



**Question 1**

Distinguish between Job costing and Process Costing.

**(5 Marks)**

**Solution**

<b>Job Costing</b>	<b>Process Costing</b>
(i) 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.
(ii) 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.
(iii) Each job is separate and independent of other jobs.	Products lose their individual identity as they are manufactured in a continuous flow.
(iv) Each job or order has a number and costs are collected against the same job number.	The unit cost of process is an average cost for the period.
(v) Costs are computed when a job is completed. The cost of a job may be determined by adding all costs against the job.	Costs are calculated at the end of the cost period. The unit cost of a process may be computed by dividing the total cost for the period by the output of the process during that period.
(vi) As production is not continuous and each job may be different, so more managerial attention is required for effective control.	Process of production is usually standardized and is therefore, quite stable. Hence control here is comparatively easier.





**Question 2**

- (a) Briefly explain the essential features of a good Cost Accounting System.
- (b) Write down the treatment of following items associated with purchase of materials.
- (i) Cash discount
  - (ii) IGST
  - (iii) Demurrage
  - (iv) Shortage
  - (v) Basic Custom Duty
- (c) Explain the treatment of Overtime Premium in following situations:
- (i) SV & Co. wants to grab some special orders, and overtime is required to meet the same.
  - (ii) Dept. X has to work overtime to make up a shortfall in production due to some fault of management in dept. Y.
  - (iii) S Ltd. has to work overtime regularly throughout the year as a policy due to the workers' shortage.
  - (iv) Due to flood in Odisha, RS Ltd. has to work overtime to complete the job.
  - (v) A customer requested the company MN Ltd. to expedite the job because of his urgency of work.
- (d) Discuss briefly some of the criticism which may be levelled against the Standard Costing System.
- (e) Identify the methods of costing from the following statements:
- (i) Costs are directly charged to a group of products.
  - (ii) Nature of the product is complex and method cannot be ascertained.
  - (iii) Costs ascertained for a single product.
  - (iv) All costs are directly charged to a specific job.
  - (v) Costs are charged to operations and averaged over units produced.





**Solution**

(a) **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.





(b) Treatment of items associated with purchase of materials is tabulated as below

S. No.	Items	Treatment
(i)	Cash Discount	Cash discount is <b>not deducted</b> from the purchase price. It is treated as interest and finance charges. It is ignored.
(ii)	Integrated Goods and Service Tax (IGST)	Integrated Goods and Service Tax (IGST) is paid on inter-state supply of goods and provision of services and collected from the buyers. It is <b>excluded from the cost of purchase if credit for the same is available</b> . Unless mentioned specifically it should not form part of cost of purchase.
(iii)	Demurrage	Demurrage is a penalty imposed by the transporter for delay in uploading or offloading of materials. It is an <b>abnormal cost and not included with cost of purchase</b>
(iv)	Shortage	Shortage in materials are treated as follows: <b>Shortage due to normal reasons: Good units absorb the cost of shortage due to normal reasons.</b> Losses due to breaking of bulk, evaporation, or due to any unavoidable conditions etc. are the reasons of normal loss. <b>Shortage due to abnormal reasons: Shortage arises due to abnormal reasons such as material mishandling, pilferage, or due to any avoidable reasons are not absorbed by the good units. Losses due to abnormal reasons are debited to costing profit and loss account.</b>
(v)	Basic Custom Duty	Basic Custom duty is paid on import of goods from outside India. It is <b>added</b> with the purchase cost.





**(c) Treatment of Overtime premium in different situations**

Situation	Treatment
(i) SV & Co. wants to grab some special orders, and overtime is required to meet the same.	If overtime is required to cope with general production programmes or for meeting urgent orders, <b>the overtime premium should be treated as overhead cost of the particular department or cost centre which works overtime.</b>
(ii) Dept. X has to work overtime to make up a shortfall in production due to some fault of management in dept. Y.	If overtime is worked in a department due to the fault of another department, <b>the overtime premium should be charged to the latter department (Y).</b>
(iii) S Ltd. has to work overtime regularly throughout the year as a policy due to the workers' shortage.	The overtime premium is treated as a part of <b>employee cost and job is charged at an effective average wage rate.</b>
(iv) Due to flood in Odisha, RS Ltd. has to work overtime to complete the job.	Overtime worked on account of abnormal conditions such as flood, earthquake etc., <b>should not be charged to cost, but to Costing Profit and Loss Account.</b>
(v) A customer requested the company MN Ltd. to expedite the job because of his urgency of work.	Where overtime is worked at the request of the customer, overtime premium is also <b>charged to the job/ customer directly.</b>

**(d) Criticism of Standard Costing**

(i) Variation in price: One of the chief problem faced in the operation of the standard costing system is the precise estimation of likely prices or rate to be paid. The variability of prices is so great that even actual prices are not necessarily adequately representative of cost. But the use of sophisticated forecasting techniques should be able to cover the price fluctuation to some extent. Besides this, the system provides for isolating uncontrollable variances arising from variations to be dealt with separately.





