

CA INTERMEDIATE

COST & MANAGEMENT ACCOUNTING

THEORY CUM MCQ BOOK

By

CA. NAMIT ARORA SIR

This book is dedicated to my Brother

Mr. MANIK ARORA

INDEX

<i>S. NO.</i>	<i>CHAPTERS NAME</i>	<i>PAGE NO.</i>
<i>1</i>	<i>INTRODUCTION</i>	<i>1.1 - 1.20</i>
<i>2</i>	<i>MATERIALS COST</i>	<i>2.1 - 2.15</i>
<i>3</i>	<i>EMPLOYEE COST & DIRECT EXPENSES</i>	<i>3.1 - 3.9</i>
<i>4</i>	<i>OVERHEADS ABSORPTION COSTING METHOD</i>	<i>4.1 - 4.7</i>
<i>5</i>	<i>ACTIVITY BASED COSTING</i>	<i>5.1 - 5.5</i>
<i>6</i>	<i>COST SHEET</i>	<i>6.1 - 6.3</i>
<i>7</i>	<i>COST ACCOUNTING SYSTEM</i>	<i>7.1 - 7.5</i>
<i>8</i>	<i>UNIT COSTING, JOB AND BATCH COSTING</i>	<i>8.1 - 8.5</i>
<i>9</i>	<i>PROCESS & OPERATION COSTING</i>	<i>9.1 - 9.5</i>
<i>10</i>	<i>JOINT PRODUCTS & BY PRODUCTS</i>	<i>10.1 - 10.4</i>
<i>11</i>	<i>SERVICE COSTING</i>	<i>11.1 - 11.4</i>
<i>12</i>	<i>STANDARD COSTING</i>	<i>12.1 - 12.5</i>
<i>13</i>	<i>MARGINAL COSTING</i>	<i>13.1 - 13.4</i>
<i>14</i>	<i>BUDGETS AND BUDGETARY CONTROL</i>	<i>14.1 - 14.5</i>



1. MEANING AND DEFINITION

Cost	<p>Cost is the amount of resource given up in exchange of some goods or services.</p> <p>As a noun, it can be defined as the amount of expenditure (actual or notional) incurred on or attributable to a specified article, product or activity.</p> <p>As a verb, it can be as an action to ascertain the cost of a specified thing or activity.</p>
Costing	<p>Costing is defined as “the technique and process of ascertaining costs”.</p> <p>According to CIMA “an organisation’s costing system is the foundation of the internal financial information system for managers. It provides the information that management needs to plan and control the organisation’s activities and to make decisions about the future.”</p>
Cost Accounting	<p>Cost Accounting is defined as “the process of accounting for cost which begins with the recording of income and expenditure or the bases on which they are calculated and ends with the preparation of periodical statements and reports for ascertaining and controlling costs.”</p>
Cost Accountancy	<p>Cost Accountancy has been defined as “the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived there from for the purpose of managerial decision making.”</p>
Management Accounting	<p>As per CIMA Official Terminology “Management Accounting is the application of the principles of accounting and financial management to create, protect, preserve and increase value for the stakeholders of for-profit and not-for-profit enterprises in the public and private sectors.”</p> <p>Management Accounting is an integral part of management function. It assists management by provision of relevant information for planning, organising, controlling, decision making etc.</p>
Cost Management	<p>It is an application of management accounting concepts, methods of collections, analysis and presentation of data to provide the information needed to plan, monitor and control costs.</p>

2. OBJECTIVES OF COST ACCOUNTING

Ascertainment of Cost	<p>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.</p>
Determination of Selling Price and Profitability	<p>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.</p>

Cost Control	<p>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.</p> <p>To exercise control over cost, following steps are followed:</p> <ul style="list-style-type: none"> ➤ Determination of pre-determined standard or results ➤ Measurement of actual performance ➤ Comparison of actual performance with set standard or target ➤ Analysis of variance and action
Cost Reduction	<p>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."</p> <p>Cost Reduction is an approach of management where cost of an object is believed to have a scope of further reduction. No cost is termed as lowest and every possibility of cost reduction is explored.</p> <p>To do cost reduction, the following action is taken:</p> <ul style="list-style-type: none"> ➤ Each activity within an entity is segmented to analyse and identify value added and non- value added activities. All non-value added activities are eliminated without affecting the essential characteristics of the product or process. Value Chain Analysis, a strategic tool, developed by Michael Porter, is one of the method to do value analysis. ➤ Conducting continuous research and study to know the most optimal way to manufacture a product or render a service. <p>The three-fold assumptions:</p> <ul style="list-style-type: none"> ➤ There is a saving in unit cost. ➤ Such saving is of permanent nature. ➤ The utility and quality of the goods and services remain unaffected, if not improved.
Assisting Management in Decision Making	<p>Cost and Management Accounting by providing relevant information, assist management in planning, implementing, measuring, controlling and evaluating of various activities. A robust (strong) cost and management accounting system provides internal and external information to the industry which will be relevant for decision making.</p>

3. DIFFERENCE BETWEEN COST CONTROL AND COST REDUCTION

S.N	Cost Control	Cost Reduction
1	Cost control aims at maintaining the costs in accordance with the established standards.	Cost reduction is concerned with reducing costs. It challenges all standards and endeavours to better them continuously




2	Cost control seeks to attain lowest possible cost under existing conditions.	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.	In case of cost reduction it is on present and future.
4	Cost Control is a preventive function	Cost reduction is a corrective function. It operates even when an efficient cost control system exists.
5	Cost control ends when targets are achieved	Cost reduction has no visible end and is a continuous process.

4. SCOPE OF COST ACCOUNTING (FUNCTIONS)

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, and operation cost etc.
Cost Accounting	Cost Accounting is defined as "the process of accounting for cost which begins with the recording of income and expenditure or the bases on which they are calculated and ends with the preparation of periodical statements and reports for ascertaining and controlling costs." Cost Accounting is a formal mechanism of cost ascertainment.
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.
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 or service over a period of time.
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 analysed to know whether cost is not exceeding its budgeted cost and whether further cost reduction is possible or not.
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.
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.

5. RELATIONSHIP OF COST AND MANAGEMENT ACCOUNTING WITH OTHER RELATED DISCIPLINES

Cost Accounting with Management Accounting	As we have already studied that though Cost Accounting and Management Accounting is used synonymously but there are a few differences. Management Accounting is an open-ended discipline which enables managers to take informed decisions. Management Accounting takes inputs from cost accounts, financial accounts, statistical and operation management tools etc.
Cost Accounting with Financial Accounting	Cost accounting accumulates and ascertains costs for goods sold and inventories. It provides inputs to record costs in financial accounting system.
Cost and Management Accounting with Financial Management	<p>Cost and Management Accounting is an application of Financial Management for decision making purposes.</p> <p>The relationship among Cost Accounting, Management Accounting, Financial Accounting and Financial Management can be understood with the help of the following diagram.</p> 

6. DIFFERENCE BETWEEN COST ACCOUNTING AND 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	It only deals with cost Ascertainment.	It is wider in scope as it includes financial accounting, budgeting, taxation, planning etc.
Recording of data	It uses both past and present figures.	It is focused with the projection of figures for future.



Development	Its development is related to industrial revolution.	It develops in accordance to the need of modern business world.
Rules and Regulation	It follows certain principles and procedures for recording costs of different products.	It does not follow any specific rules and regulations.

7. DIFFERENCE BETWEEN FINANCIAL ACCOUNTING AND COST ACCOUNTING

Basis	Financial Accounting	Cost Accounting
Objective	Providing information about the financial performance of an entity.	Ascertainment of cost for the purpose of cost control and decision making.
Nature	It classifies records, present and interprets transactions in monetary terms.	It classifies costs, records, present, and interprets it in a significant manner.
Recording of data	It records historical data.	It makes use of both historical and pre-determined costs.
Users of information	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 some time regulatory authorities also.
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, contracts, etc.
Time period	Financial Statements are prepared usually for a year.	Reports and statements are prepared as and when required.
Presentation of information	A set format is used for presenting financial information.	In general, no set formats for presenting cost information is followed.

8. ROLE & FUNCTIONS OF COST AND MANAGEMENT ACCOUNTING

The role of a cost and management accounting system	<ul style="list-style-type: none"> ➤ To Provide relevant information to management for decision making, ➤ To assist management for planning, measurement, evaluation and controlling of business activities, ➤ To help in allocation of cost to products and inventories for both external and internal users.
The functions of Cost and	<ul style="list-style-type: none"> ➤ Collection and accumulation of cost for each element of cost. ➤ Assigning costs to cost objects to ascertain cost. ➤ Cost and Management Accounting Department sets budget and standards for a particular period or activity beforehand and these are compared with the

Management Accounting	<p>assigned and ascertained cost. Any deviation with the set standards are analysed and reported. All this exercise is done to control costs.</p> <ul style="list-style-type: none"> ➤ 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). The MIS provides relevant and timely information related to both internal and external to the organisation to enable management at all levels to take decisions. ➤ 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.
------------------------------	--

9. USERS OF COST AND MANAGEMENT ACCOUNTING

Internal Users	<p>(a) Policy Makers: The policy makers are those who formulate strategies:</p> <ul style="list-style-type: none"> ➤ 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. <p>(b) Managers: The managers use the information:</p> <ul style="list-style-type: none"> ➤ 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 <p>(c) Operational level staff: The operational level staff like supervisors, foreman, team leaders require information:</p> <ul style="list-style-type: none"> ➤ 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. <p>(d) Employees: Employees are concerned with the information related with time and attendance, incentives for work, performance standards etc.</p>
External Users	<ul style="list-style-type: none"> ➤ Regulatory Authorities: for different purpose which includes tariff determination, providing subsidies, rate fixation etc.



	<ul style="list-style-type: none"> ➤ <i>Auditors:</i> while conducting audit of financial accounts or for some other special purpose audit like cost audit etc. ➤ <i>Shareholders:</i> concerned with information that effect their investment. Management communicates to the shareholders through periodic communique (statements), annual reports etc. regarding new orders received, product expansion, market share for products etc. ➤ <i>Creditors and Lenders:</i> concerned with data and information which affects an entity's ability to serve lenders or creditors.
--	--

10. ESSENTIALS FEATURES OF A GOOD COST ACCOUNTING SYSTEM

<i>Informative and simple</i>	Cost accounting system should be tailor-made (suitable), practical, simple and capable of meeting the requirements of a business concern.
<i>Accurate and authentic</i>	The data to be used by the cost accounting system should be accurate and authenticated; otherwise it may distort the output of the system and a wrong decision may be taken.
<i>Uniformity and consistency</i>	There should be uniformity and consistency in classification, treatment and reporting of cost data and related information.
<i>Integrated and inclusive</i>	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.
<i>Flexible and adaptive</i>	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.
<i>Trust on the system</i>	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.

11. INSTALLATION OF COSTING SYSTEM

<i>Introduction</i>	A well-established costing system should provide all relevant information as and when required by management as well as various stakeholders.
<i>Factors of a Cost Accounting System to be studied</i>	<ul style="list-style-type: none"> ➤ Objective ➤ Nature of Business or Industry ➤ Organisational Hierarchy ➤ Knowing the product ➤ Knowing the production process ➤ Information synchronisation ➤ Method of maintenance of cost records

- Statutory compliances and audit
- Information Attributes (complete, accurate, timely, relevant etc.)

12. COST ACCOUNTING WITH THE USE OF INFORMATION TECHNOLOGY (IT)

<p>Industry 4.0</p>	<p>With the expansion of e-commerce and increasing competitive business environment, information technology is becoming an integral part of each activity in an organisation including Cost and Management Accounting.</p> <p>Information technology has changed the Cost and Management Accounting functions dramatically with the introduction of Enterprise Resource Planning (ERP) system.</p> <p>Cost Accounting and Management Information System has become automated and improved. The new industrial revolution in the form of digital innovation which is popularly known as Industry 4.0, has more emphasis on digitisation and automation of business process to have a better control over cost to maintain market competitiveness. Cost Accounting System has seen lots of savings in terms of time, money and efforts.</p>
<p>Impact of it in Cost Accounting</p>	<ul style="list-style-type: none"> ➤ Different functional activities get integrated ➤ A single entry into the accounting system provides custom made reports for every purpose and saves an organisation from preparing different sets of documents ➤ Reconciliation becomes simpler ➤ Paperless environment, department can get e-copy from the system ➤ IT with the help of internet are helping in resource procurement and mobilisation. For example, production department can get materials from the stores without issuing material requisition note physically ➤ To shift towards Just-in-Time (JIT) approach of inventory management and production. ➤ Cost information for a cost centre or cost object is ascertained with accuracy in timely manner. ➤ Each cost centre a cost object is codified and all related costs are assigned to the cost objects or cost centres using assigned codes ➤ The cost information can be customised as per the requirement ➤ Uniformity in preparation of report, budgets and standards can be achieved ➤ ERP software plays an important role in bringing uniformity irrespective of location, currency, language and regulations. ➤ Cost and revenue variance reports are generated in real time basis ➤ IT enables an entity to monitor and analyse each process of manufacturing or service activity closely to eliminate non value-added activities



13. DIGITAL COSTING SYSTEM

<p>Definition</p>	<p>Like the conventional cost accounting system, Digital costing system too collects data, classify the data, account the data to get and process information to make decisions, but the difference is the method of collection, medium of storage, forms of analysis and reporting. 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.</p> <p>Digital Costing System provides data to get the following information:</p> <ul style="list-style-type: none"> ➤ Cost incurred on a cost object ➤ Data on time spent ➤ Data on resource consumption ➤ Data on current market price of final product and raw materials ➤ Data on lead time and availability of materials ➤ Data on product demand and trend
<p>Benefits of Digital Costing System</p>	<ul style="list-style-type: none"> ➤ Ascertainment of cost with certainty on a cost object. This helps to analyse the activities for cost allocation and apportionment ➤ Analysis of data on time spent on each activity to study and formulate incentive plans ➤ 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) ➤ Helps to identify and eliminate the non-value-added activities. ➤ Data on resource consumption is helpful in setting the standards and measurement of variances on real time basis. ➤ Data on current market prices of material and consumables helps to estimate cost and setting standards on Marked to Market (M2M) basis. ➤ Extrapolation (conclusion) of data on customer behaviour towards the products to predict the market demand. It is helpful in preparation of budgets and planning of production. ➤ A better analysis of cost behaviour improves the cost benefit analysis and equipping the management in informed decision making.

