first be communicated to all executives so that everybody must be informed the desired performance expected from each of them. Secondly, the achievement of targets should have consideration in measurement and evaluation of performance an executive at individual level and at departmental level. Rewards such as promotion, increment, Performance related pay (Pay), bonus may be appropriate motivation factors.

(b) Achievable Targets: While setting targets, the practical aspects such as availability of resources and realism of figures must be considered. The targes should be balance one, it neither be very easy nor too tough, means it should be realistic one. An unrealistic target has reverse impact and may be demotivate the executives.

(c) Optimum utilisation of resources: A budget targets which is easily achievable may underutilise the resources such as potential skills of executives. Pressure sometime forcing to explore innovative ways to get things done. Thus, to keep motivation alive, a balanced approach should be applied for optimum utilisation of resources upto its effort zone, though beyond the comfort zone.

(d) Involvement in budgeting process: The budgets which involves the executives from all department can capture the requirement of all the users. The participative budgeting motivates the executives and give them a sense of ownership. Involvement at planning stage of budget can take care of the requirements of the executives and force them accept the targets. However, involvement at every stage of budgeting process may distort the objective of budget and lands nowhere., thus, a balance approach may be followed.

13. What are components of Budget Manual ?

The budget manual is a booklet specifying the objectives of an organisation in relation to its strategy. The budget is made to decide how much an organisation would earn and spend and in what manner. CIMA, London, defines budget manual as, "A document which sets out the responsibilities of the persons engaged in, the routine of, and the forms and records required for, budgetary control."

Effective budgetary planning relies on the provision of adequate information to the individuals involved in the planning process. Many of these information needs are contained in the budget manual. A budget manual is a collection of documents that contains key information for those involved in the planning process.

Typical budget manual may include the following:

(i) A statement regarding the objectives of the organisation and how they can be achieved through budgetary control;

(ii) A statement about the functions and responsibilities of each executive, both regarding preparation and execution of budgets;

(iii) Procedures to be followed for obtaining the necessary approval of budgets. The authority of granting approval should be stated in explicit terms. Whether, one two or more signatures are required on each document should be clearly stated;

(iv) A form of organisation chart to show who are responsible for the preparation of each functional budget and the way in which the budgets are interrelated.

(v) A timetable for the preparation of each budget.

(vi) The manner of scrutiny and the personnel to carry it out;

(vii) Reports, statements, forms and other record to be maintained;

(viii) The accounts classification to be employed. It is necessary that the framework within which the costs, revenue and other financial accounts are classified must be identical both in the accounts and budget department;

(ix) The reporting of the remedial action;

(x) The manner in which budgets, after acceptance and issuance, are to be revised or the matter amended these are included in budgets and on which action can be taken only with the approval of top management

(xi) This will prevent the formation of a 'bottleneck' with the late preparation of one budget holding up the preparation of all others.

(xii) Copies of all forms to be completed by those responsible for preparing budgets, with explanations concerning their completion.

(xiii) A list of the organization's account codes, with full explanations of how to use them.

(xiv) Information concerning key assumptions to be made by managers in their budgets, for example the rate of inflation, key exchange rates, etc.

14. Explain Budget Ratios.

The following ratios are usually used by the management to measure development from budget.

Capacity Usage Ratio: This relationship between the budgeted number of working hours and the maximum possible number of working hours in a budget period.

Standard Capacity Employed Ratio: This ratio indicates the extent to which facilities were actually utilized during the budget period.

Level of Activity Ratio: This may be defined as the number of standard hours equivalent to work produced expressed as a percentage of the budget of standard hours.

Efficiency Ratio: This ratio may be defined as standard hours equivalent of work produced expressed as a percentage of the actual hours spent in producing the work.

Calendar Ratio: This ratio may be defined as the relationship between the number of working days in a period and the number of working as in the relative budget period.

15. Explain the Concept of Zero Based Budgeting.

Zero-based Budgeting (ZBB) is defined as a method of budgeting which requires each cost element to be specifically justified, though the activities to which the budget relates are not being undertaken for the first time. The cost of each activity has to be justified and without justification, the budget allowance is zero.