(ii) **Varying levels of output:** If the standard level of output set for pre-determination of standard costs is not achieved, the standard costs are said to be not realised. However, the statement that the capacity utilisation cannot be precisely estimated for absorption of overheads may be true only in some industries of jobbing type. In vast majority of industries, use of forecasting techniques, market research, etc., help to estimate the output with reasonable accuracy and thus the variation is unlikely to be very large. Prime cost will not be affected by such variation and, moreover, variance analysis helps to measure the effects of idle time.

(iii) **Changing standard of technology:** In case of industries that have frequent technological changes affecting the conditions of production, standard costing may not be suitable. This criticism does not affect the system of standard costing. Cost reduction and cost control is a cardinal feature of standard costing because standards once set do not always remain stable. They have to be revised.

(iv) **Attitude of technical people:** Technical people are accustomed to think of standards as physical standards and, therefore, they will be misled by standard costs. Since technical people can be educated to adopt themselves to the system through orientation courses, it is not an insurmountable difficulty.

(v) **Mix of products:** Standard costing presupposes a pre-determined combination of products both in variety and quantity. The mixture of materials used to manufacture the products may vary in the long run but since standard costs are set normally for a short period, such changes can be taken care of by revision of standards.

(vi) **Level of Performance:** Standards may be either too strict or too liberal because they may be based on (a) theoretical maximum efficiency, (b) attainable good performance or (c) average past performance. To overcome this difficulty, the management should give thought to the selection of a suitable type of standard. The type of standard most effective in the control of costs is one which represents an attainable level of good performance.

(vii) **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.

(viii) 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.

**(e) Method of costing followed:**

Situation	Method of costing
(i) Costs are directly charged to a group of products.	Batch costing
(ii) Nature of the product is complex and method cannot be ascertained.	Multiple costing
(iii) Cost is ascertained for a single product.	Unit/ Single/Output costing
(iv) All costs are directly charged to a specific job.	Job costing
(v) Costs are charged to operations and averaged over units produced.	Process costing

**Question 3**

- (a) Specify the types of Responsibility centres under the following situations:
- (i) Purchase of bonds, stocks, or real estate property.
  - (ii) Ticket counter in a Railway station.
  - (iii) Decentralized branches of an organization.
  - (iv) Maharana, Navratna and Miniratna public sector undertaking (PSU) of Central Government.
  - (v) Sales Department of an organization.





- (b) What is Margin of Safety? What does a large Margin of Safety indicates? How can you calculate Margin of Safety?
- (c) Rowan Premium Bonus system does not motivate a highly efficient worker as a less efficient worker and a highly efficient worker can obtain same bonus under this system. Discuss with an example.
- (d) What do you understand by Build-Operate-Transfer (BOT) approach in Service Costing? How is the Toll rate computed?
- (e) Write a short note on VED analysis of Inventory Control.

**Solution**

(a)

Particulars	Types of Responsibility Centre
(i) Purchase of bonds, stocks, or real estate property.	Investment Centre
(ii) Ticket counter in a Railway station.	Revenue Centre
(iii) Decentralized branches of an organization.	Profit Centre
(iv) Maharatna, Navratna and Miniratna public sectorundertaking (PSU) of Central Government.	Investment Centre
(v) Sales Department of an organization.	Revenue Centre







- (b) **Margin of Safety:** The margin of safety can be defined as the difference between the expected level of sale and the breakeven sales.

The larger the margin of safety, the higher is the chances of making profits.

The Margin of Safety can be calculated by identifying the difference between the projected sales and breakeven sales in units multiplied by the contribution per unit. This is possible because, at the breakeven point all the fixed costs are recovered and any further contribution goes into the making of profits.

Margin of Safety = (Projected sales - Breakeven sales) in units x contribution per unit

It also can be calculated as:

$$\text{Margin of Safety} = \frac{\text{Profit}}{p/v \text{ Ratio}}$$

- (c) **Rowan Premium Plan:** According to this system a standard time allowance is fixed for the performance of a job and bonus is paid if time is saved.