14. COST OBJECT, COST UNITS & COST DRIVER

<p>Cost object</p>	<p>Cost object is anything for which a separate measurement of cost is required. Cost object may be a product, a service, a project, a customer, a brand category, an activity, a department or a programme etc.</p> <p>Cost object remains in nucleus (centre) of cost classification and analysis of the cost behaviour.</p> <p>Examples:</p> <ul style="list-style-type: none"> ➤ Product: Smart phone, Tablet computer, SUV Car, Book etc.
---------------------------	---

	<ul style="list-style-type: none"> ➤ Service: An airline flight from Delhi to Mumbai, Concurrent audit assignment, Utility bill payment facility etc. ➤ Project: Metro Rail project, Road projects etc. ➤ Activity: Quality inspection of materials, placing of orders etc. ➤ Process: Refinement of crudes in oil refineries, melting of billets or ingots in rolling mills etc. <p>Department: Production department, Finance & Accounts, Safety etc.</p>
Cost unit	<p>It is a unit of product, service or time (or combination of these) in relation to which costs may be ascertained or expressed. We may for instance determine the cost per ton of steel, per ton-kilometre of a transport service or cost per machine hour. Sometime, a single order or a contract or a batch constitutes a cost unit.</p> <p>Cost units are usually the units of physical measurement like number, weight, area, volume, length, time and value.</p>
Cost Driver	<p>A Cost driver is a factor or variable which effect level of cost. Generally, it is an activity which is responsible for cost incurrence. Level of activity or volume of production is the example of a cost driver.</p> <p>CIMA Official terminology defines cost driver as “Factor influencing the level of cost” Often used in the context of Activity Based Costing to denote the factor which links activity resource consumption to product outputs, for example the number of purchase orders would be a cost driver for procurement cost.”</p> <p>Examples of cost drivers are number of machine set ups, number of purchase orders, hours spent on product inspection, number of tests performed etc.</p>

15. A FEW TYPICAL EXAMPLES OF COST UNITS ARE GIVEN BELOW

S.N.	Industry or Product	Cost Unit Basis
1	Power	Kilo-watt (kw) hours
2	Steel	Tonne
3	Chemicals	Litre, gallon, kilogram, ton etc.
4	Cement	Ton/ per bag etc.
5	Transport	Passenger- kilometer
6	Gas	Cubic feet
S.N.	Industry Sector by CIMA	Cost Unit
1	Brewing	Barrel
2	Brick-making	1,000 bricks
3	Coal mining	Tonne/ton
4	Electricity	Kilowatt-hour (kwh)
5	Engineering	Contract, job

6	Oil	Barrel, tonne, litre
7	Hotel/Catering	Room/meal
8	Professional services	Chargeable hour, job, contract
9	Education	Course, enrolled student, successful student
10	Hospitals	Patient day
S.N.	Activity	Cost Unit
1	Credit control	Accounts maintained
2	Selling	Customer call, value of sales, orders taken
3	Materials storage/handling	Requisition unit issued/received, material movement, value issued/received
4	Personnel administration	Personnel record

16. RESPONSIBILITY CENTRES

Definition	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.
Types	<ul style="list-style-type: none"> ➤ Cost Centres ➤ Revenue Centres ➤ Profit Centres ➤ Investment Centres
Cost Centres	<p>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.</p> <p><i>The cost centres are of two types:</i></p> <p><i>(a) Standard Cost Centre:</i> Cost Centre where output is measurable and input required for the output can be specified. 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.</p> <p><i>(b) Discretionary Cost Centre:</i> The cost centre whose output cannot be measured in financial terms, thus input-output ratio cannot be defined. The cost of input is</p>

	compared with allocated budget for the activity. Examples of discretionary cost centres are Research & Development department, Advertisement department.
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. Sometimes expenditures related with selling activities like commission to sales person etc. are incurred by revenue centres.
Profit Centres	These are the responsibility centres which have both responsibility of generation of revenue and incurrance 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.
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.

18. LIMITATIONS OF COST ACCOUNTING

Expensive	It is expensive because analysis, allocation and absorption of overheads requires considerable amount of additional work, and hence additional money.
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.
Duplication of work	It involves duplication of work as organization has to maintain two sets of accounts i.e. Financial Accounts and Cost Accounts.

19. CLASSIFICATION OF COSTS

1. By Nature or Element	<p>Direct Materials: Materials which are present in the finished product (cost object) or can be economically identified in the product are termed as direct materials.</p> <p><i>Direct Labour:</i> Labour which can be economically identified or attributed wholly to a cost object is termed as direct labour.</p> <p><i>Direct Expenses:</i> All expenses other than direct material or direct labour which are specially incurred for a particular cost object and can be identified in an economically feasible way are termed as Direct Expenses.</p> <p><i>Indirect Materials:</i> Materials which do not normally form part of the finished product (cost object) are known as indirect materials.</p>
--------------------------------	--



	<p>Indirect Labour: Labour cost which cannot be allocated but can be apportioned to or absorbed by cost units or cost centres is known as indirect labour.</p> <p>Indirect Expenses: Expenses other than direct expenses are known as indirect expenses. These cannot be directly, conveniently and wholly allocated to cost centres.</p> <p>Overheads: The aggregate of indirect material costs, indirect labour costs and indirect expenses is termed as Overheads. The main groups into which overheads may be subdivided are as follows:</p> <ul style="list-style-type: none"> ➤ Production or Works Overheads ➤ Administration Overheads ➤ Selling Overheads ➤ Distribution Overheads
2. By Functions	(a) Prime Cost (b) Factory/ Works Cost (c) Cost of Production (d) Cost of Goods Sold (e) Cost of Sales.
3. By Variability or Behaviour	<p>(a) Fixed costs: These are the costs which are incurred for a period, and which, within certain output and turnover limits, tend to be unaffected by fluctuations in the levels of activity (output or turnover). They do not tend to increase or decrease with the changes in output.</p> <p>(b) Variable Costs: These costs tend to vary with the volume of activity. Any increase in the activity results in an increase in the variable cost and vice versa.</p> <p>(c) Semi-variable costs: These costs contain both fixed and variable components and are thus partly affected by fluctuations in the level of activity.</p>
4. By Controllability	<p>(a) Controllable Costs: Cost that can be controlled, typically by a cost, profit or investment centre manager is called controllable cost. Controllable costs incurred in a particular responsibility centre can be influenced by the action of the manager heading that responsibility centre.</p> <p>(b) Uncontrollable Costs: Costs which cannot be influenced by the action of a specified member of an undertaking are known as uncontrollable costs.</p>
5. By Normality	<p>(a) Normal Cost: It is the cost which is normally incurred at a given level of output under the conditions in which that level of output is normally attained.</p> <p>(b) Abnormal Cost: It is the cost which is not normally incurred at a given level of output in the conditions in which that level of output is normally attained. It is charged to Costing Profit and loss Account.</p>

6. BY COSTS USED IN MANAGERIAL DECISION MAKING

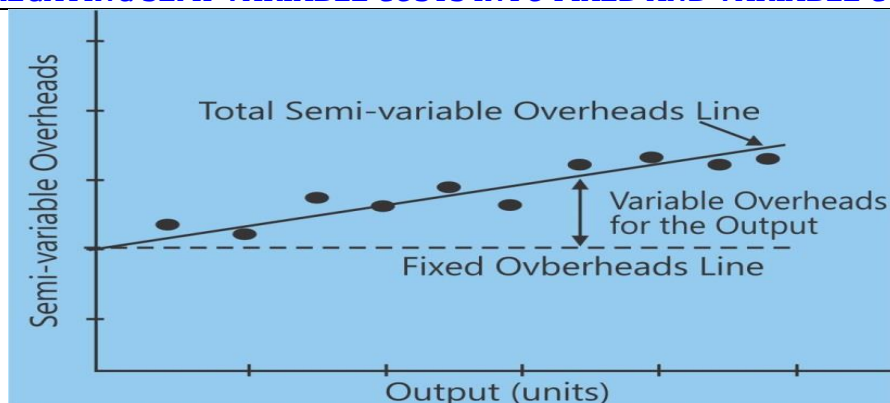
(a) Pre-determined Cost	A cost which is computed in advance before production or operations start, on the basis of specification of all the factors affecting cost, is known as a pre-determined cost.
(b) Standard Cost	A pre-determined cost, which is calculated from managements 'expected standard of efficient operation' and the relevant necessary expenditure. It may be used as a basis for price fixation and for cost control through variance analysis.
(c) Marginal Cost	The amount at any given volume of output by which aggregate costs increases or decreases if the volume of output is increased or decreased by one unit.
(d) Estimated Cost or Prospective Cost	Kohler defines estimated cost as "the expected cost of manufacture, or acquisition, often in terms of a unit of product computed on the basis of information available in advance of actual production or purchase".
(e) Differential Cost	It represents the change (increase or decrease) in total cost (variable as well as fixed) due to change in activity level, technology, process or method of production, etc.
(f) Imputed Costs	These costs are notional costs which do not involve any cash outlay. These costs are similar to opportunity costs.
(g) Capitalized Costs	These are costs which are initially recorded as assets and subsequently treated as expenses. Example, installation expenses on the erection of a machine are added to the cost of a machine.
(h) Product Costs	These are the costs which are associated with the purchase and sale of goods (in the case of merchandise inventory). In the production scenario, such costs are associated with the acquisition and conversion of materials and all other manufacturing inputs into finished product for sale.
(i) Opportunity Cost	This cost refers to the value of sacrifice made or benefit of opportunity foregone in accepting an alternative course of action.
(j) Out-of-pocket Cost	It is that portion of total cost, which involves cash outflow. This cost concept is a short-run concept and is used in decisions relating to fixation of selling price in recession, make or buy, etc. Out-of-pocket costs can be avoided or saved if a particular proposal under consideration is not accepted.
(k) Shut down Costs	Those costs, which continue to be, incurred even when a plant is temporarily shut-down e.g. rent, rates, depreciation, etc. In other words, all fixed costs, which cannot be avoided during the temporary closure of a plant, will be known as shut down costs.
(l) Sunk Costs	Historical costs incurred in the past are known as sunk costs. They play no role in decision making in the current period. For example, in the case of a decision relating to the replacement of a machine, the written down value of the existing machine is a sunk cost and therefore, not considered.



(m) Absolute Cost	These costs refer to the cost of any product, process or unit in its totality. When costs are presented in a statement form, various cost components may be shown in absolute amount or as a percentage of total cost or as per unit cost or all together.
(n) Discretionary Costs	Such costs are not tied to a clear cause and effect relationship between inputs and outputs. They usually arise from periodic decisions regarding the maximum outlay to be incurred. Examples include advertising, public relations, executive training etc.
(o) Period Costs	These are the costs, which are not assigned to the products but are charged as expenses against the revenue of the period in which they are incurred. All non-manufacturing costs such as general & administrative expenses, selling and distribution expenses are recognised as period costs.
(p) Engineered Costs	These are costs that result specifically from a clear cause and effect relationship between inputs and outputs. The relationship is usually personally observable. Examples of inputs are direct material costs, direct labour costs etc. Examples of output are cars, computers etc.
(q) Explicit Costs	These costs are also known as out-of-pocket costs and refer to costs involving immediate payment of cash. Salaries, wages, postage and telegram, printing and stationery, interest on loan etc. are some examples of explicit costs involving immediate cash payment.
(r) Implicit Costs	These costs do not involve any immediate cash payment. They are not recorded in the books of account. They are also known as economic costs.

20. METHODS OF SEGREGATING SEMI-VARIABLE COSTS INTO FIXED AND VARIABLE COSTS

1. Graphical method



Under this method, the following steps are followed:

- A large number of observations regarding the total costs at different levels of output are plotted on a graph.
- The output is plotted on the X-axis and the total cost is plotted on the Y-axis.
- Then, by judgment, a line of "best-fit", which passes through all or most of the points, is drawn.
- The point at which this line cuts the Y-axis indicates the total fixed cost component in the total cost.

	<ul style="list-style-type: none"> ➤ If a line is drawn at this point parallel to the X-axis, this indicates the fixed cost. ➤ The variable cost, at any level of output, is derived by deducting this fixed cost element from the total cost.
2. High-Low Method	<p>Under this method, difference between the total cost at highest and lowest volume is divided by the difference between the sales value at the highest and lowest volume. The quotient thus obtained gives us the rate of variable cost in relation to sales value.</p> <p>For example: If Sales and total cost at highest volume are 1,40,000 and 72,000 and Sales and total cost at lowest volume are 80,000 and 60,000 Now, Variable cost ratio = Difference in total cost/Difference in total sales $= (72,000 - 60,000) / (1,40,000 - 80,000)$ $= 20\% \text{ of sales}$</p>
3. Analytical Method	<p>Under this method an experienced cost accountant tries to judge empirically what proportion of the semi-variable cost would be variable and what would be fixed. The degree of variability is ascertained for each item of semi-variable expenses. For example, some semi-variable expenses may vary to the extent of 20% while others may vary to the extent of 80%. Although it is very difficult to estimate the extent of variability of an expense, the method is easy to apply.</p> <p>For example: Suppose last month the total semi-variable expenses amounted to ₹3,000 If the degree of variability is assumed to be 70%, then variable cost = ₹2,100 Fixed cost = ₹3,000 - ₹2,100 = ₹900 Now in the future months, the fixed cost will remain constant, but the variable cost will vary according to the change in production volume.</p>
4. Comparison by period or level of activity method	<p>Under this method, the variable overhead may be determined by comparing two levels of output with the amount of expenses at those levels. Since the fixed element does not change, the variable element may be ascertained with the help of the following formula = Change in amount of expense/ Change in the quantity of output</p>
5. Least Square Method	<p>This is the best method to segregate semi-variable costs into its fixed and variable components. This is a statistical method and is based on finding out a line of best fit for a number of observations. The method uses the linear equation $y = mx + c$ Where, 'm' represents the variable element of cost per unit, 'c' represents the total fixed cost, 'y' represents the total cost, 'x' represents the volume of output.</p>



	<p>The total cost is thus split into its fixed and variable elements by solving this equation.</p> <p>For example:</p> <p>Semi-variable expenses 'y' is 1,200 at 150 labour hours 'x' and 1,275 at 200 labour hours</p> <p>Now,</p> $Y = mx + c$ $1,200 = m150 + c$ $1,275 = m200 + c$ <p>On solving the above equations, we get the value of 'c', Fixed cost or 'c' = ₹975 and Variable cost or 'm' = ₹1.50 per labour hour.</p>
--	---

21. 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.

22. THE FOLLOWING TABLE SUMMARISES THE VARIOUS METHODS OF COSTING APPLIED IN DIFFERENT INDUSTRIES

Nature of Output	Method	Cost	Examples of Industries
------------------	--------	------	------------------------

A Series of Processes	Process costing or Operation Costing	For each process	Sugar
Construction of building	Contract Costing	For each contract	Real estate
Similar units of a Single Product, produced by Single Process	Unit or output or Single Costing	For the entire activity, but averaged for the output	Cold Drinks
Rendering of Services	Operating Costing	For all services	Hospitals
Customer Specifications: single Unit	Job Costing	For each order/assignment/job	Advertising
Consisting of multiple varieties of activities and processes	Multiple Costing	Combination of any method	Car Assembly

23. TECHNIQUES OF COSTING

Uniform Costing	<p>When a number of firms in an industry agree among themselves to follow the same system of costing in detail, adopting common terminology for various items and processes they are said to follow a system of uniform costing.</p> <p>Advantages of such a system are that:</p> <ul style="list-style-type: none"> ➤ 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. ➤ 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. It is found useful when tax-relief or protection is sought from the Government.
Marginal Costing	<p>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.</p>
Standard Costing and Variance Analysis	<p>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. However, it is especially suitable where the manufacturing method involves production of standardised goods of repetitive nature.</p>
Historical Costing	<p>It is the ascertainment of costs after they have been incurred. This type of costing has limited utility.</p> <ul style="list-style-type: none"> ➤ 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	<p>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.</p>



MULTIPLE CHOICE QUESTIONS

1. is anything for which a separate measurement is required.

- (a) Cost unit
- (b) Cost object
- (c) Cost driver
- (d) Cost centre

2. Which of the following is true about Cost control:

- (a) It is a corrective function
- (b) It challenges the set standards
- (c) It ends when targets achieved
- (d) It is concerned with future

3. Cost units used in power sector is:

- (a) Kilometer (K.M)
- (b) Kilowatt-hour (kWh)
- (c) Number of electric points
- (d) Number of hours

4. Processes Costing method is suitable for

- (a) Transport sector
- (b) Chemical industries
- (c) Dam construction
- (d) Furniture making

5. Distinction between direct cost and indirect cost is an example of classification

- (a) By Element
- (b) By Function
- (c) By Controllability
- (d) By Variability

6. The advantage of using IT in Cost Accounting does not include:

- (a) Integration of various functions
- (b) Stock needs to be reconciled with Goods Received Note
- (c) Reduction in multicity of documents
- (d) Customised reports can be prepared.