Zero based budgeting differs from the conventional system of budgeting because it mainly starts from scratch or zero and not on the basis of trends or historical levels of expenditure. In the customary budgeting system, the last year's figures are accepted as they are, or cut back or increases are granted. Zero based budgeting on the other hand, starts with the premise that the budget for next period is zero so long the demand for a function, process, project or activity is not justified for each rupee from the first rupee spent.

Zero-based Budgeting (ZBB) is an emergent form of budgeting which arises to overcome the limitations of incremental (traditional) budgeting system.

ZBB is an activity-based budgeting system where budgets are prepared for each activity rather than functional department. Justification in the form of cost benefits for the activity is required to be given. The activities are then evaluated and prioritized by the management on the basis of factors like synchronisation with organisational objectives, availability of funds, regulatory requirement etc.
ZBB is suitable for both corporate and non-corporate entities. In case of non- corporate entities like Government department, local bodies, not for profit organisations, where these entities need to justify the benefits of expenditures on social programmes like mid-day meal, installation of street lights, provision of drinking water etc.
In case of corporate entities, ZBB is best suited for discretionary costs like research and development cost, training programmes, advertisement etc.

ZBB involves the following stages:

(i) **Identification and description of Decision packages:** Decision packages are the programmes or activities for which decision is required to be taken. The programmes or activities are described for technical specifications, financial impact in the form of cost benefit analysis and other issues like environmental, regulatory, social etc.

(ii) **Evaluation of Decision packages:** Once Decision packages are identified and described, it is evaluated against factors like synchronisation with organisational objectives, availability of funds, regulatory requirement etc.

(iii) **Ranking (Prioritisation) of the Decision packages:** After evaluation of the decision packages, it is ranked on the basis priority of the activities. Because of this prioritization feature ZBB is also known as Priority-based Budgeting.

(iv) **Allocation of resources:** After ranking of the decision packages, resources are allocated for decision packages. Budgets are prepared like it is done first time without taking reference to previous budgets.

Advantages of Zero-based Budgeting

The advantages of zero-based budgeting are as follows:

- It provides a systematic approach for the evaluation of different activities and rank them in order of preference for the allocation of scarce resources.
- It ensures that the various functions undertaken by the organization are critical for the achievement of its objectives and are being performed in the best possible way.
- It provides an opportunity to the management to allocate resources for various activities only after having a thorough cost-benefit-analysis. The chances of arbitrary cuts and enhancement are thus avoided.
- The areas of wasteful expenditure can be easily identified and eliminated.
- Departmental budgets are closely linked with corporation objectives.
- The technique can also be used for the introduction and implementation of the system of 'management by objective.' Thus, it cannot only be used for fulfillment of the objectives of traditional budgeting but it can also be used for a variety of other purposes.

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

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

Limitations of Zero-based Budgeting

- The work involves in the creation of decision-making and their subsequent ranking has to be made on the basis of new data. This process is very tedious to management.
- The activities selected for the purpose of ZBB are on the basis of the traditional functional departments. So, the consideration scheme may not be implemented properly.

16. Explain difference between Traditional & Zero Based Budgeting.

Following are the points of difference between traditional budgeting and zero- based budgeting:

- Traditional budgeting is accounting oriented. Main stress happens to be on previous level of expenditure. Zero-based budgeting makes a decision- oriented approach. It is very rational in nature and requires all programmes, old and new, to compete for scarce resources.
- In traditional budgeting, first reference is made to past level of spending and then demand for inflation and new programmes. In zero- based budgeting, management focuses attention to only on decision packages, which enjoy priority to others.
- In tradition budgeting, some managers deliberately inflate their budget request so that after the cuts they still get what they want. In zero-based budgeting, a rationale analysis of budget proposals is attempted. The managers, who unnecessarily try to inflate the budget request, are likely to be caught and exposed. Management accords its approval only to a carefully devised result-oriented package.
- Traditional budgeting is not as clear and as responsive as zero-base budgeting.

