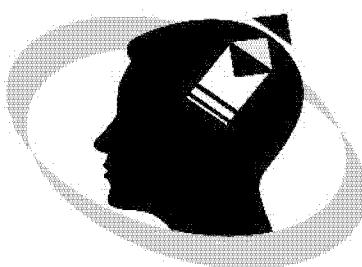


CA - IPCC COURSE MATERIAL

**Quality Education
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**SUBJECT CODE: 3B, MATERIAL NO: 52
COSTING (THEORY) _ 36e**

(NEW EDITION THOROUGHLY REVISED & UPDATED UPTO MAY 2017. THIS MATERIAL IS
SYNCHRONISED WITH APRIL 2016 EDITION OF ICAI SM & PM)



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1. BASIC CONCEPTS IN COSTING

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

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1.	A	-	2	-	-	4	-	-	-	-	-	4	-	4	-	2	4
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
3.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	A	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4	-
6.	A	-	-	-	-	-	4	-	-	-	-	4	-	-	-	4	-
7.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	B	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
9.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.	A	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
11.	A	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	4
12.	A	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-

Q.No.1. DEFINITIONS / MEANINGS.

a) **COST:**

As a noun- The amount of expenditure (actual or notional) incurred on (or) attributable to a specified article, product or activity.

As a verb- To ascertain the cost of a specified thing or activity.

b) **COSTING:** Costing is defined as “the technique and process of ascertaining costs”.

c) **COST ACCOUNTING:** Cost Accounting is defined as “the process of accounting for cost which begins with the incurrence of cost and ends with the control of cost.

d) **COST ACCOUNTANCY:** 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.”

e) **COST UNIT:**

(M11 - 4M)

- It is a unit of product, service or time in relation to which costs may be ascertained or expressed.
- For example, we determine the cost per tonne of steel, per tonne kilometer of a transport service or cost per machine hour. Sometimes, a single order or a contract constitutes a cost unit. A batch which consists of a group of identical items and maintains its identity through one or more stages of production may also be considered as a cost unit.
- Cost units are usually the units of physical measurement like number, weight, area, volume, length, time and value. A few typical examples of cost units are given below:

Industry or Product	Cost Unit Basis
Automobile	Number
Cement	Tonne / per bag etc.

Chemicals	Litre, gallon, kilogram, tonne etc.
Power, Electricity	Kilo-watt hour
Professional services	Chargeable hour
Education	Enrolled student

f) **COST CENTRES:** It is defined as a location, person or an item of equipment for which cost may be ascertained and used for the purpose of Cost Control. Cost Centers are of two types - Personal and Impersonal. (M15 - 4M, M16 - 2M)

A personal cost center consists of a person or group of persons and an Impersonal cost center consists of a location or an item of equipment.

In a manufacturing concern there are two main types of Cost Centers as indicated below:

- i) **Production Cost Center:** It is a cost centre where raw material is handled for conversion into finished product. Here both direct and indirect expenses are incurred. Machine shops, welding shops and assembly shops are examples of Production Cost Centers.
- ii) **Service Cost Center:** It is a cost centre which serves as an ancillary unit to a production cost centre. Power house, gas production shop, material service centers, plant maintenance centers are examples of service cost centers.

g) **COST OBJECTS:** It is anything for which a separate measurement of cost is desired. Examples of cost objects include a product, a service, a project, a customer, a brand category, an activity, a department, or a programme etc.

Cost Object	Example
Product	Two Wheeler
Services	An airline flight from Delhi to Mumbai
Project	Metro Railway Line constructed for Delhi Government

h) **PROFIT CENTRE:**

- Profit centers are part of a business which is accountable for both revenue and cost .
- Profit centers are responsible for generating and maximizing profits.
- Performance of Profit center is measured with the volume of profits it earns.

i) **INVESTMENT CENTRE:** It is a centre where managers are responsible for some capital investment decisions. Return on investment (ROI) is usually used to evaluate the performance of them. (M06 - 2M)

j) **EXPLICIT COSTS:** This is also known as out of pocket costs, refer to costs involving immediate payment of cash. Salaries, wages, interest on loan etc. are examples of explicit costs. They can be easily measured. (M05 - 3M, M07 - 2M)

The main points of difference between explicit and implicit costs are:

- Implicit costs do not involve immediate cash payment.
- They are not recorded in the books of account.
- They are also known as economic costs.

k) **DISCRETIONARY COSTS:** Discretionary costs are not tied to a clear cause and effect relationship between inputs and outputs. They arise from periodic decisions regarding the maximum outlay to be incurred. Examples are – advertising, public relations, training etc.

l) **TRAINING COSTS:** Costs which are incurred in and in relation to providing training to the workers, apprentices, executives etc. Training cost consists of wages and salaries paid to new trainees, fees paid to trainers, cost of materials and properties used to train the trainees, costs associated with training centre, loss suffered due to lower production and extra spoilage etc. The total cost of training section is thereafter apportioned to production centers.

m) **PERIOD COST:** Period 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.

n) **PRODUCT COST:** 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 incompletely completed 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.

Q.No.2. CLASSIFICATION OF COSTS

ON THE BASIS OF ELEMENTS

a) **Direct Materials:** Materials which are present in the finished product (cost object) or can be economically identified in the product are called direct materials.
For example, cloth in dress making; materials purchased for a specific job etc.

b) **Direct Labour:** Labour which can be economically identified or attributed wholly to a cost object is called direct labour.
For example, labour engaged on the actual production of the product or in carrying out the necessary operations for converting the raw materials into finished product.

c) **Direct Expenses:** It includes 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.
For example, hire charges for some special machinery, cost of defective work.

d) **Indirect Materials:** Materials which do not normally form part of the finished product (cost object) are known as indirect materials. These are —

- Stores used for maintaining machines and buildings (lubricants, cotton waste, bricks etc.)
- Stores used by service departments like power house, boiler house, canteen etc.

e) **Indirect Labour :** Labour costs which cannot be allocated but can be apportioned to or absorbed by cost units or cost centres is known as indirect labour.
Examples of indirect labour includes foreman and supervisors; maintenance workers; etc.

f) **Indirect Expenses:** Expenses other than direct expenses are known as indirect expenses, that cannot be directly, conveniently and wholly allocated to cost centres.
Examples of indirect expenses includes Factory rent and rates, insurance of plant and machinery, power, light, heating, repairing, telephone etc.,

ON THE BASIS OF VARIABILITY OR BEHAVIOUR

According to this classification, costs are classified into three groups. They are fixed, variable and semi-variable.

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.
- They do not tend to increase or decrease with the changes in output.
- They change beyond the relevant range. Such cost behavior pattern is described as a step fixed cost.

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.

c) Semi-variable costs: These costs contain both fixed and variable components and are partly affected by fluctuations in the level of activity.**ON THE BASIS OF FUNCTIONS**

a) Production Cost: The cost of the set of operations commencing with supply of materials, labour and services and ends with the primary packing of product. Thus it is equal to the total of Direct Materials, Direct Labour, Direct Expenses and Production Overheads.

b) Administration Cost: The cost of planning, organizing, controlling and general management expenses of the organisation, which is not directly related to production, selling & distribution.

E.g.: Office rent, Audit & Legal expenses, Director's Remuneration etc.

c) Selling Cost: The cost of creating the demand and of securing sales orders. These are also called marketing costs.

E.g.: Advertisement, Salesmen remuneration, Show-room expenses.

d) Distribution Cost: The cost incurred in making the product available to reach the customer's destination and getting back any returned empty packages.

E.g.: Carriage outwards, maintenance of delivery vans

e) Conversion cost: The sum of direct wages, direct expenses and overhead cost of converting raw materials to the finished stage.

f) Research & Development Cost: The cost of researching for new or improved products, new applications of materials or improved methods. The cost of the process which begins with the implementation of the decision to produce a new or improved product, and ends with commencement of formal production of that product or by that method.

g) Pre - production Cost: These costs forms the part of development cost, incurred in making a trial production run, preliminary to formal production. These costs are incurred when a new factory is in the process of establishment or a new project is undertaken or a new product line or product is taken up, but there is no established or formal production to which such costs may be charged. These costs are normally treated as deferred revenue expenditure (except the portion which has been capitalized) and charged to the costs of future production.

ON THE BASIS OF CONTROLLABILITY (N06 - 2M, M08 - 2M)

a) Controllable costs: Cost that can be controlled, typically by a cost, profit, or investment center manager is called Controllable cost. Controllable cost that can be incurred in a particular responsibility center can be influenced by the action of executive heading that responsibility center. For example, direct costs comprising direct material, direct labour, direct expenses and some of the overheads are generally controllable by the Top level management.

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

The distinction between controllable and uncontrollable costs is not very sharp and is sometimes left to individual judgment. In fact no cost is uncontrollable; it is only in relation to a particular individual that we may specify a particular cost to be either controllable or uncontrollable.

ON THE BASIS OF COSTS FOR 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 fixing and for cost control through variance analysis.
- c) **Marginal Cost** : The amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit.
- d) **Estimated Cost**: "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 Cost**: These costs are notional costs which do not involve any cash outlay. Interest on capital, the payment for which is not actually made, is an example of imputed cost. These costs are similar to opportunity costs. (N09 - 2M)
- g) **Sunk cost**: Historical costs or the costs incurred in the past are known as sunk cost. They play no role in the current decision making process and are termed as irrelevant costs. (M05 - 3M)
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.
- h) **Capitalised cost**: These are costs which are initially recorded as assets and subsequently treated as expenses. (N09 - 2M)
- i) **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.
- j) **Shut down Costs**: Those costs, which continue to be, incurred even when a plant is temporarily shut down e.g. rent, rates, depreciation, etc. These costs cannot be eliminated with the closure of the plant. In other words, all fixed costs, which cannot be avoided during the temporary closure of a plant, will be known as shut down costs.
- i) **Opportunity cost**: It refers to the value of sacrifice made or benefit of opportunity foregone in accepting an alternative course of action. For example, a firm financing its expansion plans by withdrawing money from its bank deposits. In such a case the loss of interest on the bank deposit is the opportunity cost for carrying out the expansion plan. (N16 -2M)

Q.No.3. METHODS OF COSTING

Different industries follow different methods of costing because of the differences in the nature of their work. The various methods of costing are as follows:

- a) **Job Costing**:
 - i) In this case the cost of each job is ascertained separately.
 - ii) It is suitable in all cases where work is undertaken on receiving a customer's order like a printing press, motor workshop, etc.
 - iii) In case a factory produces certain quantity of a part at a time, say 5,000 rims of bicycle, the cost can be ascertained like that of a job. The name then given is Batch Costing.
- b) **Batch Costing**:
 - i) It is the extension of job costing.
 - ii) A batch may represent a number of small orders passed through the factory in batch.

- iii) Each batch here is treated as a unit of cost and thus separately costed.
- iv) Here cost per unit is determined by dividing the cost of the batch by the number of units produced in the batch.
- c) **Contract Costing:** It is similar to Job costing but in this case Job is larger than Job Costing. It is suitable for firms engaged in the construction of bridges, roads, buildings etc.
- d) **Single or Output Costing:** Here the cost of a product is ascertained, the product being the only one produced like bricks, coals, etc.
- e) **Process Costing:** The cost of production at each stage is ascertained separately. Eg. Oil Refining Industries, cement, steel etc.
- f) **Operating Costing:** Ascertainment of cost in cases where services are rendered like transport, supply of water, retail trade etc.
- g) **Multiple Costing:** It is a combination of two or more methods of costing, used where the nature of the product is complex and method cannot be ascertained .Eg.Bicycles, radio, refrigerators etc.

Q.No.4. TECHNIQUES OF COSTING.

- a) **Uniform Costing:** 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.
- b) **Marginal Costing:** It is defined as the ascertainment of marginal cost by differentiating between fixed and variable costs. It is used to ascertain effect of changes in volume or type of output on profit.
- c) **Standard Costing :**
 - i) It is the name given to the technique whereby standard costs are pre-determined and subsequently compared with the recorded actual costs.
 - ii) It is thus a technique of cost ascertainment and cost control.
- d) **Historical Costing:** It is the ascertainment of costs after they have been incurred. This type of costing has limited utility. Different types of it are:
 - i) **Post Costing:** It means ascertainment of cost after production is completed.
 - ii) **Continuous costing:** Cost is ascertained as soon as the job is completed or even when the job is in progress.
- e) **Direct Costing:** It is the practice of charging all direct costs to operations, processes or products leaving all indirect costs to be written off against profits in which they arise.
- f) **Budgetary Control :** It is a system which involves –
 - i) Establishment of budgeted performance for each activity of the business for the budget period.
 - ii) Comparison of actual performance with the budgeted performance to ascertain variances
 - iii) Analysis of variances to ascertain the reasons for the variance.
 - iv) Taking corrective action.
- g) **Absorption Costing:** It is the practice of charging all costs, both variable and fixed to operations, processes or products. This differs from marginal costing where fixed costs are excluded.

Q.No.5. WHAT ARE THE OBJECTIVES OF COST ACCOUNTING?

(M08 - 2M, M10 - 2M, M16 - 4M) (PM)

1. **Ascertainment of Cost:** There are two methods of ascertaining costs:
 - a) **Post Costing:** It means analysis of actual information as recorded in financial books. It is accurate and is useful in the case of "Cost plus Contracts" where price is to be determined finally on the basis of actual cost.
 - b) **Continuous Costing:** It aims at collecting information about cost as and when the activity takes place so that as soon as a job is completed the cost of completion would be known. This involves careful estimates being prepared of overheads.
2. **Determination of Selling Price:**
 - a) Business enterprises run on a profit making basis. It is thus necessary that the revenue should be greater than the costs incurred.
 - b) Cost accounting provides the information regarding the cost to make and sell the product or services produced.
3. **Cost Control:** To exercise cost control, the following steps should be observed:
 - a) **Determine clearly the desired results:** The target cost and /or targets of performance should be laid down for each department or operation and these targets are related to individuals who, by their action, control the actual and bring them into line with the targets.
 - b) **Measure the actual performance:** Actual cost of performance should be measured in the same manner in which the targets are set up.
 - c) Investigate into the causes of failure to perform according to plan; and
 - d) Institute corrective action.
4. **Cost Reduction:** It may be defined as "the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without diminution in the quality of the product."

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

 - a) There is a saving in unit cost.
 - b) Such saving is of permanent nature.
 - c) The utility and quality of the goods and services remain unaffected, if not improved.
5. **Ascertaining the profit of each activity:**
 - a) The profit of any activity can be ascertained by matching cost with the revenue of that activity.
 - b) The purpose is to determine costing profit or loss of any activity on an objective basis.
6. **Assisting management in decision making:** For making a choice between different courses of action, it is necessary to make a comparison of the outcomes, which may be arrived under different alternatives. Such comparison has only been made possible with the help of cost accounting information.

Q.No.6. COST CONTROL Vs. COST REDUCTION.

(N11 - 4M, M14 - 4M M16 -4M) (PM))

No.	Particulars	Cost Control	Cost Reduction
1.	Aim	Cost control aims at <u>maintaining the costs in accordance with the established standards.</u>	Cost reduction is <u>concerned with reducing costs.</u> It challenges all standards and endeavours to better them continuously.

2.	permanence	Cost control seeks to attain lowest possible cost under existing conditions.	Cost reduction recognizes no condition as permanent, since a change will result in lower cost.
3.	Emphasis	In case of Cost Control, <u>emphasis is on past and present.</u>	In case of cost reduction <u>it is on present and future.</u>
4.	Function	Cost Control is a <u>preventive function.</u>	Cost reduction is a <u>corrective function.</u> It operates even when an efficient cost control system exists.
5.	Targets	Cost control <u>ends when targets are achieved.</u>	Cost reduction has <u>no visible end.</u>

Q.No.7. WHAT ARE THE ADVANTAGES OF COST ACCOUNTING?