7. A taxi provider charges minimum ₹80 thereafter ₹12 per kilometer of distance travelled, the behaviour of conveyance cost is:

- (a) Fixed Cost
- (b) Semi-variable Cost

- (c) Variable Cost
- (d) Administrative cost.

8. A Ltd. has three production department, and each department has two machines, which of the following cannot be treated as cost centre for cost allocation:

- (a) Machines under the production department
- (b) Production departments
- (c) Both Production department and machines
- (d) A Ltd.

9. Which of the following is an example of functional classification of cost:

- (a) Direct Material Cost
- (b) Fixed Cost
- (c) Administrative Overheads
- (d) Indirect Overheads.

10. Ticket counter in a Railway Station is an example of

- (a) Cost Centre
- (b) Revenue Centre
- (c) Profit Centre
- (d) Investment Centre

ANSWERS

1.	(b)	2.	(c)	3.	(b)	4.	(b)	5.	(a)	6.	(b)
7.	(b)	8.	(d)	9.	(c)	10.	(b)				



1. MEANING AND DEFINITION

<p>Material Cost</p>	<p>The general meaning of material is all commodities/ physical objects used to make the final product. It may be direct or indirect.</p> <ul style="list-style-type: none"> ➤ Direct Materials: Materials, cost of which can be directly attributable to the end product for which it is being used, in an economically feasible way. ➤ Indirect Materials: Those materials which are not directly attributable to a particular final product.
<p>Importance of Proper Recording and Control of Material</p>	<p>Direct Materials constitute a significant part for manufacturing and production of goods. Being an input and a significant cost element, it requires adequate management attention. Cost control starts from here, and for this purpose it is necessary that the principle of 3Es (Economy, Efficiency and Effectiveness) i.e. economy in procurement, efficiency in handling and processing the material and effectiveness in producing desired output as per the standard, is also applied for this cost element.</p> <p><i>Importance of proper recording and control of material are as follows:</i></p> <ul style="list-style-type: none"> ➤ <i>Quality of final product:</i> The quality of output depends on the quality of inputs. ➤ <i>Price of the final product:</i> The cost of final product is directly related with cost of materials used to produce the product. ➤ <i>Production continuity:</i> The production should not be paused for the want of materials. ➤ <i>Cost of Stock holding and stock-out:</i> An entity has to incur stock holding costs (Interest, stock handling losses like evaporation, obsolescence etc.) Understocking causes in loss of revenue. ➤ <i>Wastage and other losses:</i> These are classified as normal and abnormal for efficient utilisation and control. ➤ <i>Regular information about resources:</i> Necessary for the entity for timely and informed decision making.

2. MATERIAL CONTROL

<p>Definition</p>	<p>Material, being one of the total cost elements, are also required to be controlled so that the overall cost control objective can be fulfilled.</p>
<p>Objectives of Material Control</p>	<ul style="list-style-type: none"> ➤ Minimising interruption in production process ➤ Optimisation of Material Cost ➤ Reduction in Wastages ➤ Adequate Information ➤ Completion of order in time

<p>Requirements of Material Control</p>	<ul style="list-style-type: none"> ➤ Proper co-ordination of all departments ➤ Determining purchase procedure ➤ Use of standard forms for placing the order, noting receipt of goods, authorising issue of the materials etc. ➤ Preparation of budgets ➤ Operation of a system of internal check ➤ Storage of all materials and supplies in a well designated location with proper safeguards ➤ Operation of a system of perpetual inventory together with continuous stock checking ➤ Operation of a system of stores control and issue ➤ Development of system of controlling accounts and subsidiary records ➤ Regular reports of materials purchased, issue from stock, inventory balances, obsolete stock, goods returned to vendors, and spoiled or defective units are required.
<p>Elements of Material Control</p>	<p>Material control is a systematic control over the procurement, storage and usage of material so as to maintain an even flow of material.</p> <p>Material control involves efficient functioning of the following operations:</p> <ul style="list-style-type: none"> ➤ Purchasing of materials ➤ Receiving of materials ➤ Inspection of materials ➤ Storage of materials ➤ Issuing materials ➤ Maintenance of inventory records ➤ Stock audit

3. MATERIALS PROCUREMENT PROCEDURE

<p>Bill of Materials or Materials Specification List or Materials List</p>	<p>It 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. The materials specification list is prepared by the product development team commonly known as engineering or planning department in a standard form. This is shared with other concerned departments like Marketing, Production, Store, and Cost Accounting department.</p>
<p>Material Requisition Note</p>	<p>It is also known as material requisition slip. It is a voucher of authority used to get materials issued from store. Generally, it is prepared by the production department and materials are withdrawn on the basis of material requisition list or bill of materials. The note is shared with Store and Cost Accounting department.</p>
<p>Purchase Requisition</p>	<p>This document authorises the purchase department to order for the materials specified in the note. A purchase requisition is a form used for making a formal request to the purchasing department to purchase materials. This form is usually</p>

	filled up by the store keeper for regular materials and by the departmental head for special materials (not stocked as regular items).
Inviting Quotation/ Request for Proposal (RFP)/ Notification Inviting Tender (NIT)	<p>Materials purchase department has to answer the following question before initiating purchasing of materials:</p> <ul style="list-style-type: none"> ➤ What to purchase? ➤ When to purchase? ➤ How much to purchase? ➤ From where to purchase? ➤ At what price to purchase? <p>Government e Marketplace (GeM): A dedicated e-market for different goods & services procured by Government Organisations / Departments / PSUs.</p>
Selection of Quotation/ Proposal	On the receipt of quotations, a comparative statement is prepared. For selecting material suppliers, the factors which the purchase department keeps in its mind are price, quantity, quality offered, time of delivery, mode of transportation, terms of payment, reputation of supplier etc.
Preparation and Execution of Purchase Orders	It is a written request to the supplier to supply specified materials at specified rates and within a specified period. Generally, copies of purchase order are given to Store or order indenting department, receiving department and cost accounting department. A copy of the purchase order with relevant purchase requisitions, is held in the file of the department to facilitate the follow-up of the delivery and also for approval of the invoice for payment.
Receipt and Inspection of Materials	<p>After receipt of materials along with relevant documents, receiving department (store dept.) arrange to inspect the materials for its conformity with purchase order.</p> <p><i>Goods Received Note:</i></p> <p>If everything is in order and the supply is considered suitable for acceptance, the Receiving department prepares a Receiving Report or Material Inward Note or Goods Received Note. Generally, it is prepared in quadruplicate, the copies being distributed to purchase department, store or order indenting department, receiving department and accounting department.</p> <p><i>Material Returned Note:</i></p> <p>If the material is returned after its entry in the receiving report, a suitable document must be drawn up in support of the issue, this document usually takes the form of a Material Returned Note or Material outward return note.</p>
Checking and Passing of Bills for Payment	The invoice received from the supplier is sent to the accounts section to check authenticity and mathematical accuracy. The accounts section after checking its accuracy finally certifies and passes the invoice for payment.

4. DIFFERENCE BETWEEN BILL OF MATERIALS AND MATERIAL REQUISITION NOTE

S.N	Bill of Materials	Material Requisition Note
1	It is the document prepared by the engineering or planning dept.	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.	It is a document asking Store-keeper to issue materials to the consuming department.
3	It often serves the purpose of a material requisition as it shows the complete schedule of materials required for a particular job i.e. it can replace material requisition.	It cannot replace a bill of materials.
4	It can be used for the purpose of quotations.	It is useful in arriving historical cost only.
5	It helps in keeping a quantitative control on materials drawn through material requisition.	It shows the material actually drawn from stores.

5. TREATMENT OF ITEMS ASSOCIATED WITH PURCHASE OF MATERIALS

Discounts	Trade discount and Quantity discount are deducted from the purchase price if it is not shown as deduction in the invoice. Cash discount is not deducted from the purchase price. It is treated as interest and finance charges. It is ignored.
Subsidy/ Grant/ Incentives	Any subsidy/ grant/ incentive received from the Government or from other sources deducted from the cost of purchase.
Road / Toll Tax	Road tax/ Toll tax, if paid by the buyer, is included with the cost of purchase.
Goods and Service Tax (GST)	It is excluded from the cost of purchase if credit for the same is available. Unless mentioned specifically it should not form part of cost of purchase.
Custom Duty	Custom duty is paid on import of goods from outside India. It is added with the purchase cost.
Demurrage	Demurrage is a penalty imposed by the transporter for delay in uploading or offloading of materials. It is an abnormal cost and not included with cost of purchase
Detention charges/ Fine	Detention charges/ fines imposed for non-compliance of rule or law by any statutory authority. It is an abnormal cost and not included with cost of purchase
Penalty	Penalty of any type is not included with the cost of purchase
Other Cost	Insurance charges, Commission or brokerage paid, Freight inwards etc. are added with the cost of purchase.
Cost of	➤ Non-returnable containers: The cost of containers is added with the cost of purchase of materials.



Containers	<ul style="list-style-type: none"> ➤ Returnable Containers: If the containers are returned and their costs are refunded, then cost of containers should not be considered in the cost of purchase. ➤ Returnable Containers at low value: If the amount of refund on returning the container is less than the amount paid, then, only the short fall is added with the cost of purchase.
Shortage	<ul style="list-style-type: none"> ➤ Shortage due to normal reasons: Good units absorb the cost of shortage due to normal reasons. Losses due to breaking of bulk, evaporation, or due to any unavoidable conditions etc. are the reasons of normal loss. ➤ Shortage due to abnormal reasons: Shortage arises due to abnormal reasons such as material mishandling, pilferage, or due to any avoidable reasons are debited to costing profit and loss account.

6. MATERIAL STORAGE & RECORDS

Duties of Store Keeper	<ul style="list-style-type: none"> ➤ General control over store ➤ Safe custody of materials ➤ Maintaining records ➤ Initiate purchase requisition ➤ Maintaining adequate level of stock ➤ Issue of materials ➤ Stock verification and reconciliation
Store Records	<p>The record of stores may be maintained in three forms viz. Bin Cards, Stock Control Cards and Store Ledger.</p> <p><i>(i) Bin Cards:</i> It is a quantitative record of inventory which shows the quantity of inventory available in a particular bin. Bin refers to a box/ container/ space where materials are kept. Card is placed with each of the bin (space) to record the details of material like receipt, issue and return. It is maintained by store department.</p> <p><i>Advantages:</i></p> <ul style="list-style-type: none"> ➤ There would be fewer chances of mistakes ➤ Control over stock can be more effective ➤ Identification of the different items of materials is facilitated <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> ➤ Store records are dispersed over a wide area. ➤ The cards are liable to be smeared with dirt and grease ➤ People handling materials are not ordinarily suitable for the clerical work

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

Advantages:

- Records are kept in a more compact manner
- Records can be kept in a neat and clean way
- As the records are at one place, it is possible to get an overall idea of the stock

Disadvantages:

- On the spot comparison of the physical stock of an item with its book balance is not facilitated.
- Physical identification of materials in stock may not be as easy

Stores Ledger: A Stores Ledger is maintained to record both quantity and cost of materials received, issued and those in stock. It is a subsidiary ledger to the main cost ledger; it is maintained by the Cost Accounts Department. The source documents for posting the ledger are Goods received notes, Materials requisition notes etc.

7. DIFFERENCE BETWEEN BIN CARD & STORES LEDGER

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

8. INVENTORY CONTROL- BY SETTING QUANTITATIVE LEVELS

Re-order Stock Level (ROL)	<p>It is the level at which fresh order should be placed for replenishment of stock.</p> <p>Alt 1 $ROL = \text{Maximum usage} \times \text{Maximum re-order period}$</p> <p>Alt 2 $ROL = \text{Average usage} \times \text{Average re-order period} + \text{Minimum stock}$</p>
-----------------------------------	---



Re-Order Quantity	Re-order quantity is the quantity of materials for which purchase requisition is made by the store department.
Economic Order Quantity (EOQ)	Order size at which total of ordering and carrying cost will be lowest. Order size at which total annual ordering cost equal to annual carrying cost. Economic order quantity (EOQ) = $\sqrt{\frac{2AO}{c}}$
Minimum Stock Level	It is lowest level of material stock, which must be maintained in hand at all times, so that there is no stoppage of production due to non-availability of inventory. Minimum Stock Level = ROL – (Average usage × Average re-order period)
Maximum Stock Level	It is the highest level of quantity for any material which can be held in stock at any time. Maximum Stock Level = ROL + ROQ – (Minimum usage × Minimum re-order period)
Average Inventory Level	This is the quantity of material that is normally held in stock over a period. It is also known as normal stock level. Alt 1 Average Stock = $\frac{1}{2}$ (Minimum stock level + Maximum stock level) Alt 2 Average Stock = $\frac{1}{2}$ of ROQ + Minimum stock level
Danger level	It is the level at which normal issues of the raw material inventory are stopped and emergency issues are only made. Alt 1 Danger Stock = Average usage × Emergency re-order period (preferred) Alt 2 Danger Stock = Minimum usage × Emergency re-order period
Buffer Stock	Some quantity of stock may be kept for contingency to be used in case of sudden order, such stock is known as buffer stock.

9. INVENTORY CONTROL- ON THE BASIS OF RELATIVE CLASSIFICATION

ABC Analysis	<p>This system exercises discriminating control over different items of inventory on the basis of the investment involved. Usually the items are classified into three categories according to their relative importance, namely, their value and frequency of replenishment during a period.</p> <p><i>(i) 'A' Category:</i> This category of items consists of only a small percentage i.e., about 10% of the total items handled by the stores but require heavy investment about 70% of inventory value, because of their high prices or heavy requirement or both. Items under this category can be controlled effectively by using a regular system which ensures neither over-stocking nor shortage of materials for production. The stocks of materials are controlled by fixing certain levels like maximum level, minimum level and re-order level.</p> <p><i>(ii) 'B' Category:</i> This category of items is relatively less important; they may be 20% of the total items of material handled by stores. The percentage of investment required is about 20% of the total investment in inventories. In the</p>
---------------------	---

	<p>case of these items, as the sum involved is moderate, the moderate control is applied.</p> <p><i>(iii) 'C' Category:</i> This category of items does not require much investment; it may be about 10% of total inventory value but they are nearly 70% of the total items handled by store. Orders for items in this group may be placed either after six months or once in a year, after ascertaining consumption requirements.</p> <p>Advantages of ABC analysis:</p> <ul style="list-style-type: none"> ➤ Continuity in production ➤ Lower cost ➤ Less attention required ➤ Systematic working
Fast Moving, Slow Moving and Non-Moving (FSN) Inventory	<p>Under this system, inventories are controlled by classifying them on the basis of frequency of usage.</p> <p><i>(i) Fast Moving:</i> This category of items is placed nearer to store issue point and the stock is reviewed frequently for making of fresh orders.</p> <p><i>(ii) Slow Moving:</i> This category of items is stored little far and stock is reviewed periodically for any obsolescence, and may be shifted to Non-moving category.</p> <p><i>(iii) Non-Moving:</i> This category of items is kept for disposal.</p>
Vital, Essential and Desirable (VED)	<p>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.</p> <p><i>(i) Vital:</i> Unavailability can interrupt the production process and cause a production loss. Items under this category are strictly controlled by setting re-order level.</p> <p><i>(ii) Essential:</i> 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.</p> <p><i>(iii) Desirable:</i> Items under this category are optional in nature, unavailability does not cause any production or efficiency loss.</p>
High Cost, Medium Cost, Low Cost (HML) Inventory	<p>Under this system, inventory is classified on the basis of the cost of an individual item, unlike ABC analysis where inventories are classified on the basis of overall value of inventory. A range of cost is used to classify the inventory items into the three categories. High-Cost inventories are given more priority for control, whereas Medium-cost and Low-cost items are comparatively given lesser priority.</p>