- In traditional budgeting, it is for top management to decide why a particular amount should be spent on a particular decision unit. In Zero-based budgeting, this responsibility is shifted from top management to the manager of decision unit.
- Traditional budgeting makes a routine approach. Zero-based budgeting makes a very straightforward approach and immediately spotlights the decision packages enjoying priority over others.

17. Explain Performance Budgeting.

Performance budgeting (PB) involves evaluation of the performance of an organisation in the context of both specific as well as overall objectives of the organisation. This requires complete clarity about both the short-term as well as long-term organisational objectives. The responsibility of the various levels of management should be predetermined in terms of results expected from them and the authority vested in them. In other words, performance budgeting requires fixing of the responsibility of each executive in organisation and the continuous appraisal of his performance. It is, therefore, considered to be synonymous with responsibility accounting.

Performance Budgeting provide a meaningful relationship between estimated inputs and expected outputs as an integral part of the budgeting system. A performance budget is one which presents the purposes and objectives for which funds are required, the costs of the programmes proposed for achieving those objectives, and quantitative data measuring the accomplishments and work performed under each programme. Thus, PB is a technique of presenting budgets for costs and revenues in terms of functions. Programmes and activities are correlating the physical and financial aspect of the individual items comprising the budget.

Traditional Budgeting vs. Performance Budgeting

- The traditional budgeting gives more emphasis on the financial aspect than the physical aspects or performance. PB aims at establishing a relationship between the inputs and the outputs.
- Traditional budgets are generally prepared with the main basis towards the objects or items of expenditure i.e., it highlights the items of expenditure, namely, salaries, stores and materials, rates, rents and taxes and so on.

Steps in Performance Budgeting

- Establishing a meaningful functional programme and activity classification of government operations.
- Bring the system of accounting and financial management in accordance with this classification.
- Evolving suitable norms, yardsticks, work units of performance and units costs, wherever possible under each programme and activity for their reporting and evaluation.

For an enterprise that wants to adopt PB, it is thus imperative that:

- the objectives of the enterprise are spelt out in concrete terms.
- the objectives are then translated into specific functions, programmes, activities and tasks for different levels of management within the realities of fiscal; constraints;
- realistic and acceptable norms, yardsticks or standards and performance indicators should be evolved and expressed in quantifiable physical units.

- a style of management based upon decentralised responsibility structure should be adopted, and
- an accounting and reporting system should be developed to facilities monitoring, analysis and review of actual performance in relation to budgets .

Performance Reporting at various levels of management:

Report: A major part of the management accountant's job consists of preparing reports to provide information for purposes of control and planning.The important consideration in drawing up of reports and determining their scope are the following:

Significance : Are the facts in the reports reliable? Does it either called for action or demonstrate the effect of action? It is material enough.

Timeliness : How late can the information be and still be of use? What is the earliest moment at which it could be used if it were available? How frequently is it required?

Accuracy : How small should be an inaccuracy which does not alter the significance of the information?

Appropriateness : Is the recipient the right person to take any action that is needed? Is there any other information which is required to support the information to anyone else jointly interested?

Discrimination : Will anything be lost by omitting the item? Will any of the items gain from the omission? Is the responsibility for suppressing the item acceptable?

Presentation : Is the report clear and unbiased? Is the form of it is suitable to the subject? Is the form of it suitable to the recipient?

	MCQ
Q.1	The classification of fixed and variable cost is useful for the preparation of:
Ans.	(a) Master budget (b) Flexible budget (c) Cash budget (d) Capital budget
Q.2	Activity Ratio depicts:
Ans.	(a) Whether actual capacity utilized exceeds or falls short of the budgeted capacity (b) Whether the actual hours used for actual production were more or less than the standard hours (c) Whether actual activity was more or less than the budgeted capacity (d) None of the above
Q.3	A budget report is prepared on the principle of exception and thus
Ans.	(a) Only unfavourable variances should be shown (b) Only favourable variance should be shown (c) Both favourable and unfavourable variances should be shown (d) None of the above Solution: Self Explanatory
Q.4	Budget manual is a document
Ans.	(a) Which contains different type of budgets to be formulated only. (b) Which contains the details about standard cost of the products to be made. (c) Setting out the budget organization and procedures for preparing a budget including fixation of responsibilities, formats and records required for the purpose of preparing a budget and for exercising budgetary control system. (d) None of the above. Solution: Self Explanatory
Q.5	Which of the following is usually a short-term budget:
Ans.	(a) Capital expenditure budget (b) Research and development budget (c) Cash budget (d) Sales budget
Q.6	The budget control organization is usually headed by a top executive who is known as:
Ans.	(a) General Manager (b) Budget director/budget controller (c) Accountant of the organization