(SM)

ADVANTAGES OF COST ACCOUNTING SYSTEM:

- Cost Determination:** A good Cost Accounting System helps in identifying all expenses incurred to produce a product and determination of total cost of production.
- Helping in Cost reduction:** The application of cost reduction techniques, operations research techniques and value analysis technique helps in achieving the objective of economy in concern's operations.
- Product Profitability Analysis:** Cost Accounting is useful for identifying the exact causes for decrease or increase in the profit/loss of the business.
- Provide Information relevant for Decision making:** It provides information and data to the management to serve as guides in making decisions involving financial considerations.
- Determination of Selling Prices:** Cost Accounting is quite useful for price fixation. The price determined may be useful for preparing estimates or filling tenders.
- Cost Control and variance Analysis:** The use of Cost accounting technique viz. Variance analysis, points out the deviations from the predetermined level and thus demands suitable action to eliminate such deviations in future.
- Cost comparison and benchmarking:** Cost Comparison helps in Cost Control.
- Compliances with Statutory requirements:** A system of costing provides figures for the use of Government, Wage Tribunals and other bodies for dealing with a variety of problems.
- Identification of Lacunae:** The cost of idle capacity can be easily worked out, when a concern is not working to full capacity.

Q.No.8. WHAT ARE THE DISADVANTAGES OF COST ACCOUNTING? (OR) LIMITATIONS OF COST ACCOUNTING?

(SM)

THE LIMITATIONS OR DISADVANTAGES OF COST ACCOUNTING ARE AS FOLLOWS:

- Expensive:** It is expensive because analysis, allocation and absorption of overheads require 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 Work:** It involves duplication of work as organization has to maintain two sets of accounts i.e. Financial Account and Cost Account.
- Inefficiency:** Costing system itself does not control costs but its usage does.

Q.No.9. ENUMERATE THE FACTORS WHICH ARE TO BE CONSIDERED BEFORE INSTALLING A SYSTEM OF COST ACCOUNTING IN A MANUFACTURING ORGANISATION.

(N10 - 4M) (PM)

BEFORE SETTING UP A SYSTEM OF COST ACCOUNTING THE UNDER MENTIONED FACTORS SHOULD BE STUDIED:

- a) **Objective:** The objective of costing system, for example whether it is being introduced for fixing prices or for insisting a system of cost control.
- b) **Nature of Business or Industry:** The Industry in which business is operating. Every business industry has its own peculiar feature and costing objectives. According to its cost information requirement cost accounting methods are followed. For example Indian Oil Corporation Ltd. has to maintain process wise cost accounts to find out cost incurred on a particular process say in crude refinement process etc.
- c) **Organisational Hierarchy:** Costing system should fulfil the requirement of different level of management. Top management is concerned with the corporate strategy, strategic level management is concerned with marketing strategy, product diversification, product pricing etc. Operational level management needs the information on standard quantity to be consumed, report on idle time etc.
- d) **Knowing the product:** Nature of product determines the type of costing system to be implemented. The product which has by-products requires costing system which account for by-products as well. In case of perishable or short shelf life, marginal costing method is required to know the contribution and minimum price at which it can be sold.
- e) **Knowing the production process:** A good costing system can never be established without the complete knowledge of the production process. Cost apportionment can be done on the most appropriate and scientific basis if a cost accountant can identify degree of effort or resources consumed in a particular process.

Q.No.10. DISCUSS ESSENTIAL FEATURES OF A GOOD COST ACCOUNTING SYSTEM (OR) WHAT ARE THE CHARACTERISTICS OF GOOD COST ACCOUNTING SYSTEM. (N12 - 4M) (PM)

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 meticulous and unnecessary details.
- b) **Accuracy:** The data to be used by the Cost Accounting System should be accurate; otherwise it may distort the output of the system and a wrong decision may be taken.
- c) **Support from Management and subordinates:** Necessary cooperation and participation of executives from various departments of the concern is essential for developing a good system of Cost Accounting.
- d) **Cost-Benefit:** The Cost of installing and operating the system should justify the results.
- e) **Procedure:** A carefully phased programme should be prepared by using network analysis for the introduction of the system.
- f) **Trust:** Management should have faith in the Costing System and should also provide a helping hand for its development and success.

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To **MASTER MINDS**, Guntur

Q.No.11. STATE THE METHOD OF COSTING AND THE SUGGESTIVE UNIT OF COST FOR THE FOLLOWING INDUSTRIES . (M13 - 4M, M14 - 2M, N14 - 4M, N15 - 4M, N16 - 4M) (PM) (PM)

No.	Industry	Method of costing	Suggestive unit of cost
a)	Transport	Operating Costing	Passenger k.m. or tonne k.m.
b)	Power	Operating Costing	Kilo-watt (kw) hours
c)	Hotel	Operating Costing	Room day
d)	Hospital	Operating Costing	Patient-day
e)	Steel	Process Costing/ Single Costing	Tonne
f)	Coal	Single Costing	Tonne
g)	Bicycles	Multiple Costing	Number
h)	Bridge Construction	Contract Costing	Project/ Unit
i)	Interior Decoration	Job Costing	Assignment
j)	Advertising	Job Costing	Assignment
k)	Furniture	Job Costing	Number
l)	Brick Works	Single Costing	1000 units/ units
m)	Oil refining mill	Process Costing	Barrel/ Tonne/ Litre
n)	Sugar company having its own sugarcane field	Process Costing	Tonne
o)	Toy Making	Batch Costing	Units
p)	Cement	Single Costing	Tonne/ per bag
q)	Radio assembling	Multiple Costing	Units
r)	Ship Building	Contract Costing	Project/ Unit
s)	Automobile	Process costing	Number
t)	Education	Operating costing	Per student hour
u)	ice cream	Process costing	Per case/per cup
v)	dry cleaning	Job costing	Per cloth/Garment
w)	Pharmaceuticals	Batch Costing	1,000 nos, tablets, strips, capsules
x)	Carpet	Process Costing	Per square feet
y)	Aircraft	Job Costing	Number
z)	Beer	Process Costing	Per bottle

Q.No.12. STATE THE TYPES OF COST IN THE FOLLOWING CASES: (M12 - 4M) (PM)

a)	Interest paid on own capital not involving any cash outflow	Imputed Cost
b)	Withdrawing money from bank deposit for the purpose of purchasing new machine for expansion purpose	Opportunity Cost
c)	Rent paid for the factory building which is temporarily closed	Shut Down Cost
d)	Cost associated with the acquisition and conversion of material into finished product	Product Cost

THE END

2. MATERIALS

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	A	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
5.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-
6.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	A	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-
9.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.	A	3	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-

Q.No.1. DEFINITIONS / MEANINGS

1) MATERIAL REQUISITION NOTE:

Meaning:

- a) It is also known as material requisition slip; It is the voucher of the authority regarding issue of materials for use in the factory or in any of its departments.
- b) Generally it is prepared by the production department and materials are withdrawn on the basis of material requisition list or bill of materials.

Origination:

- a) Where a 'Materials List' has been prepared, either the whole of the materials would be withdrawn on its basis or separate materials requisitions would be prepared by the department and the material drawn up to the limit specified in the list.
- b) Where a 'Materials List' has not been prepared, MRN should be ideally be prepared by the planning department. If there is no planning department, it may be prepared by the concerned production department. In all cases, it should be duly approved by a responsible official.

2) PURCHASE REQUISITION NOTE:

Meaning:

- a) A purchase requisition is a form used for making a formal request to the purchasing department to purchase materials.

b) This form is usually filled up by the store keeper for regular materials and by the departmental head for special materials (not stocked as regular items).

The following conditions should have been fulfilled in order to initiate the purchase procedure:

- a) The item of material should be included in the standard list of the purchase department as "Regular Item". If a new item is required, suitable sanction and approval shall be obtained.
- b) The stock of the item should have reached the Re - order Level. This is the level at which action can be taken to initiate the purchase procedure.
- c) There should be proper co - ordination between Purchase, Stores and Production Departments.

3) **Goods Received Note:** This is a confirmation note prepared by the department who receives the goods or entitled to receive the goods (usually stores department), stating the quantity and description of goods received by it.

4) **Material Received Note:** This is a note prepared by the department who receives the goods or entitled to receive the goods (usually stores department), stating the quantity and description of goods which are returned by it.

5) **Bin card:** 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.

Advantages of Bin Cards:

- a) Chance of mistakes is less as entries will be made at the same time as goods are received or issued by the person actually handling the materials.
- b) Control over stock can be more effective, since comparison of the actual quantity with book balance is possible.

6) **Stock Control Card:** It is a record keeping document maintained by stores department for every item of material. Recording includes receipt, issue, return, in hand and order given.

Advantages of Stock Control Cards:

- a) Records are kept in a more compact manner so that reference to them is facilitated.
- b) Records can be kept in a neat and clean way by men solely engaged in clerical work so that a division of labour between record keeping and actual material handling is possible.

Disadvantages of Stock Control Cards:

- a) On the spot comparison of the physical stock of an item with its book balance is not facilitated.
- b) Physical identification of materials in stock may not be as easy as in the case of bin cards, as the Stock Control Cards are housed in cabinets or trays.

7) **Stores Ledger:** Stores Ledger is a collection of cards or loose leaves specially ruled for maintaining a record of both quantity and cost of stores received, issued and those in stock. It being a subsidiary ledger to the main cost ledger, it is maintained by the Cost Accounting Department.

Advantages of Stores Ledger:

- a) It enables distribution of work among a number of clerks due to which receipts and issues are posted quickly and regularly.
- b) It enables stock records to be centralised in case of an organisation having a number of depots.

8) **Economic Order Quantity:**

Meaning: The size of the order for which both ordering and carrying cost are at minimum is known as economic order quantity or E.O.Q. It is used in an optimizing stock control system

It is calculated by using a following formula:

$$EOQ = \sqrt{\frac{2AQ}{C}}, \quad \text{Where, } A = \text{Annual usage units}$$

O = Ordering cost per order

C = Annual carrying cost of one unit,
i.e., carrying cost percentage \times cost of one unit.

Assumptions underlying E.O.Q.: The calculation of economic order of material to be purchased is subject to the following assumptions:

- a) Ordering cost per order and carrying cost per unit per annum are known and they are fixed.
- b) Anticipated usage of material in units is known.
- c) Cost per unit of the material is constant and is known as well.
- d) The quantity of material ordered is received immediately i.e. the lead time is zero.
- 9) **Re-order quantity:** It refers to the quantity of stock for which an order is to be placed at any one point of time. It should be such that it minimises the combined annual costs of placing an order and holding stock. Such an ordering quantity in other words is known as economic order quantity (EOQ).

$$EOQ = \sqrt{\frac{2AO}{Ci}}, \quad A = \text{Annual raw material usage quantity}$$

O = Ordering cost per order

C = Cost per unit

i = Carrying cost percentage per unit per annum

- 10) **Re-order level:** It is the level at which fresh order should be placed for the replenishment of stock.

$$= \text{Maximum re-order period} \times \text{Maximum usage} \quad (\text{OR})$$

$$= \text{Minimum level} + [\text{Average Consumption} \times \text{average time to obtain fresh supplies}]$$

- 11) **Maximum stock level:** It indicates the maximum figure of stock held at any time.

$$= \text{Re-order level} + \text{Re-order quantity} - [\text{Minimum consumption} \times \text{Minimum Re-order Period}]$$

- 12) **Minimum stock level:** It indicates the lowest figure of stock balance, which must be maintained in hand at all times, so that there is no stoppage of production due to non-availability of inventory.

$$= \text{Re-order level} - [\text{Average rate of consumption} \times \text{Average time of stock delivery}]$$

- 13) **Average Inventory Level:** Average inventory level is the average stock held by an organization

$$\text{Average inventory level} = \text{Minimum level} + \frac{1}{2} \text{Re-order quantity} \quad (\text{or})$$

$$= \frac{\text{Maximum level} + \text{Minimum level}}{2}$$

- 14) **Danger level:** It is the level at which normal issues of the raw material inventory are stopped and emergency issues are only made.

$$\text{Danger level} = \text{Average consumption} \times \text{Lead time for emergency purchases}$$

- 15) **Safety Stock*:** Stock of materials that are carried in excess of the expected lead time consumption of materials. It is kept as cushion against the unexpected demand for the material.

$$\frac{\text{Annual Demand}}{365} \times (\text{Maximum lead time} - \text{Average lead time})$$

* Safety stock and Buffer stock are some time used interchangeably

16) Two Bin System:

- Under this system each bin is divided into two parts-one, the smaller one, to stock the quantity equal to the minimum stock and the other to keep the remaining quantity.
- Issues are made out of the larger portion. Immediately after completion of the stock in larger portion a fresh order is placed.
- “Two Bin System” is supplement to the record of respective quantities on the bin card and the stores ledger card.

17) Establishment of Systems of Budgets :

- By studying the production schedules, the inventories requirement budget can be prepared
- Based on such budget the materials are purchased as and when required periodically instead of purchasing at a time.

18) Control Ratios :

- Input Output ratio:**
 - Input-output ratio is the ratio of the quantity of input of material to production.
 - This type of ratio analysis enables comparison of actual consumption and standard consumption, thus indicating whether the usage of material is favorable or adverse.
- Inventory turnover ratio:** Computation of inventory turnover ratios for different items of material and comparison of the turnover rates provides a useful guidance for measuring inventory performance. 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.

$$\text{Inventory turnover ratio} = \frac{\text{Cost of materials consumed during the period}}{\text{Cost of average stock held during the period}}$$

$$\text{Average stock} = \frac{1}{2} (\text{opening stock} + \text{closing stock})$$

Q.No.2. WHAT ARE THE OBJECTIVES OF SYSTEM OF MATERIAL CONTROL?

(SM)

THE OBJECTIVES OF A SYSTEM OF MATERIAL CONTROL ARE THE FOLLOWING:

- Minimising interruption in production process:** Ensuring that no activity, particularly production, suffers from interruption for want of materials and stores. It should be noted that this requires constant availability of every item that may be needed howsoever small its cost may be.
- Cost of Material:** Seeing to it that all the materials and stores are acquired at the lowest possible price considering the quality that is required and considering other relevant factors like reliability in respect of delivery, etc. Holding cost should also be tried to be minimized.
- Reduction in Wastages:** Avoidance of unnecessary losses and wastages that may arise from deterioration in quality due to defective or long storage or from obsolescence. It may be noted that losses and wastages in the process of manufacture, concern the production department.
- Adequate Information:** Maintenance of proper records to ensure that reliable information is available for all items of materials and stores that not only helps in detecting losses and pilferages but also facilitates proper production planning.

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

Q.No.3. WHAT ARE THE ELEMENTS OF MATERIAL CONTROL.

(SM)

Material control is a systematic control over the procurement, storage and usage of material so as to maintain an even flow of material.

Material control involves efficient functioning of the following operations:

a) Purchasing of materials	e) Issuing of materials
b) Receiving of materials	f) Maintenance of inventory records
c) Inspection of materials	g) Stock audit
d) Storage of materials	

Q.No.4. DISTINGUISH BETWEEN BILL OF MATERIALS AND MATERIAL REQUISITION NOTE.

(M12 - 4M) (PM)

Bills of Material	Material Requisition Note
1) It is <u>document or list of materials</u> prepared by the engineering/ drawing department.	1) It is prepared by the foreman of the consuming department.
2) It is a complete schedule of component parts and raw materials required for a particular job or work order.	2) It is a document authorizing Store- Keeper to issue material to the consuming department.
3) It often serves the purpose of a Stores Requisition as it shows the complete schedule of materials required for a particular job i.e. it can replace stores requisition.	3) It <u>cannot replace</u> a bill of material.
4) It can be used for the <u>purpose of quotation</u> .	4) It is useful in arriving <u>historical cost only</u> .
5) It helps in <u>keeping a quantitative control</u> on materials drawn through Stores Requisition.	5) It shows the material actually <u>drawn from stores</u> .

Q.No.5. GIVE THE TREATMENT OF CERTAIN ITEMS ASSOCIATED WITH PURCHASE OF MATERIALS.