Under Rowan System, the bonus is that proportion of the time wages as time saved bears to the standard time.

$$\text{Bonus} = \frac{\text{Time Saved}}{\text{Time Allowed}} \times \text{Time taken} \times \text{Rate per hour}$$

Example explaining highly efficient worker and less efficient worker obtaining same bonus:

Time rate (per Hour)     ` 60  
 Time allowed                8 hours.  
 Time taken by 'X'         6 hours.  
 Time taken by 'Y'         2 hours.

$$\text{Bonus} = \frac{\text{Time Saved}}{\text{Time Allowed}} \times \text{Time taken} \times \text{Rate per hour}$$

$$\text{For 'X'} = \frac{2 \text{ Hours}}{8 \text{ Hours}} \times 6 \text{ hours} \times ` 60 = ` 90$$

$$\text{For 'Y'} = \frac{6 \text{ Hours}}{8 \text{ Hours}} \times 2 \text{ hours} \times ` 60 = ` 90$$





From the above example, it can be concluded that a highly efficient worker may obtain same bonus as less efficient worker under this system.

- (d) **Build-Operate-Transfer (BOT) Approach:** In recent years a growing trend emerged among Governments in many countries to solicit investments for public projects from the private sector under BOT scheme. BOT is an option for the Government to outsource public projects to the private sector. With BOT, the private sector designs, finances, constructs and operate the facility and eventually, after specified concession period, the ownership is transferred to the Government. Therefore, BOT can be seen as a developing technique for infrastructure projects by making them amenable to private sector participation.

**Toll Rate:** In general, the toll rate should have a direct relation with the benefits that the road users would gain from its improvements. The benefits to road users are likely to be in terms of fuel savings, improvement in travel time and good riding quality.

To compute the toll rate, following formula may be used

$$= \frac{\text{Total cost} + \text{Profit}}{\text{Number of Vehicles}}$$

Or, to compute the toll rate following formula with rounding off to nearest multiple of five has been adopted: User fee = Total distance x Toll rate per km.

- (e) **Vital, Essential and Desirable (VED):** Under this system of inventory analysis, inventories are classified on the basis of its criticality for the production function and final product. Generally, this classification is done for spare parts which are used for production.

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

(ii) **Essential-** Items under this category are essential but not vital. The unavailability may cause sub standardisation and loss of efficiency in





production process. Items under this category are reviewed periodically and get the second priority.

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

#### Question 4

- (a) State how the following items are treated in arriving at the value of cost of material purchased:
- (i) Detention Charges/Fines
  - (ii) Demurrage
  - (iii) Cost of Returnable containers
  - (iv) Central Goods and Service Tax (CGST)
  - (v) Shortage due to abnormal reasons.
- (b) State the limitations of Budgetary Control System.
- (c) Explain Blanket Overhead Rate and Departmental Overhead Rate. How they are calculated? State the conditions required for the application of Blanket Overhead Rate.
- (d) State the method of costing that would be most suitable for:
- (i) Oil Refinery
  - (ii) Interior Decoration
  - (iii) Airlines Company
  - (iv) Advertising
  - (v) Car Assembly
- (e) Give any five examples of the impact of use of Information Technology in Cost Accounting.





**Solution**

**(a) Treatment of items in arriving at the value of cost of material Purchased**

S. No.	Items	Treatment
(i)	<b>Detention charges/ Fine</b>	Detention charges/ fines imposed for non-compliance of rule or law by any statutory authority. It is an abnormal cost and <b>not included</b> with cost of purchase.
(ii)	<b>Demurrage</b>	Demurrage is a penalty imposed by the transporter for delay in uploading or offloading of materials. It is an abnormal cost and <b>not included</b> with cost of purchase.
(iii)	<b>Cost of returnable containers</b>	Treatment of cost of returnable containers are as follows:  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. 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.
(iv)	<b>Central Goods and Service Tax (CGST)</b>	Central Goods and Service Tax (CGST) is paid on manufacture and supply of goods and collected from the buyer. It is <b>excluded</b> from the cost of purchase if the input credit is available for the same. Unless mentioned specifically CGST is not added with the cost of purchase.
(v)	<b>Shortage due to abnormal reasons</b>	Shortage arises due to abnormal reasons such as material mishandling, pilferage, or due to any avoidable reasons are not absorbed by the good units. Losses due to abnormal reasons are debited to costing profit and loss account.