	(d) None of the above
Q.7	Efficiency ratio is:
	(a) The extent of actual working days avoided during the budget period (b) Activity ratio/ capacity ratio (c) Whether the actual activity is more or less than budgeted activity (d) None of the above
Q.8	Purchases budget and materials budget are same:
Ans.	(a) Purchases budget is a budget which includes only the details of all materials purchased (b) Purchases budget is a wider concept and thus includes not only purchases of materials but also other item's as well (c) Purchases budget is different from materials budget; it includes purchases of other items only (d) None of the above
Q.9	A favourable budget variance is always an indication of efficient performance". Do you agree, give reason"
Ans.	(a) A favourable variance indicates, saving on the part of the organization hence it indicates efficient performance of the organization. (b) Under all situations, a favourable variance of an organization speaks about its efficient performance. (c) A favourable variance does not necessarily indicate efficient performance, because such a variance might have been arrived at by not carrying out the expenses mentioned in the budget. (d) None of the above.
Q.10	XYZ Ltd. had a marginal costing profit of ₹ 1,28,600 in April 2018. The opening stock was 1,600 units and the closing stock was 1,150 units. The company is considering changing to an absorption costing system. The fixed overhead absorption rate is ₹ 4 per unit. Profit under absorption costing will be:
Ans.	(a) ₹ 1,26,800 (b) ₹ 1,30,400 (c) ₹ 1,15,700 (d) ₹ 1,28,070 Solution: Self Explanatory
Q.11	A Toy manufacturer finds that it costs ₹ 8.5 per unit to make component to C-21 that is used to manufacture a toy. A supplier is ready to provide the same component at ₹ 7.25 each. Continuous supply is also fully assured. The break-down cost per unit as follows: Materials ₹ 3.60, Labour ₹ 2.40 other variable expenses ₹ 1.00, Depreciation and other fixed cost ₹ 1.50. What would be your decision?
Ans.	(a) Make (b) Buy

(c) Sell
(d) None of the above
Solution: Self Explanatory

Q.12 Which of the following assumptions are made while calculating marginal cost?

(a) Total fixed cost is constant at all levels of output
(b) All elements of cost can be divided into fixed and variable components
(c) Total variable cost varies according to the volume of output
(d) All of the above

Q.13 The fixed expenses are ₹ 64,000 and the break-even point is ₹ 1,60,000. The new break-even point, if the selling price is reduced by 10% is

Ans.
(a) ₹ 1,60,000
(b) ₹ 182,000
(c) ₹ 192,000
(d) ₹ 2,00,000
Solution: Self Explanatory

Q.14 A newspaper presently sells 1,00,000 copies of its morning daily. It wants to publish evening daily. The particulars are: Actual for Morning daily Estimates for Evening Sales Price ₹ 2 per paper ₹ 0.50 per paper Variable cost ₹ 1.20 per paper ₹ 0.22 per paper Fixed cost ₹ 2,40,000 per week ₹ 10,000 per week Sales of Morning daily will daily fall @ 1 copy of every 10 copies sold of Evening daily. Calculate the Break Sales for Evening daily per week.

Ans.
(a) 3,00,000 Copies
(b) 35,714 Copies
(c) 50,000 Copies
(d) 32,514 Copies

Q.15 Selling price per unit ₹ 40, Trade discount 10% of selling price, cash discount 5% on sales, Material cost ₹ 6, Labour cost ₹ 8, Fixed overheads ₹ 51,600 and variable overheads 60% of labour cost. What would be the net profit if sales are 20% above the BEP?