(M16 -4M)

TREATMENT OF FOLLOWING ITEMS ASSOCIATED WITH PURCHASE OF MATERIALS:

No.	Items	Treatment
Discounts and Subsidy		
a)	Trade Discount	Trade discount is deducted from the purchase price if it is not shown as deduction in the invoice.
b)	Quantity Discount	Like trade discount quantity discount is also shown as deduction from the invoice. It is deducted from the purchase price if not shown as deduction.
c)	Cash Discount	Cash discount is not deducted from the purchase price.
d)	Subsidy/ Grant/ Incentives	Any subsidy/ grant/ incentive received from the Government or from other sources deducted from the cost of purchase.

Duties and Taxes		
e)	Road Tax/ Toll Tax	Road tax/ Toll tax if paid by the buyer then it is included with the cost of purchase.
f)	Octroi/ Entry Tax	Octroi/ Entry tax is collected by the Panchayats/ Municipalities. It is added with cost of purchase if it is born by the buyer.
g)	Central Sales Tax (CST)	Central Sales Tax (CST) is paid on inter-state sale and collected from the buyers. The buyer is not getting any credit for tax paid hence it is added with cost of purchase.
h)	State Sales tax or Value Added Tax (VAT)	State Sales Tax/ VAT is paid on intra-state sale and collected from the buyers. 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.
i)	Excise Duty	Excise duty is paid on manufacture of goods and collected from the buyer. It is excluded from the cost of purchase if credit (CENVAT) is available for the same. Unless mentioned specifically excise duty is not added with the cost of purchase.
j)	Custom Duty	Custom duty is paid on import of goods from outside India. It is added with the purchase cost.
k)	Purchase Tax	It is a tax paid on purchase of goods from unregistered supplier. Credit on purchase tax is available hence unless specifically mentioned it is not added with the cost of purchase.
Penalty and Charges		
l)	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
m)	Detention charges/ Fine	Detention charges/ Fine is imposed for non compliance of rule or law by any statutory authority. It is an abnormal cost and not included with cost of purchase
n)	Penalty	Penalty of any type is not included with the cost of Purchase
Other expenditures		
o)	Insurance charges	Insurance charges are paid for protecting goods during transit. It is added with the cost of purchase.
p)	Commission or brokerage paid.	Commission or brokerage paid is added with the cost of purchase.
q)	Freight inwards	It is added with the cost of purchase as it is directly attributable to procurement of material.
r)	Cost of containers	<p>Treatment of cost of containers are as follows:</p> <p>i) Non-returnable containers: The cost of containers is added with the cost of purchase of materials.</p> <p>ii) Returnable Containers: If on return of containers cost of containers is returned back then in this case cost of containers is not added with the cost of purchase.</p> <p>If the amount of refund on returning the container is less than the amount paid then only short fall is added with the cost of purchase.</p>
s)	Shortage	<p>Shortage in materials are treated as follows:</p> <p>i) Shortage due to normal reasons: Good units absorb the cost of shortage due to normal reasons. Losses due to breaking of bulk, evaporation, due to unavoidable conditions etc. are the reasons of normal loss.</p>

		ii) Shortage due to abnormal reasons: shortage arises due to abnormal reasons such as material mishandling, pilferage, due to avoidable reasons are not absorbed by the good units. Losses due to abnormal reasons are debited to costing profit and loss account.
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Q.No.6. DIFFERENCE BETWEEN BIN CARD AND STORES LEDGER.

(SM)

Difference between Bin Card & Stores Ledger

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

Q.No.7. WHAT ARE THE TECHNIQUES OF INVENTORY CONTROL?

(SM)

THE TECHNIQUES COMMONLY APPLIED FOR INVENTORY CONTROL ARE AS FOLLOWS:

- i) Setting of various stock levels.
- ii) ABC analysis.
- iii) Two bin system.
- iv) Establishment of system of budgets.
- v) Use of perpetual inventory records and continuous stock verification.
- vi) Determination of economic order quantity.
- vii) Review of slow and non-moving items.
- viii) Use of control ratios.

Q.No.8. EXPLAIN THE CONCEPT OF "ABC ANALYSIS" AS A TECHNIQUE OF INVENTORY CONTROLS.

(PM)

ABC Analysis: It is a system of selective inventory control whereby the measure of control over an item of inventory varies with its usage value. It exercises discriminatory control over different items of stores grouped on the basis of the investment involved. Usually the items of material are grouped into three categories viz; A, B and C according to their use value during a period. In other words, the high use value items are controlled more closely than the items of low use value.

- a) 'A' Category of items consists of only a small percentage i.e., about 10 % of the total items of material handled by the stores but require heavy investment i.e., about 70% of inventory value, because of their high prices and heavy requirement.
- b) 'B' Category of items comprises of about 20% of the total items of material handled by stores. The percentage of investment required is about 20% of the total investment in inventories.
- c) 'C' 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 stores.

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

- Continuity in production:** It ensures that, without there being any danger of interruption of production for want of materials or stores, minimum investment will be made in inventories of stocks of materials or stocks to be carried.
- Lower cost:** The cost of placing orders, receiving goods and maintaining stocks is minimized specially if the system is coupled with the determination of proper economic order quantities.
- Less attention required:** Management time is saved since attention need be paid only to some of the items rather than all the items as would be the case if the ABC system was not in operation.
- Systematic working:** With the introduction of the ABC system, much of the work connected with purchases can be systematized on a routine basis to be handled by subordinate staff.

Q.No.9. WRITE SHORT NOTE ON PERPETUAL INVENTORY CONTROL. (OR)
WHAT ARE THE FACTORS ON WHICH SUCCESS OF PERPETUAL INVENTORY SYSTEM DEPENDS ? (OR)
WHAT ARE THE ADVANTAGES OF PERPETUAL INVENTORY SYSTEM. (PM)

Perpetual Inventory: It represents a system of records maintained by the stores in department. It in fact comprises of:

- Bin Cards, and
- Stores Ledger

Bin Card maintains a quantitative record of receipts, issues and closing balances of each item of stores. Separate bin cards are maintained for each item. Each card is filled up with the physical movement of goods i.e. on its receipt and issue.

Like bin cards, the Stores Ledger is maintained to record all receipt and issue transactions in respect of materials. It is filled up with the help of goods received note and material requisitions.

A Perpetual inventory is usually checked by a programme of continuous stock taking. Continuous stock taking means the physical checking of those records (which are maintained under perpetual inventory) with actual stock. Perpetual inventory is essentially necessary for material control. It incidentally helps continuous stock taking.

THE SUCCESS OF PERPETUAL INVENTORY DEPENDS UPON THE FOLLOWING:

- The Stores Ledger-(showing quantities and amount of each item).
- Stock Control Cards (or Bin Cards).
- Reconciling the quantity balances shown by (a) & (b) above.
- Checking the physical balances of a number of items every day systematically and by rotation.
- Explaining promptly the causes of discrepancies, if any, between physical balances and book figures.
- Making corrective entries were called for after step (e) and
- Removing the causes of the discrepancies referred to step (e).

THE MAIN ADVANTAGES OF PERPETUAL INVENTORY ARE AS FOLLOWS:

- Physical stocks can be counted and book balances adjusted as and when desired without waiting for the entire stock-taking to be done.
- Quick compilation of Profit and Loss Accounts (for interim period) due to prompt availability of stock figures.
- Discrepancies are easily located and thus corrective action can be promptly taken to avoid their recurrence.
- A systematic review of the perpetual inventory reveals the existence of surplus, dormant, obsolete and slow-moving materials, so that remedial measures may be taken in time.

e) Fixation of the various levels and check of actual balances in hand with these levels assist the Storekeeper in maintaining stocks within limits and in initiating purchase requisitions for correct quantity at the proper time.

Q.No.10. HOW IS SLOW MOVING AND NON-MOVING ITEM OF STORES DETECTED AND WHAT STEPS ARE NECESSARY TO REDUCE SUCH STOCKS ? (PM)

DETECTION OF SLOW MOVING AND NON-MOVING ITEM OF STORES:

The existence of slow moving and non-moving item of stores can be detected in the following ways.

- By preparing and perusing periodic reports showing the status of different items or stores.
- By calculating the inventory turnover period of various items in terms of number of days/ months of consumption.
- By computing inventory turnover ratio periodically, relating to the issues as a percentage of average stock held.
- By implementing the use of a well designed information system.

NECESSARY STEPS TO REDUCE STOCK OF SLOW MOVING AND NON-MOVING ITEM OF STORES:

- Proper procedure and guidelines should be laid down for the disposal of non-moving items, before they further deteriorates in value.
- Diversify production to use up such materials.
- Use these materials as substitute, in place of other materials.

Q.No.11. HOW NORMAL AND ABNORMAL LOSS OF MATERIAL ARISING DURING STORAGE TREATED IN COST ACCOUNTS? (PM)

TREATMENT OF NORMAL AND ABNORMAL LOSS OF MATERIAL ARISING DURING STORAGE IN COST ACCOUNTS.

The difference between the book balance and actual physical stock, which may either be gain or loss, should be transferred to Inventory Adjustment Account pending scrutiny to ascertain the reason for the difference.

If on scrutiny, the difference arrived at is considered as normal, then such a difference should be transferred to overhead control account and if abnormal, it should be debited to costing profit and loss account.

In the case of normal losses, an alternative method may be used. Under this method the price of the material issued to production may be inflated so as to cover the normal loss.

Q.No.12. DISCUSS THE ACCOUNTING TREATMENT OF DEFECTIVES IN COST ACCOUNTS. (N08 - 2M)(PM)

ACCOUNTING TREATMENT OF DEFECTIVES IN COST ACCOUNTS:

Defectives refer to those units or portions of production, which do not meet the prescribed specifications. Such units can be reworked or re-conditioned by the use of additional material, labour and /or processing and brought to the point of either standard or sub-standard units.

The possible way of treating defectives in Cost Accounts are as below:

- When defectives are normal and it is not beneficial to identify them job-wise, then the following methods may be used.

- a) **Charged to good products:** The cost of rectification of normal defectives is charged to good units. This method is used when defectives rectified are normal.
- b) **Charged to general overheads:** If the department responsible for defectives cannot be identified, the rework costs are charged to general overheads.
- c) **Charged to departmental overheads:** If the department responsible for defectives can be correctly identified, the rectification costs should be charged to that department.

2) When normal defectives are easily identifiable with specific job the rework costs are debited to the identified job.

3) When defectives are abnormal and are due to causes within the control of the organization, the rework cost should be charged to the Costing Profit and Loss Account.

Q.No.13. WHAT IS MATERIAL HANDLING COST? HOW WILL YOU DEAL IT IN COST ACCOUNT? (PM)

Material handling cost: It refers to the expenses involved in receiving, storing, issuing and handling materials. To deal with this cost in cost accounts there are two prevalent approaches as under:

First approach suggests the inclusion of these costs as part of the cost of materials by establishing a separate material handling rate e.g., at the rate of percentage of the cost of material issued or by using a separate material handling rate which may be established on the basis of weight of materials issued.

Under another approach these costs may be included along with those of manufacturing overhead and be charged over the products on the basis of direct labour or machine hours.

Q.No.14. DISCUSS THE ACCOUNTING TREATMENT OF SPOILAGE AND DEFECTIVES IN COST ACCOUNTING. (PM)

Accounting treatment of spoilage and defectives in Cost Accounting: Normal spoilage cost (which is inherent in the operation) are included in cost either by charging the loss due to spoilage to the production order or charging it to production overhead so that it is spread over all products. Any value realized from the sale of spoilage is credited to production order or production overhead account, as the case may be.

The cost of abnormal spoilage (i.e. spoilage arising out of causes not inherent in manufacturing process) is charged to the Costing Profit and Loss Account. When spoiled work is due to rigid specifications, the cost of spoiled work is absorbed by good production, while the cost of disposal is charged to production overheads.

The problem of accounting for defective work is the problem of accounting of the costs of rectification or rework. The possible ways of treatment are as below:

- a) Defectives that are considered inherent in the process and are identified as normal can be recovered by using the following methods:
 - i) Charged to good products
 - ii) Charged to general overheads
 - iii) Charged to department overheads
 - iv) Charged to identifiable job.
- b) If defectives are abnormal and are due to causes beyond the control of organisation, the rework, cost should be charged to Costing Profit and Loss Account.

THE END

3. LABOUR**TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC**

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.	A	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-
11.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.	A	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
13.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Q.No.1. DEFINITIONS / MEANINGS

(SM, PM)

- 1) **Labour Cost** : The cost of wages and other benefits paid by employer to workers on the basis of time or on the basis of quantum of output as a result of physical or mental exertion.
- 2) **Direct Labour Cost**: Labour cost that is expended in production of a product and easily identified and allocated to a cost unit i.e. a specific job, contract, work order or any other unit of cost.
- 3) **Indirect Labour Cost**: Labour cost that is expended on the wages of workmen who are not directly engaged in the production process and can be easily identified with a cost unit.
- 4) **Idle time**: Idle time refers to the labour time paid for but not utilized on production. Idle time thus represents the time for which wages are paid but no output is obtained.
- 5) **Normal idle time**: It is the time which cannot be avoided or reduced in the normal course of business.
- 6) **Abnormal idle time**: It is defined as the idle time which arises on account of abnormal causes; e.g. strikes; lockouts; floods; major breakdown of machinery; fire etc. Such an idle time is uncontrollable.
- 7) **Time Keeping**: It refers to maintenance and recording of attendance of an employee.
- 8) **Time Booking**: It refers to the detailed recording of the actual time spent by an employee on a single job, process or in any other production related activities.
- 9) **Overtime**: Overtime is the amount of wages paid for working beyond normal working hours.

10) **Overtime premium:** 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. 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.

As per the Factories Act 1948 " Where a worker works in a factory for more than nine hours in any day or for more than forty eight hours in any week, he shall, in respect of overtime work, be entitled to wages at the rate of twice his ordinary rate of wages."

11) **Labour Turnover:** It is the rate of change in labour force during a specified period due to resignation, retirement and retrenchment. If the labour turnover is high, it's a sign of instability and may affect the profitability of the firm.

12) **Group Bonus** - Group Bonus refers to the bonus paid for the collective efforts made by a group of workers. The amount of bonus is distributed among the individual members of the group on some agreed basis.

13) **Group Bonus Schemes** - Under a group bonus scheme, bonus is paid to a team/group of employees working together.

Such a scheme is introduced generally where individual efficiency cannot be established for the payment of bonus.

For example, in the construction work, it is the team work of masons and laborers which produces results. If any incentive is to be offered, it should be offered to the team as a whole and not to an individual. Group bonus is based on the combined output of the team as a whole. The quantum of bonus is determined on the basis of the productivity of the team and the bonus is shared by individual workers in specified proportions, often in the proportion of wages on time basis.

Q.No.2. DISTINGUISH BETWEEN DIRECT AND INDIRECT LABOUR

(SM, PM)

Labour cost may be broadly classified as direct labour cost and indirect labour cost.

DISTINCTION BETWEEN DIRECT AND INDIRECT LABOUR COST:

Direct Labour Cost	Indirect Labour Cost
1. It is the cost incurred in payment of labour who are directly engaged in the production process	1. Cost incurred for payment of labour who are not directly engaged in the production process.
2. Direct labour cost can be easily identified and allocated to cost unit.	2. Indirect labour cost is apportioned on some appropriate basis.
3. Direct labour cost varies with the volume of production and has positive relationship with the volume.	3. Indirect labour cost may not vary with the volume of production.

Q.No.3. WHAT ARE THE REQUIREMENTS OF LABOUR COST CONTROL. (OR)

WHAT ARE THE ESSENTIALS OF LABOUR COST CONTROL ? (OR)

WHAT ARE THE IMPORTANT FACTORS FOR CONTROLLING LABOUR COST? (SM)

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

- i) Assessment of manpower requirements.
- ii) Control over time-keeping and time-booking.
- iii) Time & Motion Study.
- iv) Control over idle time and overtime.
- v) Control over labour turnover.
- vi) Wage systems.
- vii) Incentive systems.
- viii) Systems of wage payment and incentives.