10. INVENTORY CONTROL- USING RATIO ANALYSIS

Input-Output Ratio	<p>Input-output ratio is the ratio of the quantity of input of material to production and the standard material content of the actual output. This type of ratio analysis enables comparison of actual consumption and standard consumption, thus indicating whether the usage of material is favourable or adverse.</p>
---------------------------	--



Inventory Turnover Ratio	<p>High inventory turnover ratio indicates that the material in the question is a fast moving one. A low turnover ratio indicates over-investment and locking up of the working capital in inventories.</p> <p>Inventory Turnover Ratio (ITR) = Raw Materials Consumed ÷ Average Inventory</p> <p>Inventory Holding Period (in days) = 365 ÷ ITR</p>
---------------------------------	--

11. INVENTORY CONTROL- PHYSICAL CONTROL

Two Bin System	<p>Under this system, each bin is divided into two parts:</p> <ul style="list-style-type: none"> ➤ Smaller part to stock the quantity equal to the minimum stock or even the re-ordering level, and ➤ The other part to keep the remaining quantity. <p>Issues are made out of the larger part; but as soon as it becomes necessary to use quantity out of the smaller part of the bin, fresh order is placed.</p>
Establishment of System of Budgets	<p>The exact quantity of various types of inventories and the time when they would be required can be known by studying carefully production plans and production schedules. Based on this, inventories requirement budget can be prepared. Such a budget will discourage the unnecessary investment in inventories.</p>
Perpetual Inventory Records	<p>Perpetual inventory represents a system of records maintained by the stores department. It comprises of (i) Bin Cards, and (ii) Stores Ledger. The success of perpetual inventory depends upon the following:</p> <ul style="list-style-type: none"> ➤ The Stores Ledger ➤ Stock Control cards or Bin Cards ➤ Reconciling the quantity balances shown by (a) & (b) above ➤ Checking the physical balances ➤ Explaining promptly the causes of discrepancies ➤ Making corrective entries and ➤ Removing the causes of the discrepancies <p><i>Advantages of perpetual inventory:</i></p> <ul style="list-style-type: none"> ➤ Physical stocks can be counted and book balances adjusted as and when desired ➤ Quick compilation of Profit and Loss Account ➤ Discrepancies are easily located and thus corrective action can be promptly taken ➤ Reveals the existence of surplus, dormant (non-active), obsolete and slow-moving materials ➤ Assist the store keeper in maintaining stocks within limits and in initiating purchase requisitions for correct quantity at the appropriate time
Continuous Stock Verification	<p>The system of continuous stock-taking consists of physical verification of items of inventory. The stock verification may be done by internal audit department but</p>

	<p>are independent of the store and production staff. Stock verification is done at appropriate interval of time without prior notice.</p> <p>Advantages of continuous stock-taking:</p> <ul style="list-style-type: none"> ➤ Closure of normal functioning is not necessary ➤ Discrepancies are likely to be brought to the notice and corrected earlier ➤ A sobering influence on the stores staff ➤ Chances of obsolescence buying are reduced ➤ Final Accounts can be ready quickly ➤ Interim accounts are possible quite conveniently
--	--

12. JUST IN TIME (JIT) INVENTORY MANAGEMENT

Definition	<p>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.</p> <p>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 and the requirement for raw materials is sent to the purchase department.</p>
Principles	<ul style="list-style-type: none"> ➤ Produce goods only when it is required and ➤ The products should be delivered to customers at the time only when they want

13. METHODS OF VALUATION OF MATERIAL ISSUES

Definition	<p>There are several methods of valuation of material issues:</p> <ul style="list-style-type: none"> (a) Cost Price Method: Specific Price Method, FIFO and LIFO Method (b) Average Price Method: Simple Average and Weighted Average (c) Market Price Method: Replacement Price and Realisable Price Method (d) Notional Price Method: Standard Price, Inflated Price and Re-use Price Method
Specific Price Method	<p>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.</p>
First-in First-out (FIFO) Method	<p>It is a method of pricing the issues of materials, the materials are issued in the order in which they arrive in the store or the items longest in stock are issued first. 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.</p> <p>Advantages:</p> <ul style="list-style-type: none"> ➤ It is simple to understand and easy to operate



	<ul style="list-style-type: none"> ➤ Material cost charged to production represents actual cost ➤ In the case of falling prices, the use of this method gives better results ➤ Closing stock of material will be represented very closely at current market price <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> ➤ If the prices fluctuate frequently, this method may lead to clerical error ➤ The costs charged to the same job are likely to show a variation from period to period ➤ In the case of rising prices, the real profits of the concern being low, while the profits in the books will appear high
<p><i>Last-in-First-out (LIFO) Method</i></p>	<p>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. This method is suitable during inflationary period or period of rising prices. 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.</p> <p><i>Advantages:</i></p> <ul style="list-style-type: none"> ➤ The cost of materials issued will be either nearer to and or will reflect the current market price ➤ During the period of rising prices does not reflect undue high profit ➤ 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 ➤ The use of LIFO helps to iron out the fluctuations in profits ➤ In the period of inflation LIFO will tend to show the correct profit and thus avoid paying undue taxes to some extent <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> ➤ Calculation under LIFO system becomes complicated and cumbersome (difficult to carry) when frequent purchases are made at highly fluctuating rates ➤ Costs of different similar batches of production carried on at the same time may differ a great deal ➤ In time of falling prices, there will be need for writing off stock value considerably under the rule of the cost or the market price whichever is lower ➤ This method of valuation of material is not acceptable to the income tax authorities
<p><i>Simple Average Price Method</i></p>	<p>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.</p>

Weighted Average Method	Under this method, issue price is calculated by dividing sum of products of price and quantity by total number quantities.
Replacement Price Method	Under this method, materials issued are valued at the replacement cost of the items. The product cost under this method is at current market price, which is the main objective of the replacement price method.
Realisable Price Method	Realisable price means a price at which the material to be issued can be sold in the market. This price may be more or may be less than the cost price at which it was originally purchased.
Standard Price Method	Under this method, materials are priced at some predetermined rate or standard price irrespective of the actual purchase cost of the materials. This method is useful for controlling material cost and determining the efficiency of purchase department.
Inflated Price Method	In case material suffers loss in weight due to natural or climatic factors, e.g., evaporation, the issue price of the material is inflated to cover up the losses.
Re-use Price Method	When materials are rejected and returned to the stores or a processed material is put to some other use, other than for the purpose it is meant, then such materials are priced at a rate quite different from the price paid for them originally.

14. TREATMENT OF NORMAL AND ABNORMAL LOSS OF MATERIALS

Waste	The portion of raw material which is lost during storage or production and discarded. Generally the waste may not have any value. Treatment: Normal: Absorbed by good production units. Abnormal: Transferred to Costing Profit and loss account.
Scrap	The materials which are discarded and disposed-off without further treatment. Treatment: Normal: The cost of scrap is borne by good units and income arises on account of realisable value is deducted from the cost. Abnormal: Net loss is transferred to Costing Profit and loss account.
Spoilage	It is the term used for materials which are badly damaged in manufacturing operations, and they cannot be rectified economically. Treatment: Normal: Either charge to the production order or to the production overhead. Abnormal: Net loss is transferred to Costing Profit and loss account.
Defectives	It signifies those units or portions of production which do not meet the quality standards. The defectives which can be re-made as per the quality standard by using additional materials are known as reworks. Defectives which cannot be brought up to the quality standards are known as rejects.



	<p>The difference between spoilage and defectives is that while spoilage cannot be repaired or reconditioned, defectives can be rectified and transferred, either back to the standard production or to the seconds.</p> <p>Treatment:</p> <p>Normal: Cost less realisable value on sale of defectives are charged to material cost of good production.</p> <p>Abnormal: Net loss is transferred to Costing Profit and loss account.</p>
Obsolescence	<p>In simple words, obsolescence refers to the loss in the value of an asset due to technological advancements.</p> <p>The value of the obsolete material held in stock is a total loss and immediate steps should be taken to dispose it off at the best available price. The loss arising out of obsolete materials is an abnormal loss and it does not form part of the cost of manufacture.</p>

15. DIFFERENCE BETWEEN SCRAP AND DEFECTIVES

S.N.	Scrap	Defectives
1	It is the loss connected with the output.	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.	Defectives also are not intended but can be eliminated through a proper control system.
3	Generally, scraps are not used or rectified.	Defectives can be used after rectification.
4	Scraps have insignificant recoverable value.	Defectives are sold at a lower value from that of the good one.

MULTIPLE CHOICE QUESTIONS

1. *Direct material can be classified as*

- (a) Fixed cost
- (b) Variable cost
- (c) Semi-variable cost.
- (d) Prime Cost

2. *In most of the industries, the most important element of cost is*

- (a) Material
- (b) Labour
- (c) Overheads
- (d) Administration Cost

3. *Which of the following is considered to be the normal loss of materials?*

- (a) Loss due to accidents
- (b) Pilferage
- (c) Loss due to breaking the bulk
- (d) Loss due to careless handling of materials.

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

- (a) Last-in-first out price
- (b) First-in-first out price
- (c) Replacement price
- (d) Weighted average price

5. *Continuous stock taking is a part of*

- (a) Annual stock taking
- (b) Perpetual inventory
- (c) ABC analysis.
- (d) Bin Cards

6. *In which of the following methods, issues of materials are priced at pre-determined rate?*

- (a) Inflated price method
- (b) Standard price method
- (c) Replacement price method
- (d) Market price method.

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

- (a) Simple average price
- (b) Weighted average price
- (c) Moving average price
- (d) Inflated price.

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

- (a) Simple average



- (b) Weighted average
- (c) FIFO
- (d) LIFO

9. Under the FSN system of inventory control, inventory is classified on the basis of:

- (a) Volume of material consumption
- (b) Frequency of usage of items of inventory
- (c) Criticality of the item of inventory for production
- (d) Value of items of inventory

10. Form used for making a formal request to the purchasing department to purchase materials is a:

- (a) Material Transfer Note
- (b) Purchase Requisition Note
- (c) Bill of Materials
- (d) Material Requisition Note

ANSWERS

1.	(b)	2.	(a)	3.	(c)	4.	(b)	5.	(b)	6.	(b)
7.	(a)	8.	(b)	9.	(b)	10.	(b)				



1. MEANING AND DEFINITION

<p>Employee (Labour) Cost</p>	<p>Benefits paid or payable to the employees of an entity, whether permanent, or temporary for the services rendered by them. Employee cost includes payments made in cash or kind. Employee cost includes Wages and salary, Allowances and incentives, Payment for overtimes, Employer’s contribution to Provident fund and other welfare funds, Other benefits (leave with pay, free or subsidised food, leave travel concession etc.) etc.</p> <ul style="list-style-type: none"> ➤ Direct Employee (Labour) Cost: Benefits paid or payable to the employees which can be attributed to a cost object in an economically feasible manner. This can be easily identified and allocated to an activity, contract, cost centre, customer, process, product etc. ➤ Indirect Employee (Labour) Cost: Benefits paid or payable to the employees, which cannot be directly attributable to a particular cost object in an economically feasible manner.
<p>EMPLOYEE (LABOUR) COST CONTROL</p>	<p>Employee cost control means control over the cost incurred on employees. Control over employee costs does not imply control over the size of the wage bill; it also does not imply that wages of each employee should be kept as low as possible. The aim should be to keep the wages per unit of output as low as possible. There has to be a concerted effort by all the concerned departments:</p> <ul style="list-style-type: none"> ➤ Personnel Department: Searches for the employees with required skills and qualification and ensures that the persons recruited possess the requisite qualification and skills, arranges proper training and workshops, maintains all personal and job related records and evaluation of performance. ➤ Engineering and Work Study Department: Prepares plans and specifications for each job, providing training and guidance, supervises production activities, conducts time and motion studies, undertakes job analysis and conducts job evaluation. ➤ Time-keeping Department: Concerned with the maintenance of attendance records i.e. time keeping and Time spent by an employee on various jobs i.e. time booking etc. ➤ Payroll Department: It disburses salary and wage payments. ➤ Cost Accounting Department: Accumulation and classification of employee costs. Analysis and allocation of costs to various cost centres or cost objects
<p>Important Factors for the Control</p>	<p>The main points which need consideration for controlling employee costs are the following:</p> <ul style="list-style-type: none"> ➤ Assessment of manpower requirements. ➤ Control over time-keeping and time-booking. ➤ Time & Motion Study.

	<ul style="list-style-type: none"> ➤ Control over idle time and overtime. ➤ Control over employee turnover. ➤ Wage and Incentive systems. ➤ Job Evaluation and Merit Rating. ➤ Employee productivity.
--	--

2. ATTENDANCE & PAYROLL PROCEDURES

Attendance Procedure/Time-keeping and its Objectives	<p>It refers to correct recording of the employees' attendance time. The objectives of time-keeping are as follows:</p> <ul style="list-style-type: none"> ➤ For the preparation of payrolls ➤ For calculating overtime ➤ For ascertaining and controlling employee cost ➤ For ascertaining idle time ➤ For disciplinary purposes ➤ For overhead distribution
Methods of Time-keeping	<p>1. Manual Methods:</p> <p>(a) Attendance Register Method: Under this method, an attendance register is kept to record the arrival and departure time of an employee.</p> <p>(b) Metal Disc or Token Method: 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.</p> <p>2. Mechanical/ Automated Methods:</p> <p>(a) Punch Card Attendance: A punch card contains data related with the employee in digital form.</p> <p>(b) Bio-Metric Attendance system: Under bio-metric attendance system attendance is marked by recognizing an employee on the basis of physical and behavioural traits (a quality that forms part of your character or personality).</p>
Requisites of a Good Time-Keeping System	<p>A good time-keeping system should have following requisites:</p> <ul style="list-style-type: none"> ➤ System should not allow proxy ➤ A provision of recording of time of piece employees also ➤ Time of arrival as well as time of departure of employees should be recorded ➤ Method of recording of time should be mechanical ➤ Late-comers should record late arrivals ➤ The system should be simple, smooth and quick ➤ The system should be reviewed and maintained periodically
Time-Booking	<p>Time booking refers to a method wherein each activity of an employee is recorded.</p> <ul style="list-style-type: none"> ➤ Time booking for costing: The time spent on a particular job or activity is used to compute the cost of the job or activity.

	<ul style="list-style-type: none"> ➤ Time booking to measure efficiency: The efficiency of the employees is measured by comparing the actual time taken by an employee with the standard time that should have been taken. ➤ Time booking for fixation of responsibility: Employees or any other concerned person or departments are made accountable for variance under controllable reasons.
Time (Job Card)	<p>For the collection of all data related to time booking or time keeping, a separate record, generally known as Time (or Job) card, is kept. The time (or job) card can be of two types:</p> <ul style="list-style-type: none"> ➤ One containing analysis of time with reference to each job: A separate job card is employed in respect of a job undertaken, the job card would record the total time spent on a particular job or operation. If a number of people are engaged on the same job or operation, the time of all those employees would be booked on the same card. ➤ The other with reference to each employee: A separate card would be used for each employee for each day or for each week and the time which he spends on different jobs (and also any idle time) would be recorded in the same card.
Payroll Procedure	<ul style="list-style-type: none"> ➤ Time and Attendance details are sent to the payroll department by the time keeping department ➤ List of employees and the rate at which they will be paid is sent by the personnel/ HR department. ➤ Computation of wages and other incentives by the Payroll department ➤ Payment to the employees after deduction of all statutory deduction such as employee's contribution to provident fund and employee state insurance (ESI) scheme, TDS on salary etc. ➤ Deposit of all statutory liabilities to the respective statutory bodies.