Ans.
(a) ₹ 10,318
(b) ₹ 10,526
(c) ₹ 10,320
(d) ₹ 10,800
Solution: Self Explanatory

Q.16 A manufacturer produces 2,00,000 units of a product at a cost of ₹ 4.5 per unit. Later on, he produces 3,50,000 units at a cost of ₹ 4.20 per unit, when its fixed overheads have decreased by 30%. The marginal cost per unit and originally fixed overheads will be:

Ans.
(a) ₹ 2 and ₹ 80,000 respectively
(b) ₹ 3 and ₹ 90,000 respectively

(c) ₹ 4 and ₹ 1,00,000 respectively
(d) ₹ 5 and ₹ 1,20,000 respectively

Q.17 Miss Simran has a sum of ₹ 30,00,000 which is invested in a business. She wishes for a 10% return (after tax) on her fund. It is revealed from the present cost data analysis that the variable cost of operation is 60% of sales and fixed costs are ₹ 1,75,000 p.a. On the basis of this information, you are required to find out the sales volume to earn a 10% return (after tax). Assume tax @20%.

Ans.
(a) ₹ 13.75 Lakhs
(b) ₹ 13.375 Lakhs
(c) ₹ 7.5 lakhs
(d) ₹ 12.75 lakhs

Q.18 Sales increased from ₹ 700 Lakh to ₹ 900 Lakh. If P/V Ratio is 40%, then the % increase in variable cost per unit and total contribution will be:

Ans.
(a) Nil and ` 200 Lakhs
(b) No Change
(c) 40% and ` 80 Lakhs
(d) Nil and ₹ 80 Lakhs
Solution: Self Explanatory

Q.19 Prow shirts Ltd. manufactures three types of shirts Standard, Premium and Elite. The unit selling price of these shirts are ₹ 500, ₹ 800 and ₹ 1200 respectively. The corresponding unit variable costs are ₹ 300, ₹ 500 and ₹ 600. The proportions (quantity-wise) in which these products are manufactured and sold are 50%, 30% and 20% respectively. Total fixed costs are ₹ 60,00,000. Overall breakeven quantity is

Ans.
(a) 19,453 Units
(b) 19,354 Units
(c) 18,194 Units
(d) 19,153 Units

Q.20 In 2022, the variable cost was 8500 per unit and fixed cost ₹ 50 per unit. Production was 1,50,000 units. It is expected that production in 2023 will increase to 1,80,000 units.
The variable cost will increase by 30% and fixed cost by 28% in 2023. The amount of fixed cost in 2023 will be

Ans.
(a) ₹ 75,00,000
(b) ₹ 70,00,000
(c) ₹ 96,00,000
(d) ₹ 1,15,000

Answers:

1	2	3	4	5
B	C	C	C	C
6	7	8	9	10
B	B	B	C	C

15 CHAPTER

PROCESS COSTING

Q.N	QUESTIONS
1.	**Explain Advantages & Dis-Advantages of using Inter-Process Profit.**
	The advantages and disadvantages of using inter-process profit, in process type industries are:- **Advantages:** **1.** Comparison between the cost of output and its market price at the stage of completion is facilitated. **2.** Each process is made to stand by itself as to the profitability. **Disadvantages:** **1.** The use of inter-process profits involves complication. **2.** The system shows profits which are not realised because of stock not sold out.
2.	**Write short note on Operation Costing.**
	This product costing system is used when an entity produces more than one variant of final product using different materials but with similar conversion activities. Which means conversion activities are similar for all the product variants but materials differ significantly. **Operation Costing method is also known as Hybrid product costing system** as materials costs are accumulated by job order or batch wise but conversion costs i.e. labour and overheads costs are accumulated by department, and process costing methods are used to assign these costs to products. Moreover, under operation costing, conversion costs are applied to products using a predetermined application rate. This predetermined rate is based on budgeted conversion costs. **For example**, a company is manufacturing two grades of products, Product- Deluxe and Product-Regular. Both the products pass through a similar production process but require different quality and quantities of raw materials. The cost of raw material is accumulated on the basis of job or batches or units of two variants of products. But the costs for the conversion activities need not to be identified with the product variants as both the Products requires similar activities for conversion. Hence, conversion activity costs are accumulated on the basis of departments or processes only. Example of industries are ready made garments, Shoe making, jewelry etc.
3.	**Write down Steps in Process Costing.**
	Step-1: Analysis of physical flow of production units The first step is to determine and analyse the number of physical units in the form of inputs (introduced fresh or transferred from previous process, beginning work- in-process) and outputs (completed and work-in-process). **Step-2: Calculation of equivalent units for each cost elements** The second step is to calculate equivalent units of production for each cost element i.e. for material, labour and overheads. It is calculated by taking the extent of work done in respect of each element.