**(b) Limitations of Budgetary Control System**

<b>Points</b>	<b>Description</b>
<b>1. Based on Estimates</b>	Budgets are based on a series of estimates, which are based on the conditions prevalent or expected at the time budget is established. It requires revision in plan if conditions change.
<b>2. Time factor</b>	Budgets cannot be executed automatically. Some preliminary steps are required to be accomplished before budgets are implemented. It requires proper attention and time of management. Management must not expect too much during the initial development period.
<b>3. Co-operation Required</b>	Staff co-operation is usually not available during the initial budgetary control exercise. In a decentralised organisation, each unit has its own objective and these units enjoy some degree of discretion. In this type of organisation structure, coordination among different units is required. The success of the budgetary control depends upon willing co-operation and teamwork,
<b>4. Expensive</b>	The implementation of budget is somewhat expensive. For successful implementation of the budgetary control, proper organisation structure with responsibility is prerequisite. Budgeting process start from the collection of information to for preparing the budget and performance analysis. It consumes valuable resources (in terms of qualified manpower, equipment, etc.) for this purpose; hence, it is an expensive process.
<b>5. Not a substitute for management</b>	Budget is only a managerial tool and must be intelligently applied for management to get benefited. Budgets are not a substitute for good management.
<b>6. Rigid document</b>	Budgets are sometime considered as rigid documents. But in reality, an organisation is exposed to various uncertain internal and external factors. Budget should be flexible enough to incorporate ongoing developments in the internal and external factors affecting the very purpose of the





	budget.
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(c) **Blanket Overhead Rate:** Blanket overhead rate refers to the computation of one single overhead rate for the whole factory.

This overhead rate is computed as follows:

$$\text{Blanket Rate} = \frac{\text{Total overheads for the factory}}{\text{Total number of units of base for the factory}}$$

**Departmental Overhead Rate:** It refers to the computation of one single overhead rate for a particular production unit or department.

This overhead rate is determined by the following formula:

$$\text{Departmental overhead Rate} = \frac{\text{Overheads of department or cost centre}}{\text{Corresponding base}}$$

Conditions required for the Application of Blanket Overhead:

A blanket rate should be applied in the following cases:

- (1) Where only one major product is being produced.
- (2) Where several products are produced, but
  - (a) All products pass through all departments; and
  - (b) All products are processed for the same length of time in each department.

(d) **Method of Costing**

S.No.	Industry	Method of Costing
(i)	Oil Refinery	Process Costing
(ii)	Interior Decoration	Job Costing
(iii)	Airlines Company	Operation/ Service Costing
(iv)	Advertising	Job Costing





(v)	Car Assembly	Multiple Costing
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(e) Example of Impact of Information Technology in cost accounting may include the following:

(i) After the introduction of ERPs, different functional activities get integrated and as a consequence 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 process of results of both cost and financial accounting systems become simpler and less sophisticated.

(ii) A move towards paperless environment can be seen where documents like Bill of Material, Material Requisition Note, Goods Received Note, labour utilisation report etc. are no longer required to be prepared in multiple copies, the related department can get e-copy from the system.

(iii) Information Technology with the help of internet (including intranet and extranet) helping in resource procurement and mobilisation. For example, production department can get materials from the stores without issuing material requisition note physically. Similarly, purchase orders can be initiated to the suppliers with the help of extranet. This enables an entity to shift towards Just-in-Time (JIT) approach of inventory management and production.

(iv) Cost information for a cost centre or cost object is ascertained with accuracy in timely manner. Each cost centre and cost object is codified and all related costs are assigned to the cost objects or cost centres using assigned codes. This automates the cost accumulation and ascertainment process. The cost information can be customised as per the requirement. For example, when an entity manufacture or provide services, are able to know information job-wise, batch-wise, process-wise, cost centre wise etc.

(v) Uniformity in preparation of report, budgets and standards can be achieved with the help of IT. ERP software plays an important role in bringing uniformity irrespective of location, currency, language and regulations.





- (vi) Cost and revenue variance reports are generated in real time basis which enables the management to take control measures immediately.
- (vii) IT enables an entity to monitor and analyse each process of manufacturing or service activity closely to eliminate non value added activities.

**Question 5**

What is Bill of Material? Describe the uses of Bill of Material in following departments:

- (i) Purchases Department
- (ii) Production Department
- (iii) Stores Department
- (iv) Cost/Accounting Department

**Solution**

Bill of Material: 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.

Uses of Bill of Material in different department:

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





**Question 6**

- (a) Briefly explain the 'techniques of costing'.
- (b) Narrate the terms 'Joint Products' and 'By-Products' with an example of each term.
- (c) Discuss the steps involved in setting labour time standards.
- (d) What is 'Budgetary Control System' and discuss the components of the same.
- (e) Describe the difference between 'Cost Control' and 'Cost Reduction'.