- ix) Control over casual, contract and other workers.
- x) Job Evaluation and Merit Rating.
- xi) Labour productivity.

Q.No.4. DISCUSS THE OBJECTIVES OF TIME KEEPING AND TIME BOOKING.

(PM)

OBJECTIVES OF TIME KEEPING: Time keeping has the following two objectives:

- a) **Preparation of Payroll:** Wage bills are prepared by the payroll department on the basis of information provided by the time keeping department.
- b) **Computation of Cost:** Labour cost of different jobs, departments or cost centers are computed by costing department on the basis of information provided by the timekeeping department.

THE OBJECTIVES OF TIME BOOKING ARE AS FOLLOWS:

- a) To ascertain the labour time spent on a job and the idle labour hours.
- b) To ascertain labour cost of various jobs and products.
- c) To calculate the amount of wages and bonus payable under the wage incentive scheme.
- d) To compute and determine overhead rates and absorption of overheads under the labour and machine hour method.
- e) To evaluate the performance of labour by comparing actual time booked with standard or budgeted time.

Q.No.5. ENUMERATE THE VARIOUS METHODS OF TIME BOOKING.

(PM)

The various methods of time booking are:

- a) Job ticket.
- b) Combined time and job ticket.
- c) Daily time sheet.
- d) Piece work card.
- e) Clock card.

Q.No.6. EXPLAIN THE REASONS FOR NORMAL IDLE TIME AND DISCUSS ITS TREATMENT IN COST ACCOUNTING.

(PM)

THE MAIN REASONS FOR THE OCCURRENCE OF NORMAL IDLE TIME ARE AS FOLLOWS:

1. Time taken by workers to travel the distance between the main gate of factory and the place of their work.
2. Time lost between the finish of one job and starting of next job.
3. Time spent to overcome fatigue.
4. Time spent to meet their personal needs like taking lunch, tea etc.

TREATMENT IN COST ACCOUNTING:

Normal idle time: It is inherent in any job situation and thus it cannot be eliminated or reduced.

For example: Time gap between the finishing of one job and the starting of another; time lost due to fatigue etc.

The cost of normal idle time should be charged to the cost of production. This may be done by inflating the labour rate. It may be transferred to factory overheads for absorption, by adopting a factory overhead absorption rate.

Q.No.7. EXPLAIN THE REASONS FOR ABNORMAL IDLE TIME AND DISCUSS ITS TREATMENT IN COST ACCOUNTING (SM, PM)

THE MAIN REASONS FOR THE OCCURRENCE OF ABNORMAL IDLE TIME ARE:

1. Due to machine break downs, power failure, non-availability of raw materials, tools or waiting for jobs due to defective planning.
2. Due to conscious management policy decision to stop work for some time.
3. In the case of seasonal goods producing units, it may not be possible for them to produce evenly throughout the year. Such a factor too results in the generation of abnormal idle time.

Treatment in Cost Accounting:

The cost of abnormal idle time due to any reason (like strikes, lock outs etc) should be charged to Costing Profit & Loss Account.

Q.No.8. DISCUSS THE TREATMENT OF OVERTIME PREMIUM IN COST ACCOUNTING. (M06 - 4M)(SM, PM)

UNDER COST ACCOUNTING, THE OVERTIME PREMIUM IS TREATED AS FOLLOWS:

- a) If overtime is resorted to at the desire of the customer, then the overtime premium may be charged to the job directly.
- b) If overtime is required to cope with general production program or for meeting urgent orders, the overtime premium should be treated as overhead cost of particular department or cost center which works overtime.
- c) Overtime worked on account of abnormal conditions should be charged to costing Profit & Loss Account.
- d) If overtime is worked in a department due to the fault of another department the overtime premium should be charged to the latter department.

Q.No.9. DISCUSS THE EFFECT OF OVERTIME PAYMENT ON PRODUCTIVITY (PM)

Effect of overtime payment on productivity: Overtime work should be resorted to only when it is extremely essential because it involves extra cost. The overtime payment increases the cost of production in the following ways:

- a) The overtime premium paid is an extra payment in addition to the normal rate.
- b) The efficiency of operators during overtime work may fall and thus output may be less than normal output.
- c) In order to earn more the workers may not concentrate on work during normal time and thus the output during normal hours may also fall.
- d) Reduced output and increased premium of overtime will bring about an increase in cost of production.

Q.No.10. EXPLAIN THE METHODS FOR CALCULATING LABOUR TURNOVER. (SM)

Labour turnover can be measured through the following methods:

- a) **Replacement method:** This method takes into consideration actual replacement of labour irrespective of number of persons leaving. New labour appointed on account of expansion not to be included in number of replacements.

$$\frac{\text{No. of Replacements}}{\text{Average no. of workers}}$$

b) **Separation method:** In this method labour turnover is measured by dividing the total number of separations during the period by the average total number of workers on payroll during the same period.

$$\frac{\text{No. of Separations}}{\text{Average no. of workers}}$$

c) **Flux method:** This method takes into account both the number of replacements as well as the number of separations during the period

$$\text{Alternative 1: } \frac{\text{Separations + Replacements}}{\text{Average no. of workers}}$$

$$\text{Alternative 2: } \frac{\text{Separations + Replacements + New recruitments}}{\text{Average no. of workers}}$$

d) **Recruitment Method:** Labour Turnover due to new recruitments (other than replacements)

$$\frac{\text{Recruitments other than replacements}}{\text{Average no. of workers}}$$

e) **Accessions Method:** $\frac{\text{Total Recruitments}}{\text{Average no. of workers}}$

Total recruitments (also called Accessions) = Replacements & Newly appointed workers.

Q.No.11. DISCUSS THE TWO TYPES OF COST ASSOCIATED WITH LABOUR TURNOVER

(PM)

TWO TYPES OF COSTS WHICH ARE ASSOCIATED WITH LABOUR TURNOVER ARE:

a) **Preventive costs:** This includes costs incurred to keep the labour turnover at a low level i.e., cost of medical schemes. If a company incurs high preventive costs, the rate of labour turnover is usually low.

b) **Replacement costs:** These are the costs which arise due to high labour turnover. If men leave soon after they acquire the necessary training and experience of work, additional costs will have to be incurred on new workers, i.e., cost of advertising, recruitment, selection, training and induction, extra cost also incurred due to abnormal breakage of tools and machines, defectives, low output, accidents etc., caused due to the inefficiency and inexperienced new workers.

It is obvious that a company will incur very high replacement costs if the rate of labour turnover is high. Similarly, only adequate preventive costs can keep labour turnover at a low level. Each company must, therefore, workout the optimum level of labour turnover keeping in view its personnel policies and the behavior of replacement costs and preventive costs at various levels of labour turnover rates.

Q.No.12. ENUMERATE THE CAUSES OF LABOUR TURNOVER

(PM)

CAUSES OF LABOUR TURNOVER: THE MAIN CAUSES OF LABOUR TURNOVER IN AN ORGANISATION/INDUSTRY CAN BE BROADLY CLASSIFIED UNDER THE FOLLOWING THREE HEADS:

- a) Personal Causes;
- b) Unavoidable Causes; and
- c) Avoidable Causes.

a) **Personal causes** are those which induce or compel workers to leave their jobs; such causes include the following:

- i) Change of jobs for betterment.
- ii) Premature retirement due to ill health or old age.
- iii) Domestic problems and family responsibilities.
- iv) Discontent over the jobs and working environment.

b) **Unavoidable causes** are those under which it becomes obligatory on the part of management to ask one or more of their employees to leave the organisation; such causes are summed up as listed below:

- i) Seasonal nature of the business;
- ii) Shortage of raw material, power, slack market for the product etc.;
- iii) Change in the plant location;
- iv) Disability, making a worker unfit for work;
- v) Disciplinary measures.

c) **Avoidable causes** are those which require the attention of management on a continuous basis so as to keep the labour turnover ratio as low as possible. The main causes under this case are indicated below:

- i) Dissatisfaction with job, remuneration, hours of work, working conditions, etc.,
- ii) Strained relationship with management, supervisors or fellow workers;
- iii) Lack of training facilities and promotional avenues
- iv) Lack of recreational and medical facilities;
- v) Low wages and allowances.

Q.No.13. ENUMERATE THE REMEDIAL STEPS TO BE TAKEN TO MINIMIZE LABOUR TURNOVER (PM)

THE FOLLOWING STEPS ARE USEFUL FOR MINIMIZING LABOUR TURNOVER:

- a) **Exit interview:** An interview to be arranged with each outgoing employee to ascertain the reasons of his leaving the organization.
- b) **Job analysis and evaluation:** To ascertain the requirement of each job.
- c) Organization should make use of a scientific system of recruitment, placement and promotion for employees.
- d) Organization should create healthy atmosphere, providing education, medical and housing facilities for workers.
- e) Committee for settling workers grievances.

Q.No.14. STATE THE CIRCUMSTANCES IN WHICH TIME RATE SYSTEM OF WAGE PAYMENT CAN BE PREFERRED IN A FACTORY. (PM)

CIRCUMSTANCES IN WHICH TIME RATE SYSTEM OF WAGE PAYMENT CAN BE PREFERRED:

In the following circumstances the time rate system of wage payment is preferred in a factory.

1. Persons whose services cannot be directly or tangibly measured, e.g., general helpers, supervisory and clerical staff etc.

2. Workers engaged on highly skilled jobs or rendering skilled services, e.g., tool making, inspection and testing.
3. Where the pace of output is independent of the operator, e.g., automatic chemical plants.

Q.No.15. DESCRIBE BRIEFLY, HOW WAGES MAY BE CALCULATED UNDER THE FOLLOWING SYSTEMS (PM)

- 1) **Gantt Task and Bonus System:** This system is a combination of time and piecework system. According to this system a high standard or task is set and payment is made at time rate to a worker for production below the set standard.

Wages payable to workers under the plan are calculated as under:

Output	Payment
i) Output below standard	Guaranteed time rate
ii) Output at standard	Time rate plus bonus of 20% (usually) of time rate
iii) Output over standard	High piece rate on worker's output. (It is so fixed so as to include a bonus of 20% of time rate)

- 2) **Emerson's Efficiency System:** Under this system wages may be calculated as below:

Performance	Wages
Below 66 2/3% efficiency	Time rate without any bonus
66 2/3% - 100% efficiency	Bonus varies between 1% to 20%*
Above 100% efficiency	Bonus of 20% of basic wages plus 1% for every 1% increase in efficiency.

*At 100% efficiency the bonus percentage will be 20%.

- 3) **Rowan System:** As per this system standard time allowance is fixed for the performance of a job and bonus is paid if time is saved.

$$\text{Total Wages} = (\text{Time taken} \times \text{Time Rate}) + \left[\frac{\text{Time saved}}{\text{Time allowed}} \times \text{Time taken} \times \text{Time Rate} \right]$$

- 4) **Halsey System:** Under this system a standard time is fixed for each job. If there is no saving on this standard time allowance, the worker is paid only his day rate.

$$\text{Total Wages} = (\text{Time taken} \square \text{Time rate}) + (50\% \text{ of time saved} \square \text{time rate})$$

- 5) **Barth System:**

$$\text{Earnings} = \text{Hourly rate} \times \sqrt{\text{Standard hours} \times \text{Hours worked}}$$

This is particularly suitable for trainees and beginners and also for unskilled workers.

- 6) **BEDAUX POINTS SYSTEM:**

$$\text{Earnings} = \text{Hours worked} \times \text{Rate per hour} + \left[\frac{75}{100} \times \frac{\text{Bedaux points saved}}{60} \times \text{Rate per hour} \right]$$

OR

$$\text{Earnings} = \text{Hours worked} \times \text{Rate per hour} + [75\% \text{ of Bedaux Points saved} \times \text{Rate per minute}]$$

Q.No.16. DESCRIBE BRIEFLY HOW WAGES MAY BE CALCULATED UNDER THE FOLLOWING DIFFERENTIAL PIECE RATE SYSTEMS. (SM)

1) Taylor's System

Efficiency	Payment
Less than 100%	83% of the normal piece rate or 80% of piece rate when below standard
Either 100% or more than 100%	125% of the normal piece rate or 120% of piece rate when at or above standard

2) Merrick Differential Piece Rate System

Efficiency	Payment
Up to 83 %	Ordinary piece rate
83% to 100%	110% of ordinary piece rate (10% above the ordinary piece rate)
Above 100%	120% or 130% of ordinary piece rate (20% to 30% of ordinary piece rate)

Q.No.17. WHAT DO YOU MEAN BY TIME AND MOTION STUDY? WHY IT IS SO IMPORTANT TO MANAGEMENT? (MTP N14 - II) (PM)

Time and motions study: It is the study of time taken and motions (movements) performed by workers while performing their jobs at the place of their work. Time and motion study has played a significant role in controlling and reducing labour cost.

Time Study is concerned with the determination of standard time required by a person of average ability to perform a job. Motion study, on the other hand, is concerned with determining the proper method of performing a job so that there are no wasteful movements, hiring the worker unnecessarily. However, both the studies are conducted simultaneously.

Since materials, tools, equipment and general arrangement of work, all have vital bearing on the method and time required for its completion. Therefore, their study would be in complete and would not yield its full benefit without a proper consideration of these factors.

Time and motion study is important to management because of the following features:

- Improved methods, layout, and design of work ensure effective use of men, material and resources.
- Unnecessary and wasteful methods are pin-pointed with a view to either improving them or eliminating them altogether. This leads to reduction in the work content of an operation, economy in human efforts and reduction of fatigue.
- Highest possible level of efficiency is achieved in all respect.
- Provides information for setting labour standards - a step towards labour cost control and cost reduction.
- Useful for fixing wage rates and introducing effective incentive scheme.

Q.No.18. DISTINGUISH BETWEEN JOB EVALUATION AND MERIT RATING. (M08 - 3M) (PM)

- a) **Job Evaluation:** It can be defined as the process of analysis and assessment of jobs to ascertain reliably their relative worth and to provide management with a reasonably sound basis for determining the basic internal wage and salary structure for the various job positions. In other words, job evaluation provides a rationale for differential wages and salaries for different groups of employees and ensures that these differentials are consistent and equitable.
- b) **Merit Rating:** It is a systematic evaluation of the personality and performance of each employee by his supervisor or some other qualified persons.

Thus the main points of distinction between job evaluation and merit rating are as follows:

- a) Job evaluation is the assessment of the relative worth of jobs within a company and merit rating is the assessment of the relative worth of the man behind a job. In other words job evaluation rate the jobs while merit rating rate employees on their jobs.
- b) Job evaluation and its accomplishment are means to set up a rational wage and salary structure whereas merit rating provides scientific basis for determining fair wages for each worker based on his ability and performance.
- c) Job evaluation simplifies wage administration by bringing uniformity in wage rates. On the other hand merit rating is used to determine fair rate of pay for different workers on the basis of their performance.

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4. OVERHEADS**TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC**

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-
2.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	A	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
7.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	A	-	-	3	4	-	-	-	-	-	-	-	4	-	-	-	-
9.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.	B	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-
18.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Q.No.1. DEFINITIONS / MEANINGS

- Overhead:** The total of all indirect costs – indirect materials, indirect labour and indirect expenses are collectively called as “Overheads.”
- Cost Allocation:** Cost allocation is the allotment of whole item of cost to a cost centre or 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:** Cost absorption is the process of absorbing all indirect costs or overhead costs allocated or apportioned over particular cost center or production department by the unit's production.
- Blanket Overhead Rate:** Blanket overhead rate refers to the computation of one single overhead rate for the whole factory. It is to be distinguished from the departmental overhead rate which refers to a separate rate for each individual cost centre or department. The use of blanket rate may be proper in certain factories producing only one major product in a continuous process or where the work performed in every department is fairly uniform or standardized.