For example, if there are 1,000 units in work-in- process at the end of the month. All materials are introduced at the beginning of production process. For labour and overheads, 20% more work is required to get it completed. In this example, the equivalent units of work-in-process in respect of material would be 1,000 units (1,000 units × 100% complete) and for labour and overheads 800 units (1,000 units × 80% complete).

Step-3: Determination of total cost for each cost element

Total cost for each cost element is collected and accumulated for the period. The process of cost collection has already been discussed above.

Step-4: Computation of cost per equivalent unit for each cost element

In this step, the cost per equivalent unit for each cost element is calculated. The total cost as calculated in Step-3 is divided by the equivalent units as determined in Step-2.

Step-5: Assignment of total costs to units completed and ending WIP

In this step, the total cost for units completed, units transferred to next process, ending work in process, abnormal loss etc. are calculated and posted in the process account and production cost report.

4. In which Industries Process Costing is applied ?

Industries, where process costing can be applied, have normally one or more of the following features:

1. Each plant or factory is divided into a number of processes, cost centres or departments, and each such division is a stage of production or a process.

2. Manufacturing activity is carried on continuously by means of one or more process run sequentially, selectively or simultaneously.

3. The output of one process becomes the input of another process.

4. The end product usually is of like units not distinguishable from one another.

5. It is not possible to trace the identity of any particular lot of output to any lot of input materials. For example, in the sugar industry, it is impossible to trace any lot of sugar bags to a particular lot of sugarcane fed or vice versa.

6. Production of a product may give rise to Joint and/or By-Products.

ICAI MCQs

Q.1 The following information is available in respect of Process I: Raw material purchased and introduced 10,000 units @ 5 per unit Raw Material received from store 4000 units@ 6 per unit Direct Labour 40,000 Overheads 28,000 Output of Process is 13,500 units, Normal wastage 5% of inputs Scrap value of wastage 4 per unit The value of Abnormal Gain is:

(a) 2062.68
(b) 2135.34
(c) 2103.70
(d) 2093.2

Solution: Process a/c Particulars Units Amount Particulars units Amount Raw material 10000 50000 Normal loss 700 2800 Stores 4000 24000 Units transferred 13500 141293.2 Direct Wages 40000 Production overheads 28000 Abnormal gain 200 2093.2 144093.2 144093.2 Cost per unit= 142000-2800/14000-700 = 10.466 per unit

Q.2 Boiler house costing is an example of ….. costing.

(a) Contract
(b) Process
(c) Service
(d) All of above

Solution: Self Explanatory

Q.3 In a process 10000 units are introduced during 2022-23. 10% of input is normal loss. Closing work-in-progress 80% complete is 1800 units. 7000 completed units are transferred to next process. Equivalent no of units for closing WIP will be:

(a) 1440 units
(b) 360 units
(c) 8440 units
(d) 7000 units

Solution: Equivalent units for closing WIP: 1800 x 80% = 1440

Q.4 ABC Ltd manufactures chemical •x• that passes through three different process before being converted into final product. The output of each process is transferred to next process and there is no opening and closing stock of WIP. Process loss is 10% of total inputs in each process. Following are the details of abnormal loss in each process.