3. IDLE TIME

Idle Time	The time during which no production is carried-out because the worker remains idle but are paid. In other words, it is the difference between the time paid and the time booked. Idle time can be normal or abnormal.
Normal Idle Time	<p>It is the time which cannot be avoided or reduced in the normal course of business.</p> <p>Causes:</p> <ul style="list-style-type: none"> ➤ The time lost between factory gate and the place of work, ➤ The interval between one job and another, ➤ The setting up time for the machine, ➤ Normal rest time, break for lunch etc. <p>Treatment:</p>

	<p>It is treated as a part of cost of production. Thus, in the case of direct workers an allowance for normal idle time is considered setting of standard hours or standard rate.</p> <p>In case of indirect workers, normal idle time is considered for the computation of overhead rate.</p>
Abnormal Idle Time	<p>Apart from normal idle time, there may be factors which give rise to abnormal idle time.</p> <p>Causes:</p> <ul style="list-style-type: none"> ➤ Abnormal factors like lack of coordination ➤ Power failure, Breakdown of machines ➤ Non-availability of raw materials, strikes, lockouts, poor supervision, fire, flood etc. <p>The causes for abnormal idle time should be further analysed into controllable and uncontrollable:</p> <ul style="list-style-type: none"> ➤ Controllable abnormal idle time: All such time which could have been avoided is controllable idle time. ➤ Uncontrollable abnormal idle time: Time lost due to abnormal causes, over which management does not have any control. <p>Treatment:</p> <p>It is shown as a separate item in the Costing Profit and Loss Account. The cost of abnormal idle time should be further categorised into controllable and uncontrollable. This would help the management in fixing responsibility for controlling idle time.</p>

4. OVERTIME

Overtime	<p>Work done beyond normal working hours is known as 'overtime work'. Overtime payment is the amount of wages paid for working beyond normal working hours.</p> <p style="text-align: center;">Overtime Payment = Wages paid for overtime at normal rate + Premium</p>
Overtime Premium	<p>The rate for overtime work is higher than the normal time rate; usually it is at double the normal rates. The extra amount so paid over the normal rate is called overtime premium.</p>
Causes of Overtime and Treatment of Overtime Premium	<ul style="list-style-type: none"> ➤ The customer may agree to bear because urgency of work: Overtime premium may be charged to the job directly. ➤ Overtime may be called for to make up any shortfall in production due to some unexpected development: Overtime premium should be treated as overhead. ➤ Overtime work may be necessary to make up a shortfall in production due to some fault of management: Overtime premium should be charged to the faulty department. ➤ Overtime work due to abnormal reasons: Overtime premium charged to Costing Profit and Loss Account.



5. SYSTEMS OF WAGE PAYMENT AND INCENTIVES

<p>Time Based (Time Rate System)</p>	<p>Straight Time Rate System: Under this system, the workers are paid on time basis. Time based wages payment is suitable for the employees (i) whose services cannot be directly or tangibly measured, e.g., general helpers, supervisory and clerical staff etc. (ii) engaged in highly skilled jobs, (iii) where the pace of output is independent of the operator.</p> $\text{Wages} = \text{Time Worked (Hours/ Days/ Months)} \times \text{Rate for the time}$
<p>Output Based (Piece Rate System)</p>	<p>Straight Piece Rate System: The wages of the worker depend upon his output and rate of each unit of output; it is in fact independent of the time taken by him.</p> $\text{Wages} = \text{Number of units produced} \times \text{Rate per unit}$
<p>Premium Bonus Method</p>	<p>Halsey Premium Plan:</p> $\text{Wages} = \text{Time taken} \times \text{Time rate} + 50\% \text{ of time saved} \times \text{Time rate}$ <p>Advantages</p> <ul style="list-style-type: none"> ➤ There is opportunity for increasing earnings by increasing production. ➤ 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. <p>Disadvantages</p> <ul style="list-style-type: none"> ➤ Incentive is not as strong as with piece rate system. ➤ The sharing principle may not be liked by employees. <p>Rowan Premium Plan:</p> $\text{Wages} = \text{Time taken} \times \text{Time rate} + \text{AH/SH of time saved} \times \text{Time rate}$ <p>Advantages</p> <ul style="list-style-type: none"> ➤ 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. ➤ It provides a better return for moderate efficiency. ➤ The sharing principle appeals to the employer as being equitable. <p>Disadvantages</p> <ul style="list-style-type: none"> ➤ The system is a bit complicated. ➤ The incentive is weak at a high production level where the time saved is more than 50% of the time allowed. ➤ The sharing principle is not generally welcomed by employees.

6. EMPLOYEE (LABOUR) TURNOVER

<p>Employee (Labour) Turnover</p>	<p>Employee turnover or labour turnover in an organisation is the rate of change in the composition of employee force during a specified period measured against a suitable index. Methods of calculating Employee turnover are given below:</p> $\text{Separation Method} = \frac{\text{Number of separations}}{\text{Average workers}} \times 100$
--	--

	<p>Replacement Method = $\frac{\text{Number of replacements}}{\text{Average workers}} \times 100$</p> <p>New Accession Method = $\frac{\text{Number of new joinings}}{\text{Average workers}} \times 100$</p> <p>Accession Method = $\frac{\text{Number of total joinings}}{\text{Average workers}} \times 100$</p> <p>Flux Method (alt 1) = $\frac{\text{No. of separations + replacements}}{\text{Average workers}} \times 100$</p> <p>Flux Method (alt 2) = $\frac{\text{No. of separations + accessions}}{\text{Average workers}} \times 100$</p>
Causes of Employee (Labour) Turnover	<p>(a) Personal causes includes change of jobs for betterment, premature retirement due to ill health or old age, domestic problems and family responsibilities and discontent (dissatisfaction) over the jobs and working environment etc.</p> <p>(b) Unavoidable causes includes seasonal nature of the business, shortage of raw material, power, slack market for the product etc., change in the plant location, disability, making a worker unfit for work and disciplinary measures etc.</p> <p>(c) Avoidable causes includes Dissatisfaction remuneration, hours of work, working conditions etc., strained relationship with management, supervisors or fellow workers, lack of training facilities and promotional avenues, lack of recreational and medical facilities, low wages and allowances etc.</p>
Effects of Employee (Labour) Turnover	<ul style="list-style-type: none"> ➤ Flow of production is disturbed; ➤ Efficiency of new workers is low; ➤ New workers cause increased breakage of tools, wastage of materials, etc. ➤ Cost of recruitment and training increases.
Cost of Employees (Labour) Turnover	<p>(a) Preventive Costs: The cost incurred to prevent employee turnover or keep it as lowest as possible like cost of medical benefit provided to the employees, cost incurred on employees' welfare like pension etc., and cost on other benefits with an objective to retain employees.</p> <p>(b) Replacement Costs: These are the costs which arise due to employee turnover like cost of recruitment, training and induction, abnormal breakage and scrap and extra wages and overheads due to the inefficiency of new workers.</p>

7. DIRECT EXPENSES

Direct Expenses	<p>Expenses other than direct material cost and direct employee cost, which are incurred to manufacture a product or for provision of service and can be directly traced in an economically feasible manner to a cost object. The following costs are examples for direct expenses:</p> <ul style="list-style-type: none"> ➤ Royalty paid/ payable for production or provision of service; ➤ Hire charges paid for hiring specific equipment; ➤ Cost for product/ service specific design or drawing;
------------------------	--



	<ul style="list-style-type: none"> ➤ Cost of product/ service specific software; ➤ Other expenses which are directly related with the production of goods or provision of service etc.
<i>Measurement of Direct Expenses</i>	<p>The direct expenses are measured at invoice or agreed price net of rebate or discount but includes duties and taxes (for which input credit not available), commission and other directly attributable costs.</p> <p>In case of sub-contracting, where goods are get manufactured by job workers independent of the principal entity, are measured at agreed price. Where the principal supplies some materials to the job workers, the value of such materials and other incidental expenses are added with the job charges paid to the job workers.</p>
<i>Treatment of Direct Expenses</i>	<p>Direct Expenses form part of the prime cost for the product or service to which it can be directly traceable and attributable. In case of lump-sum payment or onetime payment, the cost is amortised over the estimated production volume or benefit derived.</p> <p>If the expenses incurred are of insignificant amount i.e. not material, it can be treated as part of overheads.</p>

MULTIPLE CHOICE QUESTIONS

1. *Idle time is the time under which-*

- (a) Full wages are paid to workers
- (b) No productivity is given by the workers
- (c) Both (a) and (b)
- (d) None of the above

2. *Cost of idle time due to non-availability of raw material is-*

- (a) Charged to overhead costs
- (b) Charged to respective jobs
- (c) Charged to costing profit and loss account
- (d) None of the above

3. *Time and motion study is conducted by-*

- (a) Time keeping department
- (b) Personnel department
- (c) Payroll department
- (d) Engineering department

4. *Identify, which one of the following, does not account for increasing labour productivity-*

- (a) Job satisfaction
- (b) Motivating workers
- (c) High labour turnover
- (d) Proper supervision and control

5. *Labour turnover is measured by-*

- (a) Number of persons replaced / average number of workers
- (b) Numbers of persons separated / number of workers at the beginning of the year
- (c) $(\text{Number of persons replaced} + \text{number of persons separated}) / (\text{number of persons at the beginning} + \text{the number of persons at the end of the year})$
- (d) None of the above

6. *Time booking refers to a method wherein of an employee is recorded.*

- (a) Attendance
- (b) Food expenses
- (c) Health status
- (d) Time spent on a particular job

7. *Employee Cost includes-*

- (a) Wages and salaries
- (b) Allowances and incentives
- (c) Payment for overtime
- (d) All of the above

8. *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

9. Standard time of a job is 60 hours and guaranteed time rate is ₹0.30 per hour. What is the amount of wages under Rowan plan if job is completed in 48 hours?

- (a) ₹16.20
- (b) ₹17.28
- (c) ₹18.00
- (d) ₹14.40

10. Important factors for control of employee cost can be-

- (a) Time and Motion Study
- (b) Control over idle time and overtime
- (c) Control over employee turnover
- (d) All of the above

11. Out of the following methods attendance is marked by recognizing an employee based on physical and behavioural traits-

- (a) Punch Card Attendance method
- (b) Bio- Metric Attendance system
- (c) Attendance Register method
- (d) Token Method

12. If overtime is required for meeting urgent orders, the overtime premium should be charged as-

- (a) Respective job
- (b) Overhead cost
- (c) Costing P& L A/c
- (d) None of above

ANSWERS

1.	(c)	2.	(c)	3.	(d)	4.	(c)	5.	(a)	6.	(d)
7.	(d)	8.	(a)	9.	(b)	10.	(d)	11.	(b)	12.	(a)

**Question 1**

Distinguish between cost allocation and cost absorption.

Solution**Cost allocation and Cost absorption:**

Cost allocation is the allotment of whole item of cost to a cost centre or a cost unit. In other words, it is the process of identifying, assigning or allowing cost to a cost centre or a cost, unit.

Cost absorption is the process of absorbing all indirect costs or overhead costs allocated or apportioned over particular cost centre or production department by the units produced.

Question 2

Suggest any one basis of re-apportionment of service department overheads over production departments in the following instances:

<i>Cost of service Department</i>	<i>Basis</i>
(a) Maintenance and Repair shop	
(b) Hospital and Dispensary	
(c) Fire Protection	
(d) Stores Department	
(e) Transport Department	
(f) Computer Section	
(g) Power House (Electric Power Cost)	
(h) Inspection	
(i) Tool Room	
(j) Time-keeping	

Answer

<i>Cost of service Department</i>	<i>Basis</i>
(a) Maintenance and Repair shop	Direct labour hours, Machine hours, Direct labour wages, Asset value x Hours worked
(b) Hospital and Dispensary	No. of employees etc.
(c) Fire Protection	Capital values
(d) Stores Department	No. of requisitions, Weight or value of Materials issued.
(e) Transport Department	Crane hours, Truck hours, Truck mileage, Truck tonnage, Truck ton- hours, Tonnage handled. No. of packages of Standard size
(f) Computer Section	Computer hours, Specific allocation to departments
(g) Power House	Horse power, Kwh, Horse power x Machine hours, Kwh x Machine hours
(h) Inspection	Inspection hours
(i) Tool Room	Direct labour hours, Machine hours, Direct labour wages, Asset

(j) Time-keeping	value x Hours worked No. of card punched, No. of employees
------------------	---

Question 3

Discuss the step method and reciprocal method of secondary distribution of overheads.

Solution

Step method and Reciprocal Service method of secondary distribution of overheads

Step method:

This method gives cognizance to the service rendered by service department to another service department, thus sequence of apportionments has to be selected. The sequence here begins with the department that renders service to the maximum number of other service department. After this, the cost of service department serving the next largest number of department is apportioned.

Reciprocal service method:

This method recognises the fact that where there are two or more service department, they may render services to each other and, therefore, these inter departmental services are to be given due weight while re-distributing the expense of service department. The methods available for dealing with reciprocal servicing are:

1. Simultaneous equation method
2. Repeated distribution method
3. Trial and error method

Question 4

Discuss in brief three main methods of allocating support departments costs to operating departments. Out of these three, which method is conceptually preferable?

Solution

The three main methods of allocating support departments costs to operating departments are:

1. **Direct re-distribution method:** Under this method, support department costs are directly apportioned to various production departments only. This method does not consider the service provided by one support department to another support department.
2. **Step method:** Under this method the cost of the support departments that serves the maximum numbers of departments is first apportioned to other support departments and production departments. After this the cost of support department serving the next largest number of departments is apportioned. In this manner we finally arrive on the cost of production departments only.
3. **Reciprocal service method:** This method recognises the fact that where there are two or more support departments they may render services to each other and, therefore, these inter-departmental services are to be given due weight while re-distributing the expenses of the support departments. The methods available for dealing with reciprocal services are:



- a. Simultaneous equation method
- b. Repeated distribution method
- c. Trial and error method.

The reciprocal service method is conceptually preferable. This method is widely used even if the number of service departments is more than two because due to the availability of computer software it is not difficult to solve sets of simultaneous equations.

Question 5

Explain briefly the conditions when supplementary rates are used.

Solution

When the amount of under absorbed and over absorbed overhead is significant or large, because of differences due to wrong estimation, then the cost of product needs to be adjusted by using supplementary rates (under and over absorption/ actual overhead) to avoid misleading impression.

Question 6

Explain the treatment of over and under absorption of Overheads in Cost accounting.

Solution

Treatment of over and under absorption of overheads are:

- (i) **Writing off to costing P&L A/c:** Small difference between the actual and absorbed amount should simply be transferred to costing P&L A/c, if difference is large then investigate the causes and after that abnormal loss shall be transferred to costing P&L A/c.
- (ii) **Use of supplementary Rate:** Under this method the balance of under and over absorbed overheads may be charged to cost of W.I.P., finished stock and cost of sales proportionately with the help of supplementary rate of overhead.
- (iii) **Carry Forward to Subsequent Year:** Difference should be carried forward in the expectation that next year the position will be automatically corrected. This would really mean that costing data of two years would be wrong.

Question 7

What is blanket overhead rate? In which situations, blanket rate is to be used and why?

Solution

Blanket overhead rate is one single overhead absorption rate for the whole factory. It may be computed by using the following formula:

Blanket overhead rate = $\frac{\text{Overhead costs for the whole factory}}{\text{Total units of the selected base}}$

* The selected base can be the total output; total labour hours; machine hours etc.

Situation for using blanket rate:

The use of blanket rate may be considered appropriate for factories which produce only one major product on a continuous basis. It may also be used in those units in which all products utilise same amount of time in each department. If such conditions do not exist, the use of blanket rate will give misleading results in the determination of the production cost, especially when such a cost ascertainment is carried out for giving quotations for tenders.

Question 8

Define Selling and Distribution Expenses. Discuss the accounting for selling and distribution expenses.

Solution

Selling expenses: Expenses incurred for the purpose of promoting, marketing and sales of different products.