**Solution**

<b>Techniques</b>	<b>Description</b>
<b>Uniform Costing</b>	<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:</p> <ul style="list-style-type: none"><li>i. A comparison of the performance of each of the firms can be made with that of another, or with the average performance in the industry.</li><li>ii. Under such a system, it is also possible to determine the cost of production of goods which is true for the industry as a whole. It is found useful when tax-relief or protection is sought from the Government.</li></ul>
<b>Marginal Costing</b>	<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>





<b>Standard Costing and Variance Analysis</b>	It is the name given to the technique whereby <i>standard costs</i> are <i>pre-determined</i> and <i>subsequently compared</i> with the recorded <i>actual costs</i> . 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.
<b>Historical Costing</b>	It is the ascertainment of costs after they have been incurred. This type of costing has limited utility. <ul style="list-style-type: none"><li>• <i>Post Costing</i>: It means ascertainment of cost after production is completed.</li><li>• <i>Continuous costing</i>: Cost is ascertained as soon as the job is completed or even when the job is in progress.</li></ul>
<b>Absorption Costing</b>	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.
<b>Direct costing</b>	Direct costing is a specialized form of cost analysis that only uses variable costs to make decisions. It does not consider fixed costs, which are assumed to be associated with the time periods in which they are incurred.

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

In other words, two or more products of equal importance, produced, simultaneously from the same process, with each having a significant relative sale value are known as joint products.

For example, in the oil industry, gasoline, fuel oil, lubricants, paraffin, coal tar, asphalt and kerosene are all produced from crude petroleum. These are known as joint products.





(ii) **By-Products** - These are defined as "products recovered from material discarded in a main process, or from the production of some major products, where the material value is to be considered at the time of severance from the main product." Thus, by-products emerge as a result of processing operation of another product or they are produced from the scrap or waste of materials of a process. In short, a by-product is a secondary or subsidiary product which emanates as a result of manufacture of the main product.

The point at which they are separated from the main product or products is known as split-off point. The expenses of processing are joint till the split-off point.

Examples of by-products are molasses in the manufacture of sugar, tar, ammonia and benzene obtained on carbonisation of coal and glycerine obtained in the manufacture of soap.

(c) **Procedure of Setting Labour Time Standards**

The following are the steps involved in setting labour standards:

- (a) **Standardisation:** Products to be produced are decided based on production plan and customer's order.
- (b) **Labour specification:** Types of labour and labour time is specified. Labour time specification is based on past records and it takes into account normal wastage of time.
- (c) **Standardisation of methods:** Selection of proper machines to use proper sequence and method of operations.
- (d) **Manufacturing layout:** A plan of operation for each product listing the operations to be performed is prepared.
- (e) **Time and motion study:** It is conducted for selecting the best way of completing the job or motions to be performed by workers and the standard time which an average worker will take for each job. This also takes into account the learning efficiency and learning effect.
- (f) **Training and trial:** Workers are trained to do the work and time spent at the time of trial run is noted down.





(d) **Budgetary Control System:** It is the system of management control and accounting in which all the operations are forecasted and planned in advance to the extent possible and the actual results compared with the forecasted and planned results.

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

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

(e)

Cost Control	Cost Reduction
1. Cost control aims at <i>maintaining</i> the costs in accordance with the established standards.	1. Cost reduction is concerned with <i>reducing</i> costs. It challenges all standards and endeavours to improvise them continuously
2. Cost control seeks to <i>attain lowest possible cost</i> under existing conditions.	2. Cost reduction recognises no condition as permanent, since a <i>change will result in lower cost</i> .





3. In case of cost control, emphasis is on <i>past and present</i>	3. In case of cost reduction, it is on <i>present and future</i> .
4. Cost control is a <i>preventive</i> function	4. Cost reduction is a <i>corrective</i> function. It operates even when an efficient cost control system exists.
5. Cost control ends when targets are achieved.	5. Cost reduction has no visible end and is a continuous process.

**Question 7**

(a) Health Wealth Hospital is interested in estimating the cost for each patient stay. The hospital offers general health care facility i.e. only basic services.

You are required to:

(i) CLASSIFY each of the following costs as either direct or indirect with respect to each patient.

(ii) CLASSIFY each of the following costs as either fixed or variable with respect to hospital costs per day.

	Direct	Indirect	Fixed	Variable
Electronic monitoring	_____	_____	_____	_____
Meals for patients	_____	_____	_____	_____
Nurses' salaries	_____	_____	_____	_____
Parking maintenance	_____	_____	_____	_____
Security	_____	_____	_____	_____

(b) Differentiate between Cost Control and Cost Reduction.

(c) Though Cost Accounting and Management Accounting is used synonymously but there are a few differences. Elaborate those differences.