Process I: 3000 units Process II: 2300 units Process Ill: 2400 units
Final output of process Ill is 80580 units. Inputs introduced in Process Ill will be:
(a) 100000 units
(b) 110000 units
(c) 120000 units

Answer – 4: 115860 units

Solution: Final output process Ill 80580 Input of process Ill {80580+2400/90%) 92200 Input of process II
{92200+2300/90%) 105000 Input of process I
{105000+3000/90%) 120000

Q.5 The following information is given to you: Input of raw material is 30,000 units, output 28,750 units. If the normal loss is 5% of input, then:

(a) Normal loss of 1550 units
(b) Abnormal loss of 250 units
(c) Abnormal gain of 250 units
(d) Either abnormal loss of 250 units or abnormal gain of 250 units

Solution: Input 30000 Normal loss@ 5% {1500) Expected Output 28500 Actual output 28750 Therefore abnormal gain is 250 units

Q.6 ABC Ltd manufactures chemical 'Y' that passes through three different process before being converted into final product. The output of each process is transferred to next process and there is no opening and closing stock of WIP. Process loss is 5% of total inputs in each process. Following are the details of abnormal loss/gain in each process.

Process I: 50 units Abnormal gain
Process II: 135 units Abnormal loss
Process Ill: 125 units Abnormal loss
Final output of process Ill is 29800 units. Inputs introduced in Process Ill will be:
Answer -1: 35500 units
Answer -2: 34818 units
Answer -3: 34515 units
Answer -4: 35000 units

Solution: Final output process Ill 29800 Input of process Ill {29800+125/95%) 31500 Input of process II
{31500+135/95%) 33300 Input of process I {33300- 50/95%) 35000

Q.7 The hospital is opened for 365 days and consist of 40 beds and 10 more beds can be hired if required. it was estimated that for 165 days in a year 30 beds were occupied; For 120 days 38 beds were occupied. The hospital hired extra 800 beds @ 200 per bed. Calculate the number of patient beds.

(a) 9,510
(b) 10,310
(c) 10,130
(d) 13,510

Solution: Calculation of patient beds: 165 days x 30 beds + 120 days x 38 beds + 80 days x 40 beds+ 800 extra beds = 13510 patient beds

Q.8 The following information is given: Input of raw material 35,000 units, Process cost 278000, Actual output transferred to next process 30,200 units, Normal Loss 10% of inputs, Sale of scrap 3 per unit. Calculate the amount to be transferred to costing profit and loss account:

(a) 7,139.68 Cr side
(b) 7,139.68 Dr side
(c) 11,039.68 Dr side
(d) 11,039.68 Cr side

Solution: 278000-10500/35000-3500 = 8.492
Therefore: Value of abnormal loss (1300 x 8.492) 11039.68 Scrap sold {1300X3) {3900) Transferred to costing P&L 7139.68

Q.9 In a particular process 28000 units are introduced during a period. 5% of input is normal loss. Closing work in progress 60% complete is 2600 units. 24000 completed units are transferred to next process. Equivalent production for the period is:

(a) 25040 units
(b) 28000 units
(c) 25560 units
(d) 24000 units

Q.10 In electricity supply company uses as cost unit.

(a) Kilo watt hour
(b) per household
(c) voltage
(d) none of these

Solution: Self Explanatory

Q.11 Process cost is very much applicable in

(a) Construction Industry
(b) Telecommunication Industry
(c) Pharmaceutical Industry
(d) None of above

Solution: Self Explanatory

Q.12 In process costing. each producing department is a

(a) Cost centre
(b) Cost unit
(c) Investment centre
(d) Revenue centre

Solution: Self Explanatory

Q.13 In a process 30000 units are introduced during a period. 5% of input is normal loss. Closing work-in-process 60% complete is 3000 units. 26500 completed units are transferred to next process. Unit scrapped are 60% complete. Equivalent production for the period is

(a) 30000 units
(b) 28900 units
(c) 29200 units
(d) 27300 units

Solution: Equivalent Units: Units transferred: 26500 x 100% = 26500 Abnormal Gain: 1000 x 100% = (1000)
Closing WIP: 3000 x 60% = 1800 Total Equivalent units 27300

Q.14 In process, conversion cost means:

(a) Cost of direct materials, direct labour, direct expenses
(b) Direct labour, direct expenses, indirect material, indirect labour, indirect expenses
(c) Prime cost plus factory overheads
(d) All costs up to the product reaching the consumer, less direct material costs

Q.15 What will be the impact of normal loss on the overall per unit cost?