Distribution expenses: Expenses relating to delivery and despatch of goods/products to customers.

These expenses may be recovered by using any one of following method of recovery.

1. Percentage on cost of production / cost of goods sold.
2. Percentage on selling price.
3. Rate per unit sold.

Question 9

Discuss the problems of controlling the selling and distribution overheads.

Solution

Problems of controlling the selling & distribution overheads are:

1. The incidence of selling & distribution overheads depends on external factors such as distance of market, nature of competition etc. which are beyond the control of management.
2. They are dependent upon customers' behaviour, liking etc.
3. These expenses are of the nature of policy costs and hence not amenable to control.

The above problems of controlling selling & distribution overheads can be tackled by adopting the following steps:

1. Comparing the figures of selling & distribution overhead with the figures of previous period.
2. Selling & distribution overhead budgets may be used to control such overhead expenses by making a comparison of budgetary figures with actual figures of overhead expenses, ascertaining variances and finally taking suitable actions,
3. Standards of selling & distribution expenses may be set up for salesmen, territories, products etc. The laid down standards on comparison with actual overhead expenses will reveal variances, which can be controlled by suitable action.

Question 10

Explain what is meant by practical capacity and Normal capacity. How is normal capacity determined?



Answer

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.

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.

Normal capacity is determined as under:

Installed capacity	XXX
Adjustments for:	
(i) Time lost due to scheduled preventive or planned maintenance	(XXX)
(ii) Number of shifts or machine hours or man hours	(XXX)
(iii) Holidays, normal shut down days, normal idle time	(XXX)
(iv) Normal time lost in batch change over	(XXX)
Normal Capacity	XXX

Question 11

Discuss accounting treatment of idle capacity costs in cost accounting.

Solution:

1. If idle capacity 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 production capacity utilized.
2. If idle capacity cost is due to avoidable reasons such as faulty planning, power failure etc., the cost should be charged to Costing P&L A/c.
3. If idle capacity is due to seasonal factors, then the cost should be charged to cost of production by inflating overhead rates.

Question 12

Discuss the treatment in cost accounts of the cost of small tools of short effective life.

Solution

Treatment of cost of small tools of short effective life:

1. Depreciation of small tools may be charged to:
 - a. Factory overheads
 - b. Overheads of the department using the small tool.
2. Cost of small tools should be charged fully to the departments to which they have been issued, if their life is not ascertainable.

MULTIPLE CHOICE QUESTIONS

1. "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

2. capacity is defined as actually utilised capacity of a plant.

- (a) Theoretical
- (b) Installed
- (c) Practical
- (d) Normal

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

4. Primary packing cost is a part of:

- (a) Direct material cost
- (b) Production Cost
- (c) Selling overheads
- (d) Distribution overheads

5. Director's remuneration and expenses form part of:

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

6. 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

7. Bad debt is an example of:

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



8. 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

9. 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

10. 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

ANSWERS

1.	(a)	2.	(c)	3.	(c)	4.	(b)	5.	(b)	6.	(c)
7.	(c)	8.	(c)	9.	(d)	10.	(d)				



CHAPTER 5

ACTIVITY BASED COSTING

Question 1

Discuss difference between Activity Based Costing and Traditional Absorption Costing

Answer

Difference between Activity Based Costing and Traditional Absorption Costing

Activity Based Costing	Traditional Absorption Costing
Overheads are related to activities and grouped into activity cost pools.	Overheads are related to cost centers/ departments.
Costs are related to activities and hence are more realistic.	Costs are related to cost centers and hence not realistic of cost behaviour.
Activity-wise cost drivers are determined.	Time (Hours) are assumed to be the only cost driver governing costs in all departments.
Activity-wise recovery rates are determined and there is no concept of a single overhead recovery rate.	Either multiple overhead recovery rate (for each department) or a single overhead recovery rate may be determined for absorbing overheads.
Cost are assigned to cost objects, e.g. customers, products, services, departments, etc.	Costs are assigned to Cost Units i.e. to products, or jobs or hours.
Essential activities can be simplified and unnecessary activities can be eliminated. Thus the corresponding costs are also reduced/ minimized. Hence ABC aids cost control.	Cost Centers/ departments cannot be eliminated. Hence not suitable for cost control.

Question 2

Discuss level of activities under abc methodology/ cost hierarchy

Answer

These categories are generally accepted today but were first identified by Cooper (1990). The categories of activities help to determine the type of activity cost driver required. The categories of activities are:

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.	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ Material ordering—where an order is placed for every batch of production

	are performed each time a batch 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.	<ul style="list-style-type: none"> ➤ Machine set-up costs—where 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	<ul style="list-style-type: none"> ➤ 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 manufacturing process and are common and joint to all products manufactured.	<ul style="list-style-type: none"> ➤ Maintenance of buildings ➤ Plant security

Question 3

Discuss advantages of activity based costing

Answer

The main advantages of using Activity Based Costing are:

1. More accurate costing of products/services.
2. Overhead allocation is done on logical basis.
3. It enables better pricing policies by supplying accurate cost information.
4. Utilizes unit cost rather than just total cost
5. Help to identify non-value added activities which facilitates cost reduction.
6. It is very much helpful to organization with multiple products.
7. It highlights problem areas which require attention of the management.

Question 4

Discuss limitations of activity based costing

Answer

The main limitations using Activity Based Costing are:

1. It is more expensive particularly in comparison with Traditional costing system.
2. It is not helpful to small Organization.
3. It may not be applied to organization with very limited products.
4. Selection of most suitable cost driver may not be useful.

Question 5

PP Limited is in the process of implementation of Activity Based Costing System in the organization, for this purpose, it has identified the following Business Functions in its organization:



- (a) Research and Development
- (b) Design of Products, Services and Procedures
- (c) Customer Service
- (d) Marketing
- (e) Distribution

You are required to specify two cost drives for each Business Function Identified above.

Answer

- (a) Research and Development hours, Number of new products developed
- (b) Engineering hours, Number of employees employed
- (c) Number of customers, number of minutes spent
- (d) Sales revenue, Sales units
- (e) Number of orders, Number of units sold

Question 6

What is meant by Activity Based Management (ABM) and discuss how Activity Based Management can be used in the business?

Answer

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 Cost 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.

Activity based management can be used in the following ways:

- (a) Cost Reduction
- (b) Business Process Re-engineering
- (c) Benchmarking
- (d) Performance Measurement

Question 7

Discuss various analysis in Activity Based Management

Answer

(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 these 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.

MULTIPLE CHOICE QUESTIONS

1. 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

2. In activity based costing, costs are accumulated by activity using:

- (a) Cost drivers
- (b) Cost objects
- (c) Cost pools
- (d) Cost benefit analysis

3. 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

4. Which of the following is not a correct match:

<i>Activity</i>	<i>Cost Driver</i>
(a) Production Scheduling	Number of Production runs
(b) Despatching	Number of dispatch orders
(c) Goods receiving	Goods received orders
(d) Inspection	Machine hours

5. 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

6. 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

7. 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

8. 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

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

10. 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

ANSWERS

1.	(d)	2.	(c)	3.	(d)	4.	(d)	5.	(c)	6.	(d)
7.	(d)	8.	(a)	9.	(b)	10.	(d)				

**Question 1**

Explain, what do you mean by cost sheet or cost statement.

Solution

One of the objectives of cost accounting system is ascertainment of cost for a cost object. The cost objects may be a product, service or any cost centre. Ascertainment of cost includes element wise collection of costs, accumulation of the costs so collected for a certain volume or period and then arrange all these accumulated costs into a sheet to calculate total cost for the cost object. In this chapter, a product or a service will be the cost object for cost calculation and cost ascertainment. A Cost Sheet or Cost Statement is “a document which provides a detailed cost information. In a typical cost sheet, cost information are presented on the basis of functional classification. However, other classification may also be adopted as per the requirements of users of the information.

Question 2

Explain the functional classification of element of cost.

Solution

Under this classification, costs are divided according to the function for which they have been incurred. The following are the classification of costs based on functions:

- (a) Direct Material Cost
- (b) Direct Employee (labour) Cost
- (c) Direct Expenses
- (d) Production/ Manufacturing Overheads
- (e) Administration Overheads
- (f) Selling Overheads
- (g) Distribution Overheads
- (h) Research and Development costs etc.

Question 3

Explain the heads in a cost sheet.

Solution

The costs as classified on the basis of functions are grouped into the following cost heads in a cost sheet:

- (a) Prime Cost
- (b) Cost of Production
- (c) Cost of Goods Sold
- (d) Cost of Sales

Question 4

Explain the advantages of cost sheet or cost statement.

Solution

The main advantages of a Cost Sheet are as follows:

- (a) It provides the total cost figure as well as cost per unit of production.
- (b) It helps in cost comparison.
- (c) It facilitates the preparation of cost estimates required for submitting tenders.
- (d) It provides sufficient help in arriving at the figure of selling price.
- (e) It facilitates cost control by disclosing operational efficiency.

MULTIPLE CHOICE QUESTIONS

1. *Generally, for the purpose of cost sheet preparation, costs are classified on the basis of:*
 - (a) Functions
 - (b) Variability
 - (c) Relevance
 - (d) Nature

2. *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.

3. *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

4. *Salary paid to plant supervisor is a part of*
 - (a) Direct expenses
 - (b) Factory overheads
 - (c) Quality control cost
 - (d) Administration cost

5. *Depreciation of director's laptop is treated as a part of:*
 - (a) Administration Overheads
 - (b) Factory Overheads
 - (c) Direct Expenses
 - (d) Research & Development cost.



6. 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.

7. Audit fees paid to auditors is part of:

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

8. Salary paid to factory store staff is part of:

- (a) Factory overheads
- (b) Production Cost
- (c) Direct Employee cost
- (d) Direct Material Cost.

9. Canteen expenses for factory workers are part of:

- (a) Factory overhead
- (b) Administration Cost
- (c) Marketing cost
- (d) None of the above.

10. 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.

ANSWERS

1.	(a)	2.	(a)	3.	(b)	4.	(b)	5.	(a)	6.	(b)
7.	(a)	8.	(a)	9.	(a)	10.	(c)				

Question 1

Briefly explain the essential features of a good Cost Accounting System.

Answer

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; otherwise 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.

Question 2

What are the essential pre-requisites of integrated accounting system?

Solution

Essential pre-requisites of Integrated Accounting System:

1. The management's decision about the extent of integration of the two sets of books. Some concerns find it useful to integrate upto the stage of primary cost or factory cost while other prefer 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.

Question 3

What are the advantages of integrated accounting?

Solution

The main advantages of Integrated Accounting are as follows:

1. Since there is one set of accounts, thus there is one figure of profit. Hence the question of reconciliation of costing profit and financial profit does not arise.
2. There is no duplication of recording of entries and efforts to maintain separate set of books.
3. Costing data are available from books of original entry and hence no delay is caused in obtaining information.
4. The operation of the system is facilitated with the use of mechanized accounting.
5. Centralization of accounting function results in economy.

Question 4

What are the reasons for disagreement of profits as per cost accounts and financial accounts? Discuss.

Solution:

1. *Items included in the financial accounts but not in cost accounts (purely financial items):*

- Expenses and discounts on issue of shares, debentures etc.
- Other capital losses i.e., loss by fire not covered by insurance etc.
- Losses on the sales of fixed assets and investments
- Profits on the sale of fixed assets and investments
- Fictitious assets written off (Preliminary expenses written off etc.)
- Goodwill written off
- Donations, subscriptions etc.
- Fine, penalties etc.
- Expenses of the company's share transfer office, if any
- Transfer fee received
- Interest received on bank deposits, loans and investments
- Commission received
- Dividends received
- Rent received
- Bad debts, provision for bad debts
- Cash discount
- Interest on loans or bank mortgages or debenture etc.
- Income tax
- Dividend paid
- Transfer to reserve etc.

2. *Items included in cost accounts only (notional expenses):*



- Charges in lieu of rent where premises are owned (Notional Rent)
- Interest on capital at notional figure though not incurred (Notional Interest)
- Salary for the proprietor at notional figure though not incurred (Notional Salary)
- Notional depreciation on the assets fully depreciated for which book value is nil

3. Items whose treatment is different in the two sets of accounts:

- Difference in methods of valuation of stock
- Difference in methods of depreciation etc.
- Difference in treatment of overheads (under-over absorption carry forward method)

Question 5

When is the reconciliation statement of Cost and Financial accounts not required?

Solution

When the Cost and Financial Accounts are integrated, there is no need to have a separate reconciliation statement between the two sets of accounts. Integration means that the same set of accounts fulfil the requirement of both i.e., Cost and Financial Accounts.

Question 6

Indicate, for following items, whether to be shown in the Cost Accounts or Financial Accounts:

- (a) Preliminary Expenses written of during the year
- (b) Interest received on bank deposits
- (c) Dividend, Interest received on investment
- (d) Salary for the proprietor at notional figure though not incurred
- (e) Charges in lieu of rent where premises are owned
- (f) Rent receivables
- (g) Loss on sale of Fixed Assets
- (h) Interest on capital at notional figure though not incurred
- (i) Goodwill written off
- (j) Notional Depreciation on the assets fully depreciated for which book value is Nil.

Answer

- (a) Financial Accounts
- (b) Financial Accounts
- (c) Financial Accounts
- (d) Cost Accounts
- (e) Cost Accounts
- (f) Financial Accounts
- (g) Financial Accounts
- (h) Cost Accounts
- (i) Financial Accounts
- (j) Cost Accounts

MULTIPLE CHOICE QUESTIONS**1. 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

2. Notional 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

3. 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

4. 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

5. 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

6. 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

7. 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

8. Which of the following items is included in cost accounts?

- (a) Notional rent
- (b) Donations
- (c) (c.) Transfer to general reserve
- (d) Rent receivable

9. 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

10. 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

ANSWERS

1.	(b)	2.	(b)	3.	(d)	4.	(b)	5.	(a)	6.	(a)
7.	(a)	8.	(a)	9.	(b)	10.	(a)				



Question 1

Describe job Costing and Batch Costing giving example of industries where these are used?

Solution

Job Costing: It is a method of costing which is used when the work is undertaken as per the customer's special requirement. When an inquiry is received from the customer, costs expected to be incurred on the job are estimated and on the basis of this estimate, a price is quoted to the customer. Actual cost of materials, labour and overheads are accumulated and on the completion of job, these actual costs are compared with the quoted price and thus the profit or loss on it is determined.

Job costing is applicable in printing press, hardware, ship-building, heavy machinery, foundry, general engineering works, machine tools, interior decoration, repairs and other similar work.

Batch Costing: It is a variant of job costing. Under batch costing, a lot of similar units which comprises the batch may be used as a unit for ascertaining cost. In the case of batch costing separate cost sheets are maintained for each batch of products by assigning a batch number. Cost per unit in a batch is ascertained by dividing the total cost of a batch by the number of units produced in that batch.

Such a method of costing is used in the case of pharmaceutical or drug industries, readymade garment industries, industries, manufacturing electronic parts of T.V. radio sets etc.

Question 2

Distinguish between Job Costing & Batch Costing?

Solution

Difference between Job Costing & Batch Costing

S.N	Job Costing	Batch Costing
1	Method of costing used for nonstandard and non-repetitive products produced as per customer specifications and against specific orders.	Homogeneous products produced in a continuous production flow in lots.
2	Costs are determined for each job.	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.	Products produced in a batch are homogeneous and lack of individuality

Question 3

Distinguish between Job Costing and Process Costing?