(d) What are cost units? Write the cost unit basis against each of the following Industry/Product-Automobile, Steel, Cement, Chemicals, Power and Transport.



**Solution**

(a)

Item	Direct	Indirect	Fixed	Variable
Electronic monitoring	YES			YES
Meals for patients	YES			YES
Nurses' salaries		YES	YES	
Parking maintenance		YES	YES	
Security		YES	YES	

(b)

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





(c)

	Basis	Cost Accounting	Management Accounting
(i)	<b>Nature</b>	It records the quantitative aspect only.	It records both qualitative and quantitative aspect.
(ii)	<b>Objective</b>	It records the cost of producing a product and providing a service.	It provides information to management for planning and co-ordination.
(iii)	<b>Area</b>	It only deals with cost Ascertainment.	It is wider in scope as it includes financial accounting, budgeting, taxation, planning etc.
(iv)	<b>Recording of data</b>	It uses both past and present figures.	It is focused with the projection of figures for future.
(v)	<b>Development</b>	Its development is related to industrial revolution.	Its development is related to the need of modern business world.
(vi)	<b>Rules and Regulation</b>	It follows certain principles and procedures for recording costs of different products.	It does not follow any specific rules and regulations.

(d) Cost units are usually the units of physical measurement like number, weight, area, volume, length, time and value.

Industry or Product	Cost Unit Basis
Automobile	Number
Steel	Ton
Cement	Ton/ per bag etc.
Chemicals	Litre, gallon, kilogram, ton etc.
Power	Kilo-watt hour (kWh)
Transport	Passenger- kilometer





**Question 8**

- (a) EXPLAIN the difference between controllable & uncontrollable costs?
- (b) DEFINE cost plus contract? STATE its advantages.
- (c) "Is reconciliation of cost accounts and financial accounts necessary in case of integrated accounting system?" EXPLAIN.
- (d) DISCUSS the impact of Information Technology in Cost Accounting.

**Solution**

(a) Controllable costs and Uncontrollable 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 executive heading that responsibility centre.

Costs which cannot be influenced by the action of a specified member of an undertaking are known as uncontrollable costs.

(b) Cost plus contract: Under cost plus contract, the contract price is ascertained by adding a percentage of profit to the total cost of the work. Such types of contracts are entered into when it is not possible to estimate the contract cost with reasonable accuracy due to unstable condition of material, labour services etc.

Following are the advantages of cost plus contract:

- (i) The contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract.
- (ii) It is useful specially when the work to be done is not definitely fixed at the time of making the estimate.







(iii) Contractee can ensure himself about the 'cost of contract' as he is empowered to examine the books and documents of the contractor to ascertain the veracity of the cost of contract.

(c) In integrated accounting system cost and financial accounts are kept in the same set of books. Such a system will have to afford full information required for Costing as well as for Financial Accounts. In other words, information and data should be recorded in such a way so as to enable the firm to ascertain the cost (together with the necessary analysis) of each product, job, process, operation or any other identifiable activity. It also ensures the ascertainment of marginal cost, variances, abnormal losses and gains. In fact all information that management requires from a system of Costing for doing its work properly is made available. The integrated accounts give full information in such a manner so that the profit and loss account and the balance sheet can be prepared according to the requirements of law and the management maintains full control over the liabilities and assets of its business.

Since, only one set of books are kept for both cost accounting and financial accounting purpose so there is no necessity of reconciliation of cost and financial accounts.

(d) The impact of IT in cost accounting may include the following:

(i) After the introduction of ERPs, different functional activities get integrated and as a consequence 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 process of results of both cost and financial accounting systems become simpler and less sophisticated.

(ii) A move towards paperless environment can be seen where documents like Bill of Material, Material Requisition Note, Goods Received Note, labour utilisation report etc. are no longer required to be prepared in multiple copies, the related department can get e-copy from the system.





(iii) Information Technology with the help of internet (including intranet and extranet) helps in resource procurement and mobilisation. For example, production department can get materials from the stores without issuing material requisition note physically. Similarly, purchase orders can be initiated to the suppliers with the help of extranet. This enables an entity to shift towards Just-in-Time (JIT) approach of inventory management and production.

(iv) Cost information for a cost centre or cost object is ascertained with accuracy in timely manner. Each cost centre and cost object is codified and all related costs are assigned to the cost object or cost centre. This process automates the cost accumulation and ascertainment process. The cost information can be customised as per the requirement. For example, when an entity manufactures or provide services, it can know information job-wise, batch-wise, process-wise, cost centre wise etc.