This overhead rate is computed as follows:

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

a) **A blanket rate should be applied in the following cases:**

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

Where these conditions do not exist, departmental rates should be used.

5) **Departmental Overhead Rate:** It refers to the computation of one single overhead rate for a particular production unit or department. Where the product lines are varied or machinery is used to a varying degree in the different departments, that is, where conditions throughout the factory are not uniform, the use of departmental rates is to be preferred.

This overhead rate is determined by the following formula:

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

6) **Multiple overhead rate:** It involves computation of separate rates for each production department, service department, cost center and each product for both fixed and variable overheads. It may be computed as follows:

Multiple overhead rate =

$$\frac{\text{Overhead allocated / apportioned to each department/ cost centre or product}}{\text{Corresponding base}}$$

Under multiple overheads rate, jobs or products are charged with varying amount of factory overheads depending on the type and number of departments through which they pass. However, the number of overheads rate which a firm may compute would depend upon two opposing factors viz. the degree of accuracy desired and the clerical cost involved.

Q.No.2. HOW ARE OVERHEADS CLASSIFIED ON THE BASIS OF FUNCTIONS?

(SM)

	Description	Example
By Function		
Factory or Manufacturing or Production Overhead	<p>Manufacturing overhead is the indirect cost incurred for manufacturing or production</p> <p>Activity in a factory. Manufacturing overhead includes all expenditures incurred from the procurement of materials to the completion of finished product.</p>	<p>(i) Stock keeping expenses, (ii) Repairs and maintenance of plant, (iii) Depreciation of factory building, (iv) Indirect labour, (v) cost of primary packing (vi) Insurance of plant and machinery etc. Production overhead include administration costs relating to production, factory, works or manufacturing.</p>
Office and Administrative Overheads	<p>Office and Administrative overheads are expenditures incurred on all activities relating to general management and administration of an organisation. It includes formulating the policy, directing the organisation and controlling the operations of an undertaking which is not related directly to production, selling, distribution, research or development activity or function.</p>	<p>(i) Salary paid to office staffs, (ii) Repairs and maintenance of office building, (iii) Depreciation of office building (iv) postage and stationery, (v) Lease rental in case of operating lease (in case of finance lease rental excluding finance cost) (vi) accounts and audit expenses etc.</p>

Selling and Distribution Overheads	<p>i) Selling overhead: Expenses related to sale of products and include all indirect expenses in sales management for the organisation.</p> <p>ii) Distribution overhead: Cost incurred on making product available for sale in the market.</p>	<p>Selling Overhead:</p> <ul style="list-style-type: none"> (i) Salesmen commission, (ii) Advertisement cost, (iii) Sales office expenses etc. <p>Distribution overhead:</p> <ul style="list-style-type: none"> (i) Delivery van expenses, (ii) Transit insurance, (iii) warehouse and cold storage expenses, (iv) secondary packing expenses etc.
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Q.No.3. HOW ARE OVERHEADS CLASSIFIED ON THE BASIS OF NATURE? (SM)

By Nature		
Fixed Overhead	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.	(i) Salary paid to permanent employees, (ii) Depreciation of building and plant and equipment, (iii) Interest on capital, (iv) Insurance
Variable Overhead	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.	(i) Indirect materials, (ii) Power and fuel, (iii) lubricants, (iv) tools and spares etc.
Semi-Variable Overheads	These costs contain both fixed and variable components and are thus partly affected by fluctuations in the level of activity.	(i) Electricity cost, (ii) water cost, (iii) telephone and internet expenses etc.

Q.No.4. HOW ARE OVERHEADS CLASSIFIED ON THE BASIS OF ELEMENTS? (SM)

By Element		
Indirect materials	Materials which do not normally form part of the finished product (cost object) are known as indirect materials.	(i) Stores used for maintaining machines and buildings (lubricants, cotton waste, bricks etc.) (ii) Stores used by service departments like powerhouse, boiler house, canteen etc.
Indirect labour	Labour costs which cannot be allocated but can be apportioned to or absorbed by cost units or cost centres is known as indirect labour.	(i) Salary paid to foreman and supervisor (ii) Salary paid to administration staff etc.
Indirect expenses	Expenses other than direct expenses are known as indirect expenses, that cannot be directly, conveniently and wholly allocated to cost centres.	(i) Rates & taxes, (ii) insurance, (iii) depreciation, (iv) advertisement expenses etc.

Q.No.5. INDICATE THE BASE OR BASES THAT YOU RECOMMENDED TO APPORTIONING OVERHEAD COSTS TO PRODUCTION DEPARTMENT? (PM)

Item	Bases of apportionment
i) Supplies	Actual supplies made to different departments
ii) Repair	Direct labour hours; Machine hours; Direct
iii) Maintenance of building	Floor area occupied by each department
iv) Executive salaries	Actual basis; Number of workers.
v) Rent	Floor area
vi) Electric Power	Horse power of machines, or number of machines hour, or value of machines or units consumed
vii) Fire insurance	Capital cost of plant and building; Value of stock
viii) Indirect labour	Direct labour cost.
ix) Lighting expenses	No.of light points, or area or metered units
x) Material Handling/stores overhead	Weight of materials or volume of materials or unit of materials.
xi) General Overheads	Direct Labour hrs or direct wages or machine hrs.

Q.No.6. DISCUSS BRIEFLY THREE MAIN METHODS OF ALLOCATING SUPPORT DEPARTMENTS COSTS TO OPERATING DEPARTMENTS. OUT OF THESE, WHICH METHOD IS CONCEPTUALLY PREFERABLE? (N10 - 4M) (PM)

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

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

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.

Production Department			Service Department		
P1	P	P3	S1	S2	S3
↑	↑	↑	↑	↑	↓
↑	↑	↑	↑	↓	
↑	↑	↑	↓		

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

- Simultaneous equation method
- Repeated distribution method
- Trial and error method

Q.No.7. EXPLAIN NORMAL AND PRE DETERMINED OVERHEAD RATES?

(SM)

THE OVERHEAD RATES MAY BE OF THE FOLLOWING TYPES:

1) **Normal Rate:** This rate is calculated by dividing the actual overheads by actual base. It is also known as actual rate.

It is calculated by the following formula:

$$\text{Normal overhead rate} = \frac{\text{Actual amount of overheads}}{\text{actual base}}$$

2) **Pre-determined Overhead Rate:** This rate is determined in advance by estimating the amount of overhead for the period in which it is to be used. It is computed by the following formula:

$$\text{Pre-determined rate} = \frac{\text{Budgeted amount of overhead}}{\text{Budgeted base}}$$

Q.No.8. EXPLAIN THE TREATMENT OF OVER AND UNDER ABSORPTION OF OVERHEADS IN COST ACCOUNTING? (N10 – 4M, N14 – 4M, MTP – N14 I) (PM)

TREATMENT OF OVER AND UNDER ABSORPTION OF OVERHEADS ARE:-

- 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.
- Use of supplementary Rate:** Under this method the balance of under and over absorbed overheads may be charged to cost of WIP, finished stock and cost of sales proportionately with the help of supplementary rate of overhead.
- 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.

Q.No.9. EXPLAIN BRIEFLY THE CONDITIONS WHEN SUPPLEMENTARY RATES ARE USED (PM)

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.

Q.No.10. HOW WOULD YOU TREAT THE IDLE CAPACITY COSTS IN COST ACCOUNTS

(PM)

TREATMENT OF IDLE CAPACITY COST IN COST ACCOUNTS:

It is that part of the capacity of a plant, machine or equipment which cannot be effectively utilised in production. The idle capacity may arise due to lack of product demand, non availability of raw-material, shortage of skilled labour, shortage of power, etc. Costs associated with idle capacity are mostly fixed in nature. These costs remain unabsorbed or unrecovered due to under-utilisation of plant and service capacity. Idle capacity costs are treated in the following ways in Cost Accounts.

- If the idle capacity cost is due to unavoidable reasons** - a supplementary overhead rate may be used to recover the idle capacity cost. In this case, the costs are charged to the production capacity utilised.

- b) **If the idle capacity cost is due to avoidable reasons** - such as faulty planning, etc. the cost should be charged to Costing Profit and Loss Account.
- c) **If the idle capacity cost is due to trade depression, etc.,** - being abnormal in nature the cost should also be charged to the Costing Profit and Loss Account.

Q.No.11. DISCUSS THE TREATMENT IN COST ACCOUNTS OF THE COST OF SMALL TOOLS OF SHORT EFFECTIVE LIFE. (PM)

Small tools are mechanical appliances used for various operations on a work place, specially in engineering industries. Such tools include drill bits, chisels, screw cutter, files etc.

TREATMENT OF COST OF SMALL TOOLS OF SHORT EFFECTIVE LIFE:

- a) Small tools purchased may be capitalized and depreciated over life if their life is ascertainable. Revaluation method of depreciation may be used in respect of very small tools of short effective life. Depreciation of small tools may be charged to:
 - i) Factory overheads
 - ii) Overheads of the department using the small tool.
- b) Cost of small tools should be charged fully to the departments to which they have been issued, if their life is not ascertainable.

Q.No.12. DEFINE SELLING AND DISTRIBUTION EXPENSES. DISCUSS THE ACCOUNTING FOR SELLING & DISTRIBUTION EXPENSES. (PM)

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

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

Accounting treatment for selling and distribution expenses:

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.

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Q.No.13. EXPLAIN WHAT DO YOU MEAN BY CHARGEABLE EXPENSES AND STATE ITS TREATMENT IN COST ACCOUNTS. (PM)

Chargeable expenses: All expenses, other than direct materials and direct labour cost which are specifically and solely incurred on production, process or job are treated as chargeable or direct expenses. These expenses in cost accounting are treated as part of prime cost.

Examples of chargeable expenses include - Rental of a machine or plant hired for specific job, Royalty, and cost of making a specific pattern, design, drawing or making tools for a job.

Q.No.14. EXPLAIN THE COST ACCOUNTING TREATMENT OF UNSUCCESSFUL RESEARCH AND DEVELOPMENT COST. (PM)

Cost of unsuccessful research is treated as factory overhead, provided the expenditure is normal and is provided in the budget. If it is not budgeted, it is written off to the profit and loss account. If the research is extended for long time, some failure cost is spread over to successful research.

Q.No.15. DISCUSS THE PROBLEMS OF CONTROLLING THE SELLING AND DISTRIBUTION OVERHEADS. (PM)

PROBLEMS OF CONTROLLING THE SELLING & DISTRIBUTION OVERHEADS ARE:

- a) 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.
- b) They are dependent upon customers' behaviour, liking etc.
- c) 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:

- a) Comparing the figures of selling & distribution overhead with the figures of previous period.
- b) 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,
- c) 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.

Q.No.16. DISCUSS THE DIFFERENCE BETWEEN ALLOCATION AND APPORTIONMENT.(SM)

Difference between Allocation and Apportionment: The difference between the allocation and apportionment is important to understand because the purpose of these two methods is the identification of the items of cost to cost units or centres. However, the main difference between the above methods is given below.

- 1) Allocation deals with the whole items of cost, which are identifiable with any one department. For example, indirect wages of three departments are separately obtained and hence each department will be charged by the respective amount of wages individually. On the other hand apportionment deals with the proportions of an item of cost for example; the cost of the benefit of a service department will be divided between those departments which has availed those benefits.
- 2) Allocation is a direct process of charging expenses to different cost centres whereas apportionment is an indirect process because there is a need for the identification of the appropriate portion of an expense to be borne by the different departments benefited.
- 3) The allocation or apportionment of an expense is not dependent on its nature, but the relationship between the expense and the cost centre decides that whether it is to be allocated or apportioned.
- 4) Allocation is a much wider term than apportionment.

Q.No.17. EXPLAIN THE METHODS OF ACCOUNTING OF ADMINISTRATIVE OVERHEADS. (SM)

Accounting of Administrative Overheads: There are three distinct methods of accounting of administrative overheads, which are briefly discussed below:

- a) **Apportioning Administrative Overheads between Production and Sales Departments:** According to this method administrative overheads are apportioned over production and sales departments. The reason for the apportionment of overhead expenses over these departments, recognises the fact that administrative overheads are incurred for the benefit of both of these departments. Therefore each department should be charged with the proportionate share of the same. When this method is adopted, administrative overheads lose their identity and get merged with production and selling and distribution overheads.

Disadvantages:

- i) It is difficult to find suitable bases of administrative overhead apportionment over production and sales departments.
- ii) Lot of clerical work is involved in apportioning overheads.
- iii) It is not justified to apportion total administrative overheads only over production and sales departments when other equally important department like finance is also there.

b) **Charging to Profit and Loss Account:** According to this method administrative overheads are charged to Costing Profit & Loss Account. The reason for charging to Costing Profit & Loss are firstly, the administrative overheads are concerned with the formulation of policies and thus are not directly concerned with either the production or the selling and distribution functions. Secondly, it is difficult to determine a suitable basis for apportioning administrative overheads over production and sales departments. Lastly, these overheads are the fixed costs. In view of these arguments, administrative overheads should be charged to Profit and Loss Account.

Disadvantages :

- i) Cost of products is understated as administrative overheads are not charged to costs.
- ii) The exclusion of administrative overheads from cost of products is against sound accounting principle.

c) **Treating Administrative Overheads as a separate addition to Cost of Production/ Sales:** This method considers administration as a separate function like production and sales and, as such costs relating to formulating the policy, directing the organisation and controlling the operations are taken as a separate charge to the cost of the jobs or a product, sold along with the cost of other functions. The basis which are generally used for apportionment are:

- i) Works cost
- ii) Sales value or quantity
- iii) Gross profit on sales
- iv) Quantity produced
- v) Conversion cost, etc.

Q.No.18. DISCUSS THE TREATMENT OF CERTAIN ITEMS IN COSTING . (M11- 4M) (SM)

1) **Depreciation:** Depreciation "is the diminution in the intrinsic value of an asset due to use and/or the lapse of time." Depreciation is thus the result of two factors viz., the use, and the lapse of time. We know that each fixed asset loses its intrinsic value due to their continuous use and as such the greater the use the higher is the amount of depreciation. The loss in the intrinsic value may also arise even if the asset in question is not in service.

In Cost Accounting depreciation is charged to the cost of production.

The various reasons for including the depreciation charge in Cost Accounting are as follows:

- a) To show a true and fair picture of Balance Sheet.
- b) To ascertain the true cost of production.
- c) To keep the asset intact by distributing losses in its value over a number of years.
- d) To keep the capital intact and to make a provision of the resources for the replacement of asset in future.
- e) To provide for depreciation before distribution of profit as required under the Companies Act.

2) **Packing expenses:** Cost of primary packing necessary for protecting the product or for convenient handling, should become a part of the prime cost. The cost of packing to facilitate the transportation of the product from the factory to the customer should become a part of the distribution cost. If the cost of special packing is at the request of the customer, the same should be charged to the specific work order or the job. The cost of fancy packing necessary to attract Customers is an advertising expenditure. Hence, it is to be treated as a selling overhead.

3) **Fringe benefits:** These are the additional payments or facilities provided to the workers apart from their salary and direct cost-allowances like house rent, dearness and city compensatory allowances. These benefits are given in the form of overtime, extra shift duty allowance, holiday pay, pension facilities etc.

These indirect benefits stand to improve the morale, loyalty and stability of employees towards the organisation. If the amount of fringe benefit is considerably large, it may be recovered as direct charge by means of a supplementary wage or labour rate; otherwise these may be collected as part of production overheads.

4) **Expenses on removal and re-erection of machines:** Expenses are sometime incurred on removal and re-erection of machinery in factories. Such expenses may be incurred due to factors like change in the method of production; an addition or alteration in the factory building, change in the flow of production, etc. All such expenses are treated as production overheads. When amount of such expenses is large, it may be spread over a period of time.

If such expenses are incurred due to faulty planning or some other abnormal factor, then they may be charged to costing Profit and Loss Account.