Solution

Difference between Job Costing and Process Costing

<i>S.N</i>	<i>Job Costing</i>	<i>Process Costing</i>
1	A Job is carried out or a product is produced by specific orders.	The process of producing the product has a continuous flow and the product produced is homogeneous.
2	Costs are determined for each job.	Costs are compiled on time basis i.e., for production of a given accounting period for each process or department.
3	Each job is separate and independent of other jobs.	Products lose their individual identity as they are manufactured in a continuous flow.
4	Each job or order has a number and costs are collected against the same job number.	The unit cost of process is an average cost for the period.
5	Costs are computed when a job is completed. The cost of a job may be determined by adding all costs against the job.	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.
6	As production is not continuous and each job may be different, so more managerial attention is required for effective control.	Process of production is usually standardized and is therefore, quite stable. Hence control here is comparatively easier.

Question 4

In Batch Costing, how is Economic Batch Quantity determined?

Or

Z Ltd. Produces product ZZ in batches, management of the Z Ltd. wants to know the number of batches of product ZZ to be produced where the cost incurred on batch setup and carrying cost of production is at optimum level.

Solution:

In batch costing the most important problem is the determination of 'Economic Batch Quantity' The determination of economic batch quantity involves two types of costs viz, (i) set up cost and (ii) carrying cost. With the increase in the batch size, there is an increase in the carrying cost but the set-up cost per unit of the product is reduced; this situation is reversed when the batch size is reduced. Thus there is one particular batch size for which both set up and carrying costs are minimum. This size of a batch is known as economic or optimum batch quantity.

Economic batch quantity can be determined with the help of a table, graph or mathematical formula. The mathematical formula usually used for its determination is as follows:

$$\text{EBQ} = \sqrt{2DS \div C}$$

D = Annual demand for the product; S = Setting up cost per batch; C = Carrying cost p.u. per annum



MULTIPLE CHOICE QUESTIONS

1. *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

2. *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

3. *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.

4. *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

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.

6. *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.

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)

8. 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

9. 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

10. 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

11. 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

12. 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.

13. 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

14. Batch costing is a type of:

- (a) Process costing
- (b) Job Costing
- (c) Differential costing
- (d) Direct costing



15. 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
- (d) None of the above

16. 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

17. 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)

ANSWERS

1.	(c)	2.	(b)	3.	(c)	4.	(b)	5.	(a)	6.	(a)
7.	(d)	8.	(a)	9.	(b)	10.	(c)	11.	(c)	12.	(d)
13.	(b)	14.	(b)	15.	(b)	16.	(d)	17.	(d)		

**Question 1**

How will you treat normal loss, abnormal loss and abnormal gain in process costing? Explain.

Answer

Treatment of Normal Loss: The cost of normal process loss in practice is absorbed by good units produced under the process. The amount realised by the sale of normal process loss units should be credited to the process account.

Treatment of Abnormal Loss: The cost of an abnormal process loss unit is equal to the cost of a good unit. The total cost of abnormal process loss is credited to the process account from which it arises. Cost of abnormal process loss is not treated as a part of the cost of the product. In fact, the total cost of abnormal process loss is debited to costing profit and loss account.

Treatment of Abnormal Gain: The process account under which abnormal gain arises is debited with the abnormal gain and credited to abnormal gain account which will be closed by transferring to the Costing Profit and Loss account. The cost of abnormal gain is computed on the basis of normal production.

Question 2

Explain briefly the procedure for the valuation of Work-in-process.

Answer

Valuation of Work-in process: The valuation of work-in-process can be made in the following two ways, depending upon the assumptions made regarding the flow of costs.

1. FIFO method:

According to this method the units first entering the process are completed first. Thus the units completed during a period would consist partly of the units which were incomplete at the beginning of the period and partly of the units introduced during the period.

The cost of completed units is affected by the value of the opening inventory, which is based on the cost of the previous period. The closing inventory of work-in-process is valued at its current cost.

2. Average cost method:

According to this method opening inventory of work-in-process and its costs are merged with the production and cost of the current period, respectively. An average cost per unit is determined by dividing the total cost by the total equivalent units, to ascertain the value of the units completed and units in process.

Question 3

Explain equivalent units.

Answer

When opening and closing stocks of work-in-process exist, unit costs cannot *be* computed by simply dividing the total cost by total number of units still in process. We can convert the work-in-process units into finished units called equivalent units so that the unit cost of these units can be obtained.

$$\text{Equivalent Completed Units} = \text{Actual number of units in the process of manufacture} \times \text{Percentage of work completed}$$

It consists of balance of work done on opening work-in-process, current production done fully and part of work done on closing WIP with regard to different elements of costs viz., material, labour and overhead.

Question 4

What is inter-process profit? State its advantages and disadvantages.

Answer

In some process industries the output of one process is transferred to the next process not at cost but at market value or cost plus a percentage of profit. The difference between cost and the transfer price is known as inter-process profits.

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

Question 5

“Operation costing is defined as refinement of Process costing.” Explain it.

Answer

Operation costing is concerned with the determination of the cost of each operation rather than the process:

1. In the industries where process consists of distinct operations, the operation costing method is applied.
2. It offers better control and facilitates the computation of unit operation cost at the end of each operation.

**MULTIPLE CHOICE QUESTIONS**

1. *The type of process loss that should not be allowed to affect the cost of good units is:*
 - (a) Abnormal loss
 - (b) Normal loss
 - (c) Seasonal loss
 - (d) Standard loss

2. *200 units were introduced in a process in which 20 units is the normal loss. If the actual output is 150 units, then there is:*
 - (a) No abnormal loss
 - (b) No abnormal gain
 - (c) Abnormal loss of 30 units
 - (d) Abnormal gain of 30 units

3. *100 units are processed at a total cost of ₹160, normal loss is 10%, & scrap units are sold @ ₹0.25 each. If the output is 80 units, then the value of abnormal loss is:*
 - (a) ₹2.50
 - (b) ₹16
 - (c) ₹17.50
 - (d) ₹17.75

4. *When average method is used in process costing, the opening inventory costs are:*
 - (a) Subtracted from the new costs
 - (b) Added to the new costs
 - (c) Kept separate from the costs of the new period
 - (d) Averaged with other costs to arrive at total cost

5. *Spoilage that occurs under inefficient operating conditions and is ordinarily controllable is called:*
 - (a) Normal spoilage
 - (b) Abnormal spoilage
 - (c) Normal defectives
 - (d) None of the above

6. *The cost of normal process loss is -*
 - (a) Absorbed by good units produced and amount realised by the sale of loss units should be debited to the process account.
 - (b) Debited to costing profit and loss account.
 - (c) Absorbed by good units produced.
 - (d) Debited to costing profit and loss account and amount realised by the sale of loss units should be credited to the process account.

7. *The value of abnormal loss is equal to:*
 - (a) Total cost of materials
 - (b) Total process cost less realizable value of normal loss
 - (c) Total process cost less cost of scrap

- (d) Total process cost less realizable value of normal loss less value of transferred out goods.

8. *Inter-process profit is calculated, because:*

- (a) a process is a cost centres
- (b) each process has to report profit
- (c) the efficiency of the process is measured
- (d) the wages of employees are linked to the process profitability.

9. *Under Weighted Average (Average) Method:*

- (a) The cost to complete the opening WIP is ignored.
- (b) The cost to complete the opening WIP and other completed units are calculated separately.
- (c) The cost of opening work-in-process and cost of the current period are aggregated and the aggregate cost is divided by output in terms of completed units.
- (d) Closing stock of work in process is valued at current cost.

10. *A process account is debited by abnormal gain, the value is determined as:*

- (a) Equal to the value of normal loss
- (b) Cost of good units less realizable value of normal loss
- (c) Cost of good units less realizable value of actual loss
- (d) Equal to the value of good units less closing stock

11. *Lean Labs develops 55mm film using a four-step process that moves progressively through four departments. The company specializes in overnight service and has the largest drug store chain as its primary customer. Currently, direct labor, direct materials, and overhead are accumulated by departments. The cost accumulation system that best describes the system Lean Labs is using is:*

- (a) Operation costing.
- (b) Activity-based costing.
- (c) Job-order costing.
- (d) Process costing.

12. *When compared with normal spoilage, abnormal spoilage:*

- (a) Arises more frequently from factors that are inherent in the manufacturing process.
- (b) Is given the same accounting treatment as normal spoilage.
- (c) Is generally thought to be more controllable by purchase department than production department.
- (d) Is not typically influenced by the "tightness" of production standards.

13. *Assume 550 units were worked on during a period in which a total of 500 good units were completed. Normal spoilage consisted of 30 units; abnormal spoilage, 20 units. Total production costs were ₹2,200. The company accounts for abnormal spoilage separately on the income statement as loss due to abnormal spoilage. Normal spoilage is not accounted for separately. What is the cost of the good units produced?*

- (a) ₹2,080
- (b) ₹2,115
- (c) ₹2,200
- (d) ₹2,332



14. IC Limited uses process costing systems and inspects its goods post manufacturing. An engineer noticed on May 31st the following:

Unit costs were: Material ₹2.50 and conversion costs (Labour & overheads) ₹6.00. The number of units that company would transfer to its finished goods stock and the related cost of these units are:

- (a) 15,000 units transferred at a cost of ₹127,500
- (b) 15,000 units transferred at a cost of ₹130,050
- (c) 15,000 units transferred at a cost of ₹135,000
- (d) 15,300 units transferred at a cost of ₹130,050

ANSWERS

1.	(a)	2.	(c)	3.	(c)	4.	(b)	5.	(b)	6.	(c)
7.	(d)	8.	(c)	9.	(c)	10.	(b)	11.	(d)	12.	(d)
13.	(b)	14.	(b)								

**Question 1**

Distinguish between Joint products and By-products.

Answer

Joint Products are defined as the products which are produced simultaneously from same basic raw materials by a common process or processes but none of the products is relatively of more importance or value as compared with the other. For example spirit, kerosene oil, fuel oil, lubricating oil, wax, tar and asphalt are the examples of joint products.

By products, on the other hand, are the products of minor importance jointly produced with other products of relatively more importance or value by the common process and using the same basic materials. These products remain inseparable upto the point of split off. For example in Dairy industries, batter or cheese is the main product, but butter milk is the by-product.

Points of Distinction:

1. Joint products are the products of equal economic importance, while the by-products are of lesser importance.
2. Joint products are produced in the same process, whereas by-products are produced from the scrap or the discarded materials of the main product.
3. Joint products are not produced incidentally, but by-products emerge incidentally also.

Question 2

Discuss the treatment of by-product cost in Cost Accounting.

Answer***Treatment of by-product cost in Cost Accounting:***

1. When they are of small total value, the amount realized from their sale may be dealt as follows:
 - a. Sales value of the by-product may be credited to Costing Profit & Loss Account and no credit be given in Cost Accounting. The credit to Costing Profit & Loss Account here is treated either as a miscellaneous income or as additional sales revenue.
 - b. The sale proceeds of the by-product may be treated as deduction from the total costs. The sales proceeds should be deducted either from production cost or cost of sales.
2. When they require further processing:

In this case, the net realizable value of the by-product at the split-off point may be arrived at by subtracting the further processing cost from realizable value of by-products. If the value is small, it may be treated as discussed in (i) above.

MULTIPLE CHOICE QUESTIONS

1. 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

2. 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

3. In the Net realisable 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 multiplied 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)

4. The main purpose of accounting of joint products and by- products is to:

- (a) Determine the opportunity cost
- (b) Determine the replacement cost
- (c) Determine profit or loss on each product line
- (d) None of the above

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

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

6. Which of the following is a co-product:

- (a) Diesel and Petrol in an oil refinery
- (b) Edible oils and oil cakes
- (c) Curd and butter in a dairy
- (d) Mustard oil and Sunflower oil in an oil processing company.

7. 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.

8. Which of 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 at split-off method.

9. 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.

10. 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

11. SG Ltd manufactures two products from a joint milling process. The two products developed are Mine support (MS) and Commercial building (CB). A standard production 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 ₹200 per unit, and each CB sells for ₹450 per unit.

Assuming no further processing work is done after the split-off point, the amount of joint cost allocated to Commercial building (CB) on a physical quantity allocation basis would be:

- (a) ₹60,000.
- (b) ₹180,000.
- (c) ₹225,000.
- (d) ₹120,000.

12. Kay Company manufactures two hair care lotions, Livi and Sili, out of a joint process. The joint (common) costs incurred are ₹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 ₹240 per gallon, and Sili sells for ₹390 per gallon.

If additional processing costs beyond the split-off point are ₹140 per gallon for Livi and ₹90 per gallon for Sili, the amount of joint cost of each production run allocated to Livi on a physical- quantity basis is:

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

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

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

ANSWERS

1.	<i>(b)</i>	2.	<i>(b)</i>	3.	<i>(d)</i>	4.	<i>(c)</i>	5.	<i>(c)</i>	6.	<i>(d)</i>
7.	<i>(b)</i>	8.	<i>(a)</i>	9.	<i>(c)</i>	10.	<i>(b)</i>	11.	<i>(a)</i>	12.	<i>(b)</i>
13.	<i>(c)</i>										

**Question 1**

Explain briefly, what do you understand by Operating Costing. How are composite units computed?

Answer

Operating Costing: It is method of ascertaining costs of providing or operating a service. This method of costing is applied by those undertakings which provide services rather than production of commodities. This method of costing is used by transport companies, gas and water works departments, electricity supply companies, canteens, hospitals, theatres, schools etc.

Composite units may be computed in two ways:

1. Absolute (weighted average) tones- km., quintal- km. etc.
2. Commercial (simple average) tonnes- km., quintal-km. etc.

Absolute tonnes-km. are the sum total of tonnes-km. arrived at by multiplying various distances by respective load quantities carried.

Commercial tonnes-km., are arrived at by multiplying total distance km., by average load quantity.

Question 2

What do you understand by Operating Costs? Describe its essential features and state where it can be usefully implemented?

Answer

Operating Costs are the costs incurred by undertakings which do not manufacture any product but provide a service. Such undertakings for example are — Transport concerns, Gas agencies; Electricity Undertakings; Hospitals; Theatres etc. Because of the varied nature of activities carried out by the service undertakings, the cost system used is obviously different from that followed in manufacturing concerns.

The essential features of operating costs are as follows:

1. The operating costs can be classified under three categories. For example in the case of transport undertaking these three categories are as follows:
 - a. Operating and running charges: It includes expenses of variable nature. For example expenses on petrol, diesel, lubricating oil, and grease etc.
 - b. Maintenance charges: These expenses are of semi-variable nature and includes the cost of tyres and tubes, repairs and maintenance, spares and accessories, overhaul, etc.
 - c. Fixed or standing charges: These includes garage rent, insurance, road licence, depreciation, interest on capital, salary of operating manager, etc.
2. The cost unit used is composite like passenger-mile; Kilowatt-hour, etc.

It can be implemented in all firms of transport, airlines, bus-service, etc., and by all firms of distribution undertakings.

Question 3

Distinguish between Operating Costing and Operation Costing.

Answer

Operating Costing: It is a method of costing applied by undertakings which provide service rather than production of commodities. Like unit costing and process costing, operating costing is thus a form of operation costing.

The emphasis under operating costing is on the ascertainment of cost of rendering services rather than on the cost of manufacturing a product. It is applied by transport companies, gas and water works, electricity supply companies, canteens, hospitals, theatres, school etc. Within an organisation itself certain departments too are known as service departments which provide ancillary services to the production departments. For example maintenance department; power house, boiler house, canteen, hospital, internal transport etc.

Operation Costing: It represents a refinement of process costing. In this each operation instead of each process or stage of production is separately costed. This may offer better scope for control. At the end of each operation, the unit operation cost may be computed by dividing the total operation cost by total output.