(v) Uniformity in preparation of report, budgets and standards can be achieved with the help of IT. ERP software plays an important role in bringing uniformity irrespective of location, currency, language and regulations.

(vi) Cost and revenue variance reports are generated in real time basis which enables the management to take control measures immediately.

(vii) IT enables an entity to monitor and analyse each process of manufacturing or service activity closely to eliminate non-value-added activities.

The above are examples of few areas where Cost Accounting is done with the help of IT.

### Question 9

(a) DIFFERENTIATE between Cost Control and Cost Reduction.

(b) 'Like other branches of accounting, cost accounting also has certain limitations' . EXPLAIN the limitations.

(c) DIFFERENTIATE between Job Costing and Batch Costing.





(d) DISCUSS the treatment of by-product cost in Cost Accounting when they are of small total value.

**Solution**

(a)

S. No.	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 improvise 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.





(b) "Like other branches of accounting, cost accounting also has certain limitations". The limitations of cost accounting are as follows:

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

(c)

S. No.	Job Costing	Batch Costing
1	Method of costing used for non-standard and non-repetitive products produced as per customer specifications and against specific orders.	Homogeneous products produced in a continuous production flow in lots.
2	Cost 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.





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

(i) The sales value of the by-products may be credited to the Costing Profit and Loss Account and no credit be given in the Cost Accounts. The credit to the Costing Profit and Loss Account here is treated either as miscellaneous income or as additional sales revenue.

(ii) The sale proceeds of the by-product may be treated as deductions from the total costs. The sale proceeds in fact should be deducted either from the production cost or from the cost of sales.

### Question 10

- (a) WRITE note on cost-plus-contracts.
- (b) HOW apportionment of joint costs upto the point of separation amongst the joint products using market value at the point of separation and net realizable value method is done? DISCUSS.
- (c) DISCUSS cost classification based on variability and controllability.
- (d) DESCRIBE the salient features of budget manual.

### Solution

(a) These contracts provide for the payment by the contractee of the actual cost of construction plus a stipulated profit, mutually decided between the two parties.

The main features of these contracts are as follows:

- (i) The practice of cost-plus contracts is adopted in the case of those contracts where the probable cost of the contracts cannot be ascertained in advance with a reasonable accuracy.
- (ii) These contracts are preferred when the cost of material and labour is not steady and the contract completion may take number of years.
- (iii) The different costs to be included in the execution of the contract are mutually agreed, so that no dispute may arise in future in this respect. Under such





type of contracts, contractee is allowed to check or scrutinize the concerned books, documents and accounts.

(iv) Such a contract offers a fair price to the contractee and also a reasonable profit to the contractor.

The contract price here is ascertained by adding a fixed and mutually pre-decided component of profit to the total cost of the work.

(b) Apportionment of Joint Cost amongst Joint Products using:

**Market value at the point of separation:** This method is used for apportionment of joint costs to joint products upto the split off point. It is difficult to apply if the market value of the product at the point of separation is not available. It is useful method where further processing costs are incurred disproportionately.

**Net realizable value Method:** From the sales value of joint products (at finished stage) the followings are deducted:

- Estimated profit margins
- Selling & distribution expenses, if any
- Post split off costs.

The resultant figure so obtained is known as net realizable value of joint products. Joint costs are apportioned in the ratio of net realizable value.

(c) Cost classification based on variability

(i) **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. For example, rent, insurance of factory building etc., remain the same for different levels of production.





(ii) **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. For example, cost of direct labour, etc.

(iii) **Semi-variable Costs** - These costs contain both fixed and variable components and are thus partly affected by fluctuations in the level of activity. Examples of semi variable costs are telephone bills, gas and electricity etc.

Cost classification based on controllability

(i) **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 executive heading that responsibility centre. For example, direct costs comprising direct labour, direct material, direct expenses and some of the overheads are generally controllable by the shop level management.

(ii) **Uncontrollable Costs** - Costs which cannot be influenced by the action of a specified member of an undertaking are known as uncontrollable costs. For example, expenditure incurred by, say, the tool room is controllable by the foreman in-charge of that section but the share of the tool-room expenditure which is apportioned to a machine shop is not to be controlled by the machine shop foreman.

(d) **Salient features of Budget Manual**

- Budget manual contains much information which is required for effective budgetary planning.
- A budget manual is a collection of documents that contains key information for those involved in the planning process.
- 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.