(a) Per unit cost will decrease
(b) Per unit cost remain unchanged
(c) Per unit cost will increase
(d) Normal loss has no relation to unit cost

Solution: Self Explanatory

Q.16 In a process 20,000 units are introduced during a period. 5% of input is normal loss. Closing work-in-process 40% complete is 2000 units. 16,500 completed units are transferred to next process. Unit scrapped are 60% complete. Equivalent production for the period is

(a) 20,000 units
(b) 17,300 units
(c) 18,200 units
(d) 17,600 units

Solution: Equivalent Units: Units transferred: 16500 x 100% = 16500 Abnormal loss: 500 x 60% = 300 Closing
WIP: 2000 x 40% = 800 Total Equivalent units 17600

Q.17 In Electricity supply company uses ..... as cost unit.

(a) Kilo watt hour
(b) per household
(c) voltage
(d) none of these

Solution: Self Explanatory

Q.18 The following information is given: Input of raw material 20,000 units @ 8 per unit Direct Wages 1,20,000 Production Overhead 75,500 Actual output transferred to next process 19,250 units Normal Loss 5% of inputs, Sale of scrap 8 per unit. Calculate the amount to be transferred to costing profit and loss account:

(a) 4,572.25 Cr side
(b) 4,572.25 Dr side
(c) 2,572.25 Dr side
(d) 2,572.25 Cr side

Q.19 In XYZ Ltd. 12,000 units of raw material were introduced in Process-A. The actual output and normal loss of respective processes are as follows: Process Output Normal loss A 10500 10% B 8800 15%C 7200 20% Abnormal Gain in Process C will be

(a) 140 Units
(b) 150 Units
(c) 160 Units
(d) 155 Units.
160 units
Solution: Input of Process C 8800 units Normal loss @20% 1760 units Expected output 7040 units Actual output 7200 units Abnormal Gain 160 units

Answers:

1	2	3	4	5
D	C	A	C	C
6	7	8	9	10
D	D	B	C	A
11	12	13	14	15
C	A	D	B	C
16	17	18	19	
D	A	D	C	

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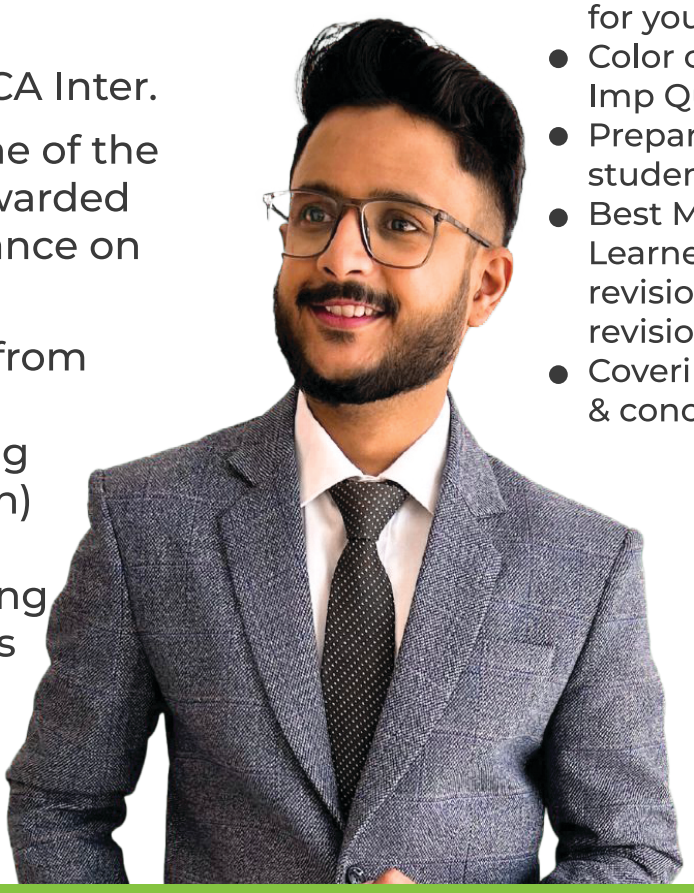

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