5) **Bad debts:** There is no unanimity among different authors of Cost Accounting about the treatment of bad debts. One view is that 'bad debts' should be excluded from cost. According to this view bad debts are financial losses and therefore, they should not be included in the cost of a particular job or product.

According to another view it should form part of selling and distribution overheads, especially when they arise in the normal course of trading. Therefore bad debts should be treated in cost accounting in the same way as any other selling and distribution cost. However extra ordinarily large bad debts should not be included in cost accounts.

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

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

7) **Canteen expenses:** The subsidy provided or expenses borne by the firm in running the canteen should be regarded as a production overhead. If the canteen is meant only for factory workers therefore this expenses should be apportioned on the basis of the number of workers employed in each department. If office workers also take advantage of the canteen facility, a suitable share of the expenses should be treated as office overhead.

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

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

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

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

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

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

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

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

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

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THE END

5. INTEGRATED AND NON-INTEGRATED ACCOUNTS

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	2	-	-	-	4	-	-	-	-	-	-	-	-	-
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Q.No.1. WHAT IS AN INTEGRATED ACCOUNTING SYSTEM? STATE ITS ADVANTAGES (M10- 2M) (PM)

- a) A system of accounting where both costing and financial transactions are recorded in the same set of books.
- b) Integrated accounts is the name given to a system of accounting, where by cost and financial accounts are kept in the same set of books.
- c) There will be no separate sets of books for costing and financial records.
- d) Integrated accounts provide or meet out fully the information requirement for costing as well as for financial accounts.

Advantages: The main advantages of Integrated Accounts are as follows:

- a) **No need for Reconciliation** : The question of reconciling costing profit and financial profit does not arise, as there is only one figure of profit.
- b) **Less efforts:** Due to use of one set of books, there is a significant saving in efforts made.
- c) **Less Time consuming:** No delay is caused in obtaining information as it is provided from books of original entry.
- d) **Economical process:** It is economical also as it is based on the concept of "Centralisation of Accounting function".

Q.No.2. WHAT ARE THE ESSENTIAL PRE-REQUISITES OF INTEGRATED ACCOUNTING SYSTEM? (PM)

Essential pre-requisites of Integrated Accounting System: The essential pre-requisites of Integrated Accounting System include the following:

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.

Under this system there is no need for a separate cost ledger. Of course, there will be a number of subsidiary ledgers; in addition to the useful Customers Ledger and the Bought Ledger, there will be: (a) Stores Ledger; (b) Finished Stock Ledger and (c) W-I-P Ledger.

Q.No.3. WHAT IS NON INTEGRATED ACCOUNTING SYSTEM? STATE ITS FEATURES?

(OR)

WHAT ARE THE ESSENTIAL PRE-REQUISITES OF NON-INTEGRATED ACCOUNTING SYSTEM?

A system of accounting where two sets of books are maintained- (i) for costing transactions; and (ii) for financial transactions.

FEATURES

1. **Entity Aspect:** Cost flows / movements within the firm as well as transactions with outsiders are captured by the system, e.g. issue of materials from stores to production department is recognized as a transaction, even if no outsider is involved.
2. **No Personal Accounts:** The Non – Integrated System involves the use of Nominal Accounts and 3 Real Accounts (Stores Ledger Control A/c, WIP Control A/c, Finished Goods Control A/c). Personal and other Real Accounts are not used in this System.
3. **General Ledger Adjustment Account:** For completing contra posting involving Personal Accounts and other Real Accounts (Cash, Bank, Assets etc.), the General Ledger Adjustment Account is used. This account is also called as Cost Ledger Adjustment or Cost Ledger Control or General Ledger Control A/c.
4. **Costing P&L A/c:** A Trial Balance is drawn under this System. The Costing P & L Account is prepared, to ascertain the Profits as per Cost Records. Balance Sheet is not prepared under this System.
5. **Reconciliation:** Non-cost transactions are not fully recorded by this System. Hence, whenever Non-Integrated System is in use, regular Financial Accounting should also be done in parallel. This creates the need for reconciling between Profits as per Cost Records and Profits as per Financial Records.

Q.No.4. WHAT ARE THE IMPORTANT LEDGERS MAINTAINED IN NON – INTEGRATED ACCOUNTING SYSTEM?

(SM)

1) Cost Ledger	3) Work – in – Progress Ledger
2) Stores Ledger	4) Finished Goods Ledger

Q.No.5. WHAT ARE THE PRINCIPLE ACCOUNTS MAINTAINED IN NON – INTEGRATED ACCOUNTING SYSTEM?

(SM)

1. Cost Ledger Control Account	7. Administrative Overhead Control Account
2. Stores Ledger Control Account	8. Selling and Distribution Overhead Account
3. Work – in – Progress Control Account	9. Cost of Sales Account
4. Finished Goods Control Account	10. Costing Profit & Loss Account
5. Wage Control Account	11. Overhead Adjustment Account
6. Manufacturing / Production / Works Overhead Control Account	

THE END

6. RECONCILIATION OF COST AND FINANCIAL ACCOUNTS

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	A	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	B	-	2	-	-	-	-	-	-	4	-	-	-	-	-	-	-

Q.No.1. WHAT ARE THE REASONS FOR DISAGREEMENT OF PROFITS AS PER COST AND FINANCIAL ACCOUNTS? DISCUSS. (RTP N14) (PM)

Reasons for disagreement of profits as per cost and financial accounts: The various reasons for disagreement of profits shown by the two sets of books viz., cost and financial may be listed as below:

1. **Items appearing only in financial accounts:** The following items of income and expenditure are normally included in financial accounts and not in cost accounts. Their inclusion in cost accounts might lead to unwise managerial decisions. These items are:

a) **Income:**

- i) Profit on sale of Fixed assets & Investments
- ii) Interest received on Bank deposits, loans and investments.
- iii) Dividend received
- iv) Rent receivable
- v) Share Transfer fees received

b) **Expenditure**

- i) Loss on sale of assets
- ii) Uninsured destruction of assets
- iii) Loss due to scrapping of plant and machinery
- iv) Preliminary expenses written off
- v) Goodwill written off
- vi) Underwriting commission and debenture discount written off
- vii) Interest on mortgage and loans
- viii) Fines and penalties

c) **Appropriation**

- i) Dividends
- ii) Reserves
- iii) Dividend equalization fund, Sinking fund etc.

2. **Items appearing only in cost accounts:** There are some items which are included in cost accounts but not in financial account. These are:

- a) Notional interest on capital;
- b) Notional rent on premises owned.
- c) Salary for the proprietor at notional figure though not incurred.
- d) Notional Depreciation on the assets fully depreciated for which book value is nil.

3. **Under or over-absorption of overhead:** In cost accounts overheads are charged to production at pre-determined rates whereas in financial accounts actual amount of overhead is charged, the difference gives rise under or over-absorption; causing a difference in profits.
4. **Different bases of stock valuation:** In financial books, stocks are valued at cost or market price, whichever is lower. In cost books, however, stock of materials may be valued on FIFO or LIFO basis and work-in-progress may be valued at prime cost or works cost. Differences in store valuation may thus cause a difference between the two profits.
5. **Depreciation:** The amount of depreciation charge may be different in the two sets of books either because of the different methods of calculating depreciation or the rates adopted. In company accounts, for instance, the straight line method may be adopted whereas in financial accounts it may be the diminishing balance method.

Q.No.2. WHY IS IT NECESSARY TO RECONCILE THE PROFITS BETWEEN THE COST ACCOUNTS AND FINANCIAL ACCOUNTS? (PM)

When the cost and financial accounts are kept separately, It is imperative that these should be reconciled, otherwise the cost accounts would not be reliable. The reconciliation of two set of accounts can be made, if both the sets contain sufficient detail as would enable the causes of differences to be located. It is therefore, important that in the financial accounts, the expenses should be analysed in the same way as in cost accounts. It is important to know the causes which generally give rise to differences in the costs & financial accounts. These are:

- a) **Items included in financial accounts but not in cost accounts**
 - i) Income-tax
 - ii) Transfer to reserve
 - iii) Dividends paid
 - iv) Goodwill / preliminary expenses written off
 - v) Pure financial items
 - vi) Interest, dividends
 - vii) Losses on sale of investments
 - viii) Expenses of Co's share transfer office
 - ix) Damages & penalties

b) **Items included in cost accounts but not in financial accounts**

- i) Opportunity cost of capital
- ii) Notional rent
- c) Under / Over absorption of expenses in cost accounts
- d) Different bases of inventory valuation

Motivation for reconciliation is:

- i) To ensure reliability of cost data
- ii) To ensure ascertainment of correct product cost
- iii) To ensure correct decision making by the management based on Cost & Financial data
- iv) To report fruitful financial / cost data.

**Q.No.3. (I) LIST THE FINANCIAL EXPENSES WHICH ARE NOT INCLUDED IN COST
(II) WHEN IS THE RECONCILIATION STATEMENT OF COST AND FINANCIAL ACCOUNTS NOT REQUIRED.** (N09 - 2M) (PM)

- 1) Financial expenses which are not included in cost accounting are as follows:

<ol style="list-style-type: none"> a) Interest on debentures and deposit b) Gratuity 	<ol style="list-style-type: none"> c) Pension d) Bonus of Employee,
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- e) Income Tax,
- f) Preliminary Expenses
- g) Discount on issue of Share
- h) Underwriting Commissions.

2) **Circumstances where Reconciliation statement can be avoided is as follows:** 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 fulfill the requirement of both i.e., Cost and Financial Accounts.

Q.No.4. IS RECONCILIATION OF COST ACCOUNTS AND FINANCIAL ACCOUNTS IS NECESSARY IN CASE OF INTEGRATED ACCOUNTING SYSTEM. (N 09- 2M) (PM)

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, we can say, 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.

THE END

7. JOB AND BATCH COSTING

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Q.No.1. DESCRIBE JOB COSTING AND BATCH COSTING GIVING EXAMPLE OF INDUSTRIES WHERE THESE ARE USED? (NOV16-4M) (PM)

1) **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.

2) **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.

Q.No.2. DISTINGUISH BETWEEN JOB COSTING AND BATCH COSTING (PM)

Basic	Job Costing	Batch Costing
Nature	Job costing is a <u>specific order costing</u> .	Batch costing is a <u>special type of job costing</u> .
Applicability	It is undertaken in such industries where work is done as per the <u>customer's requirement</u> .	It is undertaken in such industries where production is <u>of repetitive nature</u> .
Similarity	No <u>two jobs are alike</u> .	The articles produced in a batch are <u>alike</u> .
Cost determination	The cost is determined on <u>job basis</u> .	The cost is determined on <u>batch basis</u> .
Output quantity	The output of a job may be <u>1 unit, 2 units of a batch</u> .	The output of a batch is <u>usually a large quantity</u> .

Cost estimation	The cost is estimated <u>before the production.</u>	The cost is estimated <u>after the completion of production.</u>
Examples	Industries where job costing is undertaken are repair workshop, furniture and general engineering works.	Industries where job costing is undertaken are pharmaceuticals, garment manufacturing, radio, T.V. manufacturing etc.

Q.No.3. WHAT ARE THE SITUATIONS WHEN JOB COSTING IS USED.

(PM)

IT MAY BE EMPLOYED IN THE FOLLOWING CASES:

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

Q.No.4. DEFINE PRODUCT COSTS. DESCRIBE THREE DIFFERENT PURPOSES FOR COMPUTING PRODUCT COSTS.

(RTP- N15) (PM)

DEFINITION OF PRODUCT COSTS:

Product costs are inventoriable costs. These are the costs, which are assigned to the product. Under marginal costing variable manufacturing costs and under absorption costing, total manufacturing costs constitute product costs.

Purposes for computing product costs:

The three different purposes for computing product costs are as follows:

- Preparation of financial statements: Here focus is on inventoriable costs.
- Product pricing: It is an important purpose for which product costs are used. For this purpose, the cost of the areas along with the value chain should be included to make the product available to the customer.
- Contracting with government agencies: For this purpose government agencies may not allow the contractors to recover research and development and marketing costs under cost plus contracts.

Q.No.5. DISTINGUISH BETWEEN JOB COSTING AND PROCESS COSTING.

(PM)

THE MAIN POINTS WHICH DISTINGUISH JOB COSTING AND PROCESS COSTING ARE AS BELOW:

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

Q.No.6. IN BATCH COSTING, HOW ECONOMIC BATCH QUANTITY IS DETERMINED (PM)

ECONOMIC BATCH QUANTITY IN BATCH COSTING:

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:

$$EBQ = \sqrt{\frac{2AS}{C}}$$

Where, A = Annual demand for the product

S = Setting up cost per batch

C = Carrying cost per unit of production per annum

THE END

8. CONTRACT COSTING

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-
2.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	A	-	2	-	-	-	-	-	-	-	-	-	-	-	-	4	-
4.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	A	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
6.	A	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-

Q.No.1. DEFINITIONS / MEANINGS.

- a) **Contract Costing:** Contract costing is a form of specific order costing where job undertaken is relatively large and normally takes period longer than a year to be getting completed.
- b) **Sub-Contract:** When a contract either completely or partly given to another contractor by the principal contractor to get the work completed is known as Sub-Contracting and work given is known as Sub-Contract work.
- c) **Extra-Work:** Any work in addition to the original work for which a contract has been entered into between the contractor and contractee is known as extra work. For the extra work the contractee has to pay separately in addition to original contract value.
If the extra work is substantial in volume or value it is treated as separate contract.
- d) **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.
- e) **Cost of Work Certified or Value of Work Certified:** A contract is a continuous process and to know the cost or value of the work completed as on a particular date; assessment of the work is carried out by the surveyor or architect. Surveyor or architect based on his assessment certifies the percentage of work completion. This portion of called value or cost of work certified.
- f) **Progress Payment:** Contractors receive payments from the contractee periodically for the work done on the contract. This is known as progress payment or running payment. This is paid based on the certificate issued by the surveyor or architect.
- g) **Retention Money:** A contractor does not receive full payment of the work certified by the surveyor. Contractee retains some amount (say 10% to 20%) to be paid, after sometime, when it is ensured that there is no fault in the work carried out by contractor. If any deficiency or defect is noticed in the work, it is to be rectified by the contractor before the release of the retention money. Retention money provides a safeguard against the risk of loss due to faulty workmanship. **(N 11 - 4M)**
- h) **Cost of Work Uncertified:** It represents the cost of the work which has been carried out by the contractor but has not been certified by the architect. It is always shown at cost price. The cost of uncertified work may be ascertained as follows:

Particulars	Amount (Rs.)	Amount (Rs.)
Total cost to date	—	—
Less: Cost of work certified	—	—
Material in hand	—	—
Plant at site	—	—
Cost of work uncertified	—	—

Cash Received: It is ascertained by deducting the retention money from the value of work certified i.e.

$$\text{Cash received} = \text{Value of work certified} - \text{Retention money.}$$

Work-in-Progress: In Contract Accounts, the value of the work-in-progress consists of

- The cost of work completed, both certified and uncertified;
- The cost of work not yet completed; and
- The amount of profit taken as credit.

In the Balance Sheet (prepared for management), the work-in-progress is usually shown under two heads, viz., certified and uncertified. The cost of work completed and certified and the profit credited will appear under the head 'certified' work-in-progress, while the completed work not yet certified and the cost of labour, material and expenses of work which has not yet reached the stage of completion are shown under the head "uncertified" work-in-progress.

Notional Profit: It represents the difference between the value of work certified and cost of work certified. (N 11 - 4M)

Estimated Profit: It is the excess of the contract price over the estimated total cost of the contract.

Q.No.2. EXPLAIN THE FEATURES OF CONTRACT COSTING?

(SM)

CONTRACT COSTING HAVE THE FOLLOWING DISTINCT FEATURES:

- The major part of the work in connection with each contract is ordinarily carried out at the site of the contract.
- The bulk of the expenses incurred by the contractor are considered as direct.
- The indirect expenses mostly consist of office expenses of the yards, stores and works.
- A separate account is usually maintained for each contract.
- The number of contracts undertaken by a contractor at a time is usually few.
- The cost unit in contract costing is the contract itself.