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

### Question 11

- (a) LIST OUT cost unit examples of following service industry:  
Hospital, Electricity Supply service, Cinema, Canteen, Hotels
- (b) LIST OUT five purely financial expenses that are included only in Financial Accounts.
- (c) DESCRIBE Unit Costing. WHAT kind of industries follow this method of costing?
- (d) WRITE DOWN the corresponding cost drivers related to the following activity cost pools:  
Inspecting and testing costs, Setting-up machines cost, Machining costs, Supervising Costs, Ordering and Receiving Materials cost
- (e) BRIEF the treatment of following while calculating purchase cost of material:  
Trade Discount, Cash Discount, Penalty, Insurance charges, Commission paid.







**Solution**

(a)

Service industry	Unit of cost (examples)
Hospital	Patient per day, room per day or per bed, per operation etc.
Electricity Supply service	Kilowatt- hour (kWh)
Cinema	Per ticket
Canteen	Per item, per meal etc.
Hotels	Guest Days or Room Days

(b) Purely Financial Expenses included in Financial Accounts only:

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

(c) Unit costing: It is that method of costing where the output produced is identical and each unit of output requires identical cost. Unit costing is synonymously known as single or output costing, but these are sub-division of unit costing method.

This method of costing is followed by industries which produce single output or few variants of a single output, therefore, this method of costing, finds its application in industries like paper, cement, steel works, mining, breweries etc. These types of industries produce identical products and therefore have identical costs.





(d)

Activity Cost Pools	Related Cost Drivers
Inspecting and testing costs	Number of tests
Setting up machines cost	Number of set-ups
Machining costs	Machine hours
Supervising Costs	Direct labour hours
Ordering and Receiving Materials cost	Number of purchase orders

(e)

<b>Trade Discount</b>	Trade discount is <b>deducted</b> from the purchase price if it is not shown as deduction in the invoice.
<b>Cash Discount</b>	Cash discount is <b>not deducted</b> from the purchase price. It is treated as interest and finance charges. It is ignored.
<b>Penalty</b>	Penalty of any type is <b>not included</b> with the cost of purchase
<b>Insurance charges</b>	Insurance charges are paid for protecting goods during transit. It is <b>added</b> with the cost of purchase.
<b>Commission paid</b>	Commission or brokerage paid is <b>added</b> with the cost of purchase.





**Question 11**

- (a) DISCUSS the essentials of good Cost Accounting System.
- (b) STATE various causes of and treatment of Overtime Premium in Cost Accounting.
- (c) STATE Direct Expenses with examples.
- (d) EXPLAIN the difference between product cost and period cost.

**Solution**

(a) The essential features, which a good cost and management accounting system should possess, are as follows:

- (a) Informative and simple: Cost and management 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 meticulous and unnecessary details.
- (b) Accurate and authentic: The data to be used by the cost and management 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 and management 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 and management accounting system should be flexible enough to make necessary amendments and modification 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 reflect a strong conviction in using information for decision making.

(b) Causes and Treatment of Overtime premium in cost accounting

<i>Cause s</i>	<i>Treatment</i>
(1) The customer may agree to bear the entire charge of overtime because urgency of work.	(1) If overtime is resorted to at the desire of the customer, then overtime premium may be charged to the job directly.
(2) Overtime may be called for to make up any shortfall in production due to some unexpected development.	(2) If overtime is required to cope with general production programmes or for meeting urgent orders, the overtime premium should be treated as overhead cost of the particular department or cost centre which works overtime.
(3) Overtime work may be necessary to make up a shortfall in production due to some fault of management.	(3) If overtime is worked in a department due to the fault of another department, the overtime premium should be charged to the latter department.
(4) Overtime work may be resorted to, to secure an out-turn in excess of the normal output to take advantage of an expanding market or of rising demand	(4) Overtime worked on account of abnormal conditions such as flood, earthquake etc., should not be charged to cost, but to Costing Profit and Loss Account.





(c) 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:

- (a) Royalty paid/ payable for production or provision of service;
- (b) Hire charges paid for hiring specific equipment;
- (c) Cost for product/ service specific design or drawing;
- (d) Cost of product/ service specific software;
- (e) Other expenses which are directly related with the production of goods or provision of service.

(d) Product costs are those costs that are identified with the goods purchased or produced for resale. In a manufacturing organisation they are attached to the product and that are included in the inventory valuation for finished goods, or for incomplete goods. Product cost is also known as inventoriable cost. Under absorption costing method it includes direct material, direct labour, direct expenses, directly attributable costs (variable and non-variable) and other production (manufacturing) overheads. Under marginal costing method Product Costs includes all variable production costs and the all fixed costs are deducted from the contribution.

Periods costs are the costs, which are not assigned to the products but are charged as expense against revenue of the period in which they are incurred. General Administration, marketing, sales and distributor overheads are recognized as period costs.