**MULTIPLE CHOICE QUESTIONS**

1. *Composite cost unit for a hospital is:*
 - (a) Per patient
 - (b) Per patient-day
 - (c) Per day
 - (d) Per bed

2. *Cost of diesel and lubricant is an example of:*
 - (a) Operating cost
 - (b) Fixed charges
 - (c) Semi-variable cost
 - (d) None of the above

3. *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

4. *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

5. *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

6. *Jobs undertaken by IT & ITES organizations are considered as:*
 - (a) Project
 - (b) Batch work
 - (c) Contract
 - (d) All the above

7. *In Toll Road costing, the repetitive costs include:*
 - (a) Maintenance cost
 - (b) Annual operating costs
 - (c) None of the above
 - (d) Both (a) and (b)

8. BOT approach means:

- (a) Build, Operate and Transfer
- (b) Buy, Operate and Transfer
- (c) Build, Operate and Trash
- (d) Build, Own and Trash

9. Pre-product development activities in insurance companies, include:

- (a) Processing of Claim
- (b) Selling of policy
- (c) Provision of conditions
- (d) Policy application processing

10. 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

ANSWERS

1.	(b)	2.	(a)	3.	(b)	4.	(b)	5.	(c)	6.	(a)
7.	(a)	8.	(a)	9.	(c)	10.	(d)				

**Question 1**

Describe three distinct groups of variances that arise in standard costing.

Answer

The three distinct groups of variances that arise in standard costing are:

- 1. Variances of efficiency:** These are the variance, which arise due to efficiency or inefficiency in use of material, labour etc.
- 2. Variances of prices and rates:** These are the variances, which arise due to changes in procurement price and standard price.
- 3. Variances due to volume:** These represent the effect of difference between actual activity and standard level of activity.

Question 2

“Calculation of variances in standard costing is not an end in itself, but a means to an end.” Discuss.

Answer

The crux of standard costing lies in variance analysis. Standard costing is the technique whereby standard costs are predetermined and subsequently compared with the recorded actual costs. It is a technique of cost ascertainment and cost control. It establishes predetermined estimates of the cost of products and services based on management’s standards of efficient operation. It thus lays emphasis on “what the cost should be”. These should be costs are when compared with the actual costs. The difference between standard cost and actual cost of actual output is defined as the variance.

The variance in other words is the difference between the actual performance and the standard performance. The calculations of variances are simple. A variance may be favourable or unfavourable. If the actual cost is less than the standard cost, the variance is favourable but if the actual cost is more than the standard cost, the variance will be unfavourable. They are easily expressible and do not provide detailed analysis to enable management of exercise control over them. It is not enough to know the figures of these variances from month to month. We in fact are required to trace their origin and causes of occurrence for taking necessary remedial steps to reduce / eliminate them.

A detailed probe into the variance particularly the controllable variances helps the management to ascertain:

- 1.** the amount of variance
- 2.** the factors or causes of their occurrence
- 3.** the responsibility to be laid on executives and departments and
- 4.** corrective actions which should be taken to obviate or reduce the variances.

Mere calculation and analysis of variances is of no use. The success of variance analysis depends upon how quickly and effectively the corrective actions can be taken on the analysed variances. In fact variance gives information. The manager needs to act on the information provided for taking corrective action. Information is the means and action taken on it is the end. In other words, the calculation of variances in standard costing is not an end in itself, but a means to an end.

Question 3

Describe the various steps involved in adopting standard costing system in an organization.

Answer

The Steps of standard costing is as below:

1. **Setting of Standards:** The first step is to set standards which are to be achieved.
2. **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.
3. **Comparison of actual cost and standard cost:** Actual costs are compared with the standards costs and variances are determined.
4. **Investigation of variances:** Variances arises are investigated for further action. Based on this performance is evaluated and appropriate actions are taken.
5. **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.

Question 4

Discuss briefly some of the criticism which may be levelled against the Standard Costing System.

Answer

Criticism of Standard Costing:

- (a) **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.
- (b) **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.

- (c) 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.
- (d) 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.
- (e) 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.
- (f) 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.
- (g) Standard costs cannot possibly reflect the true value in exchange:** If previous historical costs are amended roughly to arrive at estimates for ad hoc purposes, they are not standard costs in the strict sense of the term and hence they cannot also reflect true value in exchange. In arriving at standard costs, however, the economic and technical factors, internal and external, are brought together and analysed to arrive at quantities and prices which reflect optimum operations. The resulting costs, therefore, become realistic measures of the sacrifices involved.
- (h) Fixation of standards may be costly:** It may require high order of skill and competency. Small concerns, therefore, feel difficulty in the operation of such system.

MULTIPLE CHOICE QUESTIONS

1. *Under standard cost system the cost of the product determined at the beginning of production is its:*
 - (a) Direct cost
 - (b) Pre-determined cost
 - (c) Historical cost
 - (d) Actual cost

2. *The deviations between actual and standard cost is known as:*
 - (a) Multiple analysis
 - (b) Variable cost analysis
 - (c) Variance analysis
 - (d) Linear trend analysis

3. *The standard which is attainable under favourable conditions is:*
 - (a) Theoretical standard
 - (b) Expected standard
 - (c) Normal standard
 - (d) Basic standard

4. *The standard most suitable from cost control point of view is:*
 - (a) Normal standard
 - (b) Theoretical standard
 - (c) Expected standard
 - (d) Basic standard

5. *Overhead cost variances is:*
 - (a) The difference between overheads recovered on actual output - actual overhead incurred.
 - (b) The difference between budgeted overhead cost and actual overhead cost.
 - (c) Obtained by multiplying standard overhead absorption rate with the difference between standard hours for actual output and actual hours worked.
 - (d) None of the above

6. *Which of the following variance arises when more than one material is used in the manufacture of a product:*
 - (a) Material price variance
 - (b) Material usage variance
 - (c) Material yield variance
 - (d) Material mix variance

7. *If standard hours for 100 units of output are 400 @ ₹2 per hour and actual hours take are 380 @ ₹2.25 per, then the labour rate variance is:*
 - (a) ₹95 (adverse)
 - (b) ₹100 (adverse)



- (c) ₹25 (favourable)
- (d) ₹120 (adverse)

8. *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

9. *Idle time variance is obtained by multiplying:*

- (a) The difference between standard and actual hours by the actual rate of labour per hour
- (b) The difference between actual labour hours paid and actual labour hours worked by the standard rate
- (c) The difference between standard and actual hours by the standard rate of labour per hour
- (d) None of the above.

10. *Basic standards are:*

- (a) Those standards, which require high degree of efficiency and performance.
- (b) Average standards and are useful in long term planning.
- (c) Standards, which can be attained or achieved
- (d) Assuming to remain unchanged for a long time.

ANSWERS

1.	(b)	2.	(c)	3.	(a)	4.	(c)	5.	(a)	6.	(d)
7.	(a)	8.	(d)	9.	(b)	10.	(d)				

**Question 1**

Explain and illustrate cash break-even.

Answer

In cash break-even chart, only cash fixed costs are considered. Non-cash items like depreciation etc. are excluded from the fixed cost for computation of break-even point. It depicts the level of output or sales at which the sales revenue will equal to total cash outflow. It is computed as under:

$$\text{Cash BEP (Units)} = \text{Cash Fixed Cost} \div \text{Contribution per Units}$$

Question 2

Write short notes on Angle of Incidence.

Answer

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

Question 3

Discuss basic assumptions of Cost Volume Profit analysis.

Answer**Assumptions of CVP Analysis:**

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

Question 4

Elaborate the practical application of Marginal Costing.

Answer**Practical applications of Marginal costing:**

1. **Pricing Policy:**

Since marginal cost per unit is constant from period to period, firm decisions on pricing policy can be taken particularly in short term.

2. Decision Making:

Marginal costing helps the management in taking a number of business decisions like make or buy, discontinuance of a particular product, replacement of machines, etc.

3. Ascertaining Realistic Profit:

Under the marginal costing technique, the stock of finished goods and work-in-progress are carried on marginal cost basis and the fixed expenses are written off to profit and loss account as period cost. This shows the true profit of the period.

4. Determination of production level:

Marginal costing helps in the preparation of break-even analysis which shows the effect of increasing or decreasing production activity on the profitability of the company.



MULTIPLE CHOICE QUESTIONS

1. Under marginal costing the cost of product includes:

- (a) Prime costs only.
- (b) Prime costs and variable overheads.
- (c) Prime costs and fixed overheads.
- (d) Prime costs and factory overheads.

2. Reporting under marginal costing is accomplished by:

- (a) Treating all costs as period costs.
- (b) Eliminating the work-in-progress inventory account.
- (c) Matching variable costs against revenue and treating fixed costs as period costs.
- (d) Including only variable costs in income statement.

3. Period costs are:

- (a) Variable costs.
- (b) Fixed costs.
- (c) Prime costs.
- (d) Overheads costs.

4. When sales and production (in units) are same then profit under:

- (a) Marginal costing is higher than that of absorption costing.
- (b) Marginal costing is lower than that of absorption costing.
- (c) Marginal costing is equal to that of absorption costing.
- (d) None of the above.

5. When sales exceed production (in units) then profit under:

- (a) Marginal costing is higher than that of absorption costing.
- (b) Marginal costing is lower than that of absorption costing.
- (c) Marginal costing is equal than that of absorption costing.
- (d) None of above.

6. The main difference between marginal costing and absorption costing is regarding the treatment of:

- (a) Prime cost.
- (b) Fixed overheads.
- (c) Direct materials.
- (d) Variable overheads.

7. Under profit volume ratio, the term profit:

- (a) Means the sales proceeds in excess of total costs.
- (b) Means the same thing as is generally understood.
- (c) Is a misnomer, it in fact refers to contribution i.e. (sales revenue-variable costs).
- (d) None of the above.

8. Factors which can change the break-even point:

- (a) Change in fixed costs.
- (b) Change in variable costs.
- (c) Change in the selling price.
- (d) All of the above.

9. If P/V ratio is 40% of sales then what about the remaining 60% of sales:

- (a) Profit.
- (b) Fixed cost.
- (c) Variable cost.
- (d) Margin of safety.

10. The P/V ratio of a product is 0.6 and profit is ₹9,000. The margin of safety is:

- (a) ₹5,400
- (b) ₹15,000
- (c) ₹22,500
- (d) ₹3,600

ANSWERS

1.	(b)	2.	(c)	3.	(b)	4.	(c)	5.	(a)	6.	(b)
7.	(c)	8.	(d)	9.	(c)	10.	(b)				

**Question 1**

Discuss the components of budgetary control system.

Answer**Components of budgetary control system**

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

1. Physical Budgets – Sales Quantity, Product Quantity., Inventory, Manpower budget.
2. Cost Budgets – Manufacturing Cost, Administration Cost, Sales & Distribution cost, R & D Cost.
3. Profit Budget.

Question 2

List the eight functional budgets prepared by a business.

Answer

The various commonly used Functional budgets are:

1. Sales Budget
2. Production Budget
3. Plant Utilisation Budget
4. Direct Material Usage Budget
5. Direct Material Purchase Budget
6. Direct Labour (Personnel) Budget
7. Factory Overhead Budget
8. Production Cost Budget.

Question 3

Explain the Essentials of budget.

Answer

Essentials of budget:

1. It is prepared in advance and is based on a future plan of actions.
2. It relates to a future period and is based on objectives to be attained.
3. It is a statement expressed in monetary and/ or physical units prepared for the implementation of policy formulated by management.

Question 4

Describe the steps involved in the budgetary control technique.

Answer

There are certain steps involved in the budgetary control technique. They are as follows:

1. Definition of objectives:

A budget being a plan for the achievement of certain operational objectives, it is desirable that the same are defined precisely. The objectives should be written out; the areas of control demarcated; and items of revenue and expenditure to be covered by the budget stated.

2. Location of the key (or budget) factor:

There is usually one factor (sometimes there may be more than one) which sets a limit to the total activity. Such a factor is known as key factor. For proper budgeting, it must be located and estimated properly.

3. Appointment of controller:

Formulation of a budget usually required whole time services of a senior executive known as budget controller; he must be assisted in this work by a Budget Committee, consisting of all the heads of department along with the Managing Director as the Chairman.

4. Budget Manual:

Effective budgetary planning relies on the provision of adequate information which 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.

5. Budget period:

The period covered by a budget is known as budget period. The Budget Committee determines the length of the budget period suitable for the business. It may be months or quarters or such periods as coincide with period of trading activity.

6. Standard of activity or output:

For preparing budgets for the future, past statistics cannot be completely relied upon, for the past usually represents a combination of good and bad factors. Therefore, though results of the past should be studied but these should only be applied when there is a likelihood of similar conditions repeating in the future.

Question 5

Describe the salient features of budget manual.

Answer

Salient features of Budget Manual:

1. Budget manual contains many information which are required for effective budgetary planning.
2. A budget manual is a collection of documents that contains key information for those involved in the planning process.
3. An introductory explanation of the budgetary planning and control process, including a statement of the budgetary objective and desired results is included in Budget Manual
4. Budget Manual contains a form of organisation chart to show who is responsible for the preparation of each functional budget and the way in which the budgets are interrelated.



5. In contains a timetable for the preparation of each budget.
6. Copies of all forms to be completed by those responsible for preparing budgets, with explanations concerning their completion is included in Budget Manual.

Question 6

Explain briefly the concept of ‘flexible budget’.

Answer

Flexible Budget: A flexible budget is defined as “a budget which, by recognizing the difference between fixed, semi-variable and variable cost is designed to change in relation to the level of activity attained”. In flexibility budgetary control system, a series of budgets are prepared one for the each of a number of alternative production levels or volumes. Flexible budgets represent the amount of expense that is reasonably necessary to achieve each level of output specified. In other words, the allowances given under flexibility budgetary control system serve as standards of what costs should be at each level of output.

Question 7

Distinguish between Fixed and flexible budget.

Solution

Difference between Fixed and Flexible Budgets

<i>S.N</i>	<i>Fixed Budget</i>	<i>Flexible Budget</i>
1	It does not change with actual volume of activity achieved. Thus it is rigid.	It can be re-casted on the basis of activity level to be achieved. Thus it is not rigid.
2	It operates on one level of activity and under one set of conditions.	It consists of various budgets for different level of activity.
3	If the budgeted and actual activity levels differ significantly, then cost ascertainment and price fixation do not give a correct picture.	It facilitates the cost ascertainment and price fixation at different levels of activity.
4	Comparisons of actual and budgeted targets are meaningless particularly when there is difference between two levels.	It provided meaningful basis of comparison of actual and budgeted targets.

Question 8

State the considerations on which capital expenditure budget is prepared.

Answer

The preparation of Capital Expenditure Budget is based on the following considerations:

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

MULTIPLE CHOICE QUESTIONS

1. If a company wishes to establish a factory overhead budget system in which estimated costs can be derived directly from estimates of activity levels, it should prepare a:

- (a) Master budget
- (b) Cash budget
- (c) Flexible budget
- (d) Fixed budget

2. The classification of fixed and variable cost is useful for the preparation of:

- (a) Master budget
- (b) Flexible budget
- (c) Cash budget
- (d) Capital budget

3. Budget manual is a document:

- (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

4. The budget control organization is usually headed by a top executive who is known as:

- (a) General manager
- (b) Budget director/budget controller
- (c) Accountant of the organization
- (d) None of the above

5. "A favourable budget variance is always an indication of efficient performance". Do you agree, give reason?

- (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.

6. A budget report is prepared on the principle of exception and thus-

- (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



7. *Purchases budget and materials budget are same:*

- (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

8. *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

9. *Activity Ratio depicts:*

- (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

10. *Which of the following is usually a short-term budget:*

- (a) Capital expenditure budget
- (b) Research and development budget
- (c) Cash budget
- (d) Sales budget

ANSWERS

1.	(c)	2.	(b)	3.	(c)	4.	(b)	5.	(c)	6.	(c)
7.	(b)	8.	(b)	9.	(c)	10.	(c)				