Q.No.3. STATE THE ADVANTAGES OF COST PLUS CONTRACTS.

(M 16 4M)(PM)

FOLLOWING ARE THE ADVANTAGES OF COST PLUS CONTRACT:

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

Q.No.4. DESCRIBE THE MAIN FEATURES OF COST PLUS CONTRACT.

(PM)

THE MAIN FEATURES OF THESE CONTRACTS ARE AS FOLLOWS:

1. 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.
2. These contracts are preferred when the cost of material and labour is not steady and the contract completion may take number of years.
3. 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.
4. 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.

Q.No.5. DISCUSS BRIEFLY THE PRINCIPLES TO BE FOLLOWED WHILE TAKING CREDIT FOR PROFITS ON INCOMPLETE CONTRACTS. (M11 – 4M) (SM)

SOME CONTRACT NOT COMPLETE WITHIN THE FINANCIAL YEAR SO COMPUTATION OF PROFIT IS MAIN POINT.SO PROFIT COMPUTATION IS AS FOLLOW:-.

In the case of incomplete contracts, the following four situations may arise:

- 1) Completion of contract is less than 25 per cent. No profit should be taken to profit and loss account.
- 2) Completion of contract is 25 per cent or more but less than 50 per cent:

$$\frac{1}{3} \times \text{Notional Profit} \times \frac{\text{Cash received}}{\text{Work certified}}$$

- 3) Completion of contract is 50 per cent or more but less than 90 per cent:

$$\frac{2}{3} \times \text{Notional Profit} \times \frac{\text{Cash received}}{\text{Work certified}}$$

- 4) Completion of contract is 90 per cent or more i.e. it is nearing completion:

$$\text{a) } \text{Estimated Profit} \times \frac{\text{Work certified}}{\text{Contract price}}$$

$$\text{b) } \text{Estimated Profit} \times \frac{\text{Work certified}}{\text{Contract price}} \times \frac{\text{Cash received}}{\text{Work certified}}$$

OR

$$\text{Estimated Profit} \times \frac{\text{Cash received}}{\text{Contract price}}$$

$$\text{c) } \text{Estimated Profit} \times \frac{\text{Cost of work to date}}{\text{Estimated total cost}}$$

$$\text{d) } \text{Estimated Profit} \times \frac{\text{Cost of work to date}}{\text{Estimated total cost}} \times \frac{\text{Cash received}}{\text{Work certified}}$$

$$\text{e) } \text{Notional Profit} \times \frac{\text{Work certified}}{\text{Contract price}}$$

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Q.No.6. WRITE SHORT NOTES ON ESCALATION CLAUSE?

(M15 – 4M)(PM)

Escalation Clause: This clause is usually provided in the contracts as a safeguard against any likely changes in the price or utilization of material and labour. If during the period of execution of a contract, the prices of materials or labour rise beyond a certain limit, the contract price will be increased by an agreed amount. Inclusion of such a term in a contract deed is known as an 'Escalation Clause'.

An escalation clause usually relates to change in price of inputs, it may also be extended to increased consumption or utilization of quantities of materials, labour etc (where it is beyond the control of the contractor). In such a situation the contractor has to satisfy the contractee that the increased utilization is not due to his inefficiency.

THE END

MASTER MINDS

9. OPERATING COSTING

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Q.No.1. WHAT DO YOU UNDERSTAND BY OPERATING COSTS? DESCRIBE ITS ESSENTIAL FEATURES AND STATE WHERE IT CAN BE USEFULLY IMPLEMENTED? (RTP N15) (PM)

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 include 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.

Service undertaking	Cost units
Transport service	Passenger km., quintal km., or tonne km.
Supply service	Kwhr, Cubic metre, per kg., per litre.
Hospital	Patient per day, room per day or per bed, per operation etc.
Canteen	Per item, per meal etc.
Cinema	Number of tickets, Number of Shows
Hotels	Guest days, Room days
Electricity supply	Kilowatt Hours
Boiler Houses	Quantity of Steam raised

Q.No.2. DEFINE ABSOLUTE TONNES-KMS AND COMMERCIAL TONNES – KMS. (SM, PM)

When goods are transported, the cost unit is tones kms. or quintal kms. etc. which may be computed in two ways.

- a) Absolute (weighted average) tones-kms., quintal kms. etc.
- b) Commercial (simple average) tones-kms., quintal kms. etc.
- a) **Absolute (weighted average) tone - kms.:** Absolute tones -kms., are the sum total of tonnes-kms., arrived at by multiplying various distances by respective load quantities carried.

Absolute tonne - kms. = \sum (Distance covered between two stations carried)

- b) **Commercial (simple average) tonne - kms.:** Commercial tones -kms., are arrived at by multiplying total distance kms., by average load quantity.

Commercial tonne - kms. = Average load X Distance covered

Q.No.3. DISTINGUISH BETWEEN OPERATION COST AND OPERATING COST. (PM)

Particulars	Operation Cost	Operating Cost
Meaning	It represents a <u>refinement of process costing</u> . In this each operation instead of each process of stage of production is separately costed.	Operating Cost refers to the <u>total cost of providing a utility or service or intangible product</u> e.g. transport undertakings, educational institutions etc.
Nature of Output	Output of each operation is <u>tangible</u> , measurable and homogeneous. It becomes the input of the subsequent operation.	Only services are provided. There is <u>no tangible output</u> .
Cost Classification	Costs are classified into <u>Direct Materials, Direct Labour, Direct Expenses and production Overheads</u> .	Costs are classified into <u>Fixed or Standing Charges, Variable or Running Charges and Semi-variable or Maintenance Charges</u> .
Cost Expression	At the end of each operation, the unit operation cost may be <u>computed by dividing the total operation cost by total output</u> .	Emphasis is on the <u>ascertainment of cost of rendering service</u> rather on the <u>cost of manufacturing a product</u> .

THE END

10. PROCESS AND OPERATION COSTING

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	B	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
7.	A	-	-	-	-	-	-	-	4	-	2	-	-	-	-	-	-

Q.No.1. DEFINITIONS / MEANINGS.

- a) **Process Costing:** Used in industries where the material has to pass through two or more processes for being converted into a final product.
- b) **Operation Costing:** It is the refinement of process costing. It is concerned with the determination of the cost of each operation other than the process.
- c) **Equivalent Production Units:** This concept is used in the industries where manufacturing is a continuous activity. Converting partly finished units into equivalent finished units.
- d) **Inter Process Profits:** The output of one process is transferred to the next process not at cost but not at market value or cost plus percentage of profit. The difference between cost and transfer price is known as inter-process profits.

Q.No.2. EXPLAIN THE FEATURES OF PROCESS COSTING.

(SM)

Process Costing : Used in industries where the material has to pass through two or more processes for being converted into a final product.

Process costing method is useful in the manufacturing of products like steel, paper, medicines, soaps, chemicals, rubber, vegetable oil, paints, varnish etc. where the production process is continuous and the output of one process becomes the input of the following process till completion.

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

- 1) Each plant or factory is divided into a number of processes, cost centres or departments, and each such division is a stage of production or a process.
- 2) Manufacturing activity is carried on continuously by means of one or more processes run sequentially, selectively or simultaneously.
- 3) The output of one process becomes the input of another process.
- 4) The end product usually is of like units not distinguishable from one another.

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

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

Q.No.3. OPERATION COSTING IS DEFINED AS REFINEMENT OF PROCESS COSTING –EXPLAIN IT. (PM)

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

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

Q.No.4. EXPLAIN BRIEFLY THE TREATMENT OF LOSSES IN PROCESS COSTING. (PM)

TREATMENT OF LOSSES IN PROCESS COSTING

Normal Process Loss	The cost of normal process loss is <u>absorbed by good units</u> produced under the process. The amount realised by the sale of normal process loss units should be <u>credited to the process account</u> .
Abnormal Process Loss	The total cost of abnormal process loss is <u>credited to the process account from which it arise</u> . The total cost of abnormal process loss is debited to costing profit and loss account.
Abnormal Gain	The process account under which <u>abnormal gain arises</u> is debited with the <u>abnormal gain</u> and <u>credited to Abnormal gain account</u> which will be closed by transferring to the Costing Profit and loss account.

Q.No.5. EXPLAIN BRIEFLY THE PROCEDURE FOR THE VALUATION OF WORK IN PROCESS (PM)

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

- First-in-first-out (FIFO) method
- Last-in-first-out (LIFO) method
- Average cost method

A brief account of the procedure followed for the valuation of work-in-process under the above three methods is as follows;

- 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.
- LIFO method:** According to this method units last entering the process are to be completed first. The completed units will be shown at their current cost and the closing-work in process will continue to appear at the cost of the opening inventory of work-in-progress along with current cost of work in progress if any.

c) **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.

Q.No.6. EXPLAIN EQUIVALENT UNITS

(N 13 – 2M) (PM)

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.

Equivalent Completed Units = Actual number of units in the process of manufacture × 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.

Q.No.7. STATE THE ADVANTAGES AND DISADVANTAGES OF INTER PROCESS PROFITS.
(RTP N14) (N12 – 4M, N13 – 2M)(PM)

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.

The advantages and disadvantages of using inter-process profit, in the case of process type industries are as follows:

1) Advantages:

- a) Comparison between the cost of output and its market price at the stage of completion is facilitated.
- b) Each process is made to stand by itself as to the profitability.

2) Disadvantages:

- a) The use of inter-process profits involves complication.
- b) The system shows profits which are not realised because of stock not sold out

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THE END

11. JOINT PRODUCTS AND BY- PRODUCTS

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	A	9	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
4.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Q.No.1. WHAT DO YOU MEAN BY JOINT PRODUCTS, BY- PRODUCTS AND CO-PRODUCTS? (SM)

a) **Joint Products:** 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.

b) **By-Products :** These are defined as "products recovered from material discarded in a main process, or from the production of some major products.

Examples of by-products are molasses in the manufacture of sugar, tar, ammonia and benzole obtained on carbonization of coal and glycerin obtained in the manufacture of soap.

c) **Co – Products:** They may be defined as two or more products which are contemporary but do not emerge necessarily from the same material in the same process.

For Example, wheat and gram produced in two separate farms with separate processing of cultivation are the co-products. Similarly timber boards made from different trees are co-products.

Q.No.2. DISCUSS THE TREATMENT OF BY-PRODUCT COST IN COST ACCOUNTING. (PM)

Treatment of By-product cost in Cost Accounting:

a) **When they are of small total value, the amount realized from their sale may be dealt as follows:**

- i) 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.
- ii) 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.

b) **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.

Q.No.3. DESCRIBE BRIEFLY, HOW JOINT COSTS UP TO THE POINT OF SEPARATION MAY BE APPORTIONED AMONGST THE JOINT PRODUCTS UNDER THE FOLLOWING METHODS: (M09 – 9M, N10- 4M) (PM)

METHODS OF APPORTIONING JOINT COST AMONG THE JOINT PRODUCTS:

- a) **Average Unit Cost Method:** Under this method, total process cost (upto the point of separation) is divided by total units of joint products produced. On division average cost per unit of production is obtained. The effect of application of this method is that all joint products will have uniform cost per unit.
- b) **Contribution Margin Method:** Under this method joint costs are segregated into two parts – variable and fixed. The variable costs are apportioned over the joint products on the basis of units produced (average method) or physical quantities. If the products are further processed, then all variable cost incurred be added to the variable cost determined earlier. Then contribution is calculated by deducting variable cost from their respective sales values. The fixed costs are then apportioned over the joint products on the basis of contribution ratios.
- c) **Market Value at the Time of Separation:** This method is used for apportioning joint costs to joint products upto the split off point. It is difficult to apply if the market values of the products at the point of separation are not available. The joint cost may be apportioned in the ratio of sales values of different joint products.
- d) **Market Value after further Processing:** Here the basis of apportionment of joint costs is the total sales value of finished products at the further processing. The use of this method is unfair where further processing costs after the point of separation are disproportionate or when all the joint products are not subjected to further processing.
- e) **Net Realisable Value Method:** Here joint costs is apportioned on the basis of net realisable value of the joint products,

Net Realisable Value = Sale value of joint products (at finished stage)
(-) estimated profit margin
(-) selling & distribution expenses, if any
(-) post split off cost

Q.No.4. DISTINGUISH BETWEEN JOINT PRODUCTS AND BY-PRODUCTS.

(PM)

Joint products and By-products: 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 byproduct.

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.

Q.No.5. WHAT ARE THE METHODS OF APPORTIONING JOINT COSTS OVER BY-PRODUCTS?
(PM)

The following methods may be adopted for the accounting of by-products and arriving at the cost of production of the main product:

1. Market value or value on realization:

- a) The realisation on the disposal of the by-product may be deducted from the total cost of production so as to arrive at the cost of the main product.
- b) When the by-product requires some additional processing and expenses are incurred in making it saleable to the best advantage of the concern, the expenses so incurred should be deducted from the total value realized from the sale of the by-product and only the net realizations should be deducted from the total cost of production to arrive at the cost of production of the main product.
- c) Separate accounts should be maintained for collecting additional expenses incurred on:
 - i) Further processing of the by-product, and
 - ii) Selling, distribution and administration expenses attributable to the by-product.

2. Standard cost in technical estimates:

- a) By – products may be valued at standard costs.
- b) The standard may be determined by averaging costs recorded in the past and making technical estimates of the number of units of original raw material going into the main product.
- c) This method may be adopted where the by-product is not saleable in the condition in which it emerges or comparative prices of similar ~~or an~~ alternative material.

3. Comparative price: Under this method, the value of the by-product is ascertained with reference to the ~~price of a similar~~ ~~or an~~ alternative material.

4. Re – use basis:

- a) In some cases the by-product may be of such a nature that it can be reprocessed in the same process as part of the input of the process.
- b) In that case the value put on the by-product should be same as that of the materials introduced into the process.
- c) If, however, the by-product can be put into an earlier process only, the value should be the same as for the materials introduced into the process.

THE END

12. STANDARD COSTING

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
4.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Q.No.1. DEFINITIONS / MEANINGS.

- a) **Standard Costing:** Standard Costing is a method of costing which measure the performance or an activity by comparing actual cost with standard cost, analyses the variances and reporting of variances for investigation.
- b) **Standard Cost:** It is a planned unit cost of the product, component or service produced in a period.
- c) **Variance:** A divergence from the pre-determined rates, expressed ultimately in money value, generally used in standard costing and budgetary control systems.
- d) **Variance Analysis:** The analysis of variances arising in standard costing system into their constituent parts.

Q.No.2. DEFINE THE TERM STANDARD COSTING? IS IT THE SAME AS ESTIMATED COST?

Meaning: It is a planned unit cost of the product, component or service produced in a period. It is used as a basis for –

- a) Price Fixing and
- b) Cost Control through variance analysis

It reflects-

- a) Quantities of material and labour expected to be used,
- b) Prices expected to be paid for materials and labour during the coming year and
- c) Factory expenses applicable to production based on good performance and practical capacity operation of the factory.

Q.No.3. DEFINE THE TERM STANDARD COSTING AND OUTLINE THE STEPS INVOLVED THEREIN. (SM)

Meaning: Standard costing is a method of costing which measure the performance or an activity by comparing actual cost with standard cost, analyses the variances and reporting of variances for investigation.

THE PROCESS OF STANDARD COSTING IS AS BELOW:

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

Q.No.4. EXPLAIN THE TYPES OF STANDARDS?

(SM)

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

These types of standards are criticized on three grounds:

- Since such standards would be unattainable, no one would take these seriously.
- The variances disclosed would be variances from the ideal standards. These would not, therefore, indicate the extent to which they could have been reasonably and practically avoided.
- There would be no logical method of disposing of these variances.

- Normal Standards:** These are standards that may be achieved under normal operating conditions.

These types of standards are criticized on two grounds:

- These standards are, however, difficult to set because they require a degree of forecasting.
- If the actual performance is found to be abnormal, large variances may result and necessitate revision of standards.

- Basic or Bogey Standards:** These standards are used only when they are likely to remain constant or unaltered over a long period. Variances from basic standards indicate the trends of deviations of actual cost from the basic cost.

These types of standards are criticized on three grounds:

- It has no practical utility in the point of view of cost control.
- Basic standards are set, on a long-term basis and are seldom revised.
- When basic standards are in use, variances are not calculated.

- Current Standards:** These standards reflect the management anticipation of what actual cost will be for the current period. The main purpose of normal standard is to eliminate variations in the cost arising out of trade cycles

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Q.No.5. EXPLAIN CONTROLLABLE, UNCONTROLLABLE, FAVOURABLE AND ADVERSE VARIANCES. (SM)

CONTROLLABLE AND UNCONTROLLABLE VARIANCES:

1. The purpose of the standard costing reports is to investigate the reasons for significant variances so as to identify the problems and take corrective action.
2. Variances are broadly of two types, namely, controllable and uncontrollable.
3. Controllable variances are those which can be controlled by the departmental heads whereas uncontrollable variances are those which are beyond their control.
4. If the uncontrollable variances are of significant nature and are persistent, the standard may need revision.

FAVOURABLE AND ADVERSE VARIANCE:

Favorable variance: Variances which are profitable for the organization are known as favorable variance.

Adverse variance: Variances which increase the cost for the organization are known as adverse variance.

Q.No.6. WHAT ARE THE ADVANTAGES OF STANDARD COSTING?

(SM)

1. **Measuring Performance:** Standards provide a basis for measurement of actual performance. Standard costing will eliminate any variations in profit due to changes in the values of stock holding from period to period. It will thus provide a true basis for the measurement of profit.
2. **Cost Control:** Variance Analysis and investigation of reasons thereof, will provide the basis for appropriate control action. Adverse variances can be controlled and their recurrence avoided.
3. **Price Fixing:** Standard costs will remain stable over a period of time, as opposed to actual cost which may fluctuate violently. Hence, where demand for a product is elastic, standard cost can be used as a basis for fixing the selling price.
4. **Management by Exception:** If the variances are negligible, it means that the performance is more or less in accordance with the standards. Significant variances that warrant the attention of the manager are brought to his knowledge. This facilitates control by exception.
5. **Introduction of Incentives:** Standard costing facilitates evaluation of jobs and introduction of incentives. Job values can be determined by the use of evaluation and scale of wages fixed according to the responsibility involved in each job.
6. **Quotations and Estimates:** Standard costing facilitates the estimation of the cost of new products with greater accuracy. It can also be used for jobbing industries.
7. **Inventory Valuation:** Standard Costs represent normal cost and are ideal for inventory valuation, when compared to actual costs.
8. **Planning and Budgeting:** Standard costing greatly aids business planning, budgeting and managerial decision-making. Standard costs being pre-determined costs, are more useful in planning and budgeting.
9. **Standardisation:** Standard costing aids in standardisation of products, operations and processes. Since standards are laid down for each product, its components, materials, operations, processes etc., it improves the overall production efficiency and reduces costs.
10. **Targets for Responsibility Centers:** It provides objectives and targets to be achieved by each level of management and defines the responsibilities of departmental managers. So, each departmental Manager knows what is expected of him and his level of performance in comparison to the targets can be seen from the variance reports. Thus the system serves as an incentive to the departmental head to achieve the targets set by the Company.

11. **Comparison facility:** Standard costing sets a uniform basis for comparison of all elements of costs. Since care is taken in setting standards, the standards become unchanging units of comparison. The standard hour may be used as a basic unit to compare dissimilar products or process.

12. **Optimum Resource Utilisation:** The maximum use of working capital, plant facilities and current assets is assured because wastage of materials and loss due to idle time are closely controlled.

**Q.No.7. WHAT ARE THE DISADVANTAGES OF STANDARD COSTING? (OR)
WHAT ARE THE LIMITATIONS OF STANDARD COSTING? (SM)**

Criticism	Counter
Variation in Price: The prices of materials or rates of labour and expenses cannot be accurately estimated. Hence, the standard costing system cannot operate effectively.	<ul style="list-style-type: none"> Use of sophisticated forecasting techniques will cover the price fluctuation to considerable extent. Uncontrollable variances due to price variations can be isolated and dealt with separately.
Varying level of output: Capacity utilisation cannot be precisely estimated for absorption of overhead. The resulting variances may be abnormally large.	<ul style="list-style-type: none"> Use of forecasting techniques, market research, etc. help to estimate the output with reasonable accuracy. The variation will not be very large. Prime Cost will not be affected by such variation and, moreover, variance analysis helps to measure the effects of idle time.
Changing technology: In light of frequent technological changes affecting the conditions of production, standard costing may not be suitable.	Standards once set, do not always remain stable. They have to be revised in light of technological changes and its impact on quantity standards.
People's Attitude: Technical people are accustomed to think of standards as physical standards and, so, they will be misled by standard costs.	Technical people can be educated to adopt themselves to the standard costing system through orientation courses. It is not an impossible difficulty.
Mix of Products: Standard costing presupposes a pre-determined combination of products both in variety and quantity. The material mix used in manufacture may vary in the long run.	Standards once set do not always remain stable. Standard cost are set normally for a short period, such changes can be taken care of by revision of standards.
Too Strict or too liberal: Standards may be based on (a) theoretical maximum efficiency, (b) attainable good performance or (c) average past performance. Sometimes they may be unattainable while in other times they may be too easy.	Management should select 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.
Not realistic or reflective: If previous historical costs are amended roughly to arrive at estimates of adhoc purposes, they are not standard costs in the strict sense of the term and hence they cannot also reflect true value in exchange.	Economic and technical factors, internal and external, are brought together and analysed to arrive at quantities and prices which reflect optimum operations. Hence, standard costs are realistic measures of the sacrifices involved and the corresponding costs.

Q.No.8. DESCRIBE THE THREE DISTINCT GROUPS OF VARIANCES THAT ARISE IN STANDARD COSTING.
(PM)

THE THREE DISTINCT GROUPS OF VARIANCES THAT ARISE IN STANDARD COSTING ARE:

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

THE END

MASTER MINDS

13. MARGINAL COSTING

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
2.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	B	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	A	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
9.	A	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-
10.	C	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-

Q.No.1. DEFINITIONS / MEANINGS.

- a) **Marginal Cost:** This is the variable cost of one unit of product or a service.
- b) **Marginal Costing:** It is a principle whereby variable cost are charged to cost units and fixed cost attributable to the relevant period is written off in full against contribution for that period.
- c) **Absorption Costing:** A method of costing by which all direct cost and applicable overheads are charged to products or cost centers for finding out the total cost of production. Absorbed cost includes production cost as well as administrative and other cost.
- d) **Direct Costing:** This is a principle under which all costs which are directly related are charged to products, processes, operations or services, of which they form an integral part.
- e) **Differential Costing:** It is a technique used in the preparation of ad-hoc information in which only cost and income differences in between alternative courses of action are taken into consideration.
- f) **Marginal contribution:** This is the difference between selling price and variable cost of production.
- g) **Break-even chart:** A mathematical or graphical representation, showing approximate profit or loss of an enterprise at different levels of activity within a limited range.
- h) **Break-even Point:** This is the level of activity where there is neither a profit nor a loss.
- i) **Cash Break-Even Point:** It is the level of activity where there is neither cash profit nor cash loss.
- j) **Cost Break-Even Point:** It is the level of activity where the total cost under two alternatives are the same. It is also known as Cost Indifference point.
- k) **Margin of Safety:** This is the difference between the expected level of sales and the break even sales.
- l) **P/V Ratio:** It is the ratio establishing the relationship between the contribution and the sales value.

This ratio is usually expressed in percentage.

$$P / V \text{ Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100 \quad (\text{or}),$$

$$P / V \text{ Ratio} = \frac{\text{Change in Contribution / Profit}}{\text{Change in Sales}} \times 100$$

A higher contribution to sales ratio implies that the rate of growth of contribution is faster than that of sales. This is because, once the breakeven point is reached, profits shall grow at a faster rate when compared to a product with a lesser contribution to sales ratio.

By transposition, we have derived the following equations:

i) $C = S \times P/V \text{ ratio}$

ii) $S = \left(\frac{C}{P / V \text{ Ratio}} \right)$

m) **Angle of Incidence:** 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.

Q.No.2. WHAT ARE THE MAIN CHARACTERISTICS OF MARGINAL COSTING?

(SM)

THE MAIN CHARACTERISTICS OF MARGINAL COSTING ARE AS FOLLOWS:

- All elements of cost are classified into fixed and variable components. Semi-variable costs are also analyzed into fixed and variable elements.
- The marginal or variable costs (as direct material, direct labour and variable factory overheads) are treated as the cost of product.
- Under marginal costing, the value of finished goods and work-in-progress is also comprised only of marginal costs. Variable selling and distribution are excluded for valuing these inventories. Fixed costs are not considered for valuation of closing stock of finished goods and closing WIP.
- Fixed costs are treated as period costs and are charged to profit and loss account for the period for which they are incurred.
- Prices are determined with reference to marginal costs and contribution margin.
- Profitability of departments and products is determined with reference to their contribution margin.

Q.No.3. WHAT IS MEANT BY DIRECT COSTING?

(SM)

- Direct costing is the practice of charging all direct cost to operations, processes or products, leaving all indirect costs to be written off against profits in the period in which they arise.
- Under direct costing the stocks are valued at direct costs, i.e., costs whether fixed or variable which can be directly attributable to the cost units.
- In general, the terms marginal costing and direct costing are used as synonymous.
- However, direct costing differs from marginal costing in that some fixed costs considered direct are charged to operations, processes or products, whereas in marginal costing only variable costs are considered.
- Applications of direct costing are as follows:
 - Stock valuation
 - Minimum quantity to be produced to recover pattern or mould cost.
 - Close down decision – like closing down of a department or shop.

Q.No.4. WHAT IS ABSORPTION COSTING? EXPLAIN THE BASIC FEATURES? (SM)

Absorption costing: A method of costing by which all direct cost and applicable overheads are charged to products or cost centres for finding out the total cost of production. Absorbed cost includes production cost as well as administrative and other cost.

BASIC FEATURES OF ABSORPTION COSTING:

- In absorption costing the classification of expenses is based on functional basis whereas in marginal costing it is based on the nature of expenses.
- In absorption costing, the fixed expenses are distributed over products on absorption costing basis that is, based on a pre-determined level of output. Since fixed expenses are constant, such a method of recovery will lead to over or under-recovery of expenses depending on the actual output being greater or lesser than the estimate used for recovery. This difficulty will not arise in marginal costing because the contribution is used as a fund for meeting fixed expenses.

Q.No.5. DISTINCTION BETWEEN MARGINAL COSTING AND ABSORPTION COSTING. (SM)

NO	MARGINAL COSTING	ABSORPTION COSTING
1.	Only <u>variable costs</u> are considered for product costing and inventory valuation.	Both <u>fixed and variable costs</u> are considered for product costing and inventory valuation.
2.	Fixed costs are regarded as <u>period costs</u> . The Profitability of different products is judged by their P/V ratio.	Fixed costs are charged to the <u>cost of production</u> . Each product bears a reasonable share of fixed cost and thus the profitability of a product is influenced by the apportionment of fixed costs.
3.	Cost data presented highlight the <u>total contribution</u> of each product.	Cost data are presented in conventional pattern. Net profit of each product is determined after subtracting fixed cost along with their variable costs.
4.	The difference in the magnitude of opening stock and closing stock does not affect the unit cost of production.	The difference in the magnitude of opening stock and closing stock affects the unit cost of production due to the impact of related fixed cost.
5.	In case of marginal costing the cost per unit remains the same, irrespective of the production as it is valued at variable cost	In case of absorption costing the cost per unit reduces, as the production increases as it is fixed cost which reduces, whereas, the variable cost remains the same per unit.

Q.No.6. WHAT YOU UNDERSTAND BY KEY-FACTOR? GIVE TWO EXAMPLES OF IT? (M 10- 2M) (SM)

Key Factor: Key factor or Limiting factor is a factor which at a particular time or over a period limits the activities of an undertaking. It may be the level of demand for the products or services or it may be the shortage of one or more of the productive resources, e.g., labour hours, available plant capacity, raw materials availability etc. Examples of Key Factors or

Limiting Factors are:

- Shortage of raw material.
- Shortage of labour.
- Plant capacity available.
- Sales capacity available.
- Cash availability.

Q.No.7. EXPLAIN AND ILLUSTRATE CASH BREAK-EVEN CHART.

(SM)

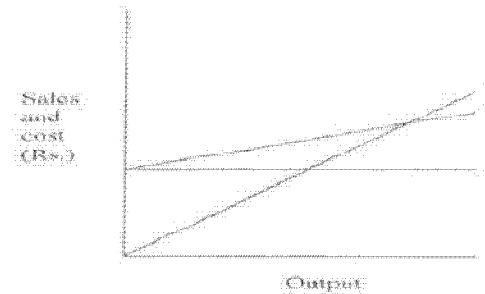
In cash break-even chart, only cash fixed costs are considered. Non-cash items like depreciation etc. are excluded from the fixed cost for computation of Break-even point. It depicts the level of output or sales at which the sales revenue will equal to total cash outflow.

It is computed as under:

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

The making of the cash break even chart would require us to select appropriate axes. Subsequently, we will mark costs/revenues on the Y axis whereas the level of activity shall be traced on the x-axis. Lines representing

- i) Cash fixed costs,
- ii) Total costs at maximum level of activity and
- iii) Revenue at maximum level of activity (joined to the origin) shall be drawn next.



The cash breakeven point is that point where the sales revenue line intersects the total cash line. Other measures like margin of safety and profit can also be measured from the chart.

Q.No.8. DISCUSS THE BASIC ASSUMPTIONS OF COST VOLUME PROFIT ANALYSIS.

(M12- 4M) (PM)

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 behavior 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, subtracted and compared without taking into account the time value of money.

Q.No.9. ELABORATE THE PRACTICAL APPLICATION OF MARGINAL COSTING.

(N13- 4M) (PM)

PRACTICAL APPLICATIONS OF MARGINAL COSTING:

- i) **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.
- ii) **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.
- iii) **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.

iv) **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.

Q.No.10. WHAT IS MEANING OF MARGIN OF SAFETY (MOS)? STATE THE RELATIONSHIP BETWEEN OPERATING LEVERAGE AND MARGIN OF SAFETY RATIO. (N13 - 4M) (SM)

Margin of Safety: This is the difference between the expected level of sales and the break even sales

$$\text{MOS} = \text{Total sales} - \text{Break even sales} \text{ and}$$

$$\text{MOS Ratio} = \frac{\text{sales} - \text{breakeven sales}}{\text{sales}} \times 100$$

- a) Break even sales(BE sales) will depend on contribution margin

$$(\text{BESales} = \frac{\text{fixedcost}}{\text{contribution margin}})$$
- b) Contribution margin is related to operating leverage also.
- c) Operating leverage is calculated as contribution ÷ operating profit and contribution margin plays an important role in it.
- d) If sales are expected to increase, higher leverage will result in higher profit
- e) When sales are expected to decrease, lower operating leverage will result in higher profit.
- f) Higher variable cost and lower fixed cost will result into higher margin of safety and risk will be lower and vice versa

So like operating leverage, MOS is a measure of risk as to what extent an organization is exposed to change in sales volume.

THE END

14. BUDGETS AND BUDGETORY CONTROL

TOPIC WISE ANALYSIS OF PAST EXAM PAPERS OF IPCC

No.	ABC	M-09	N-09	M-10	N-10	M-11	N-11	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16
1.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	A	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
3.	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	A	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
5.	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	A	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-
8.	B	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.	A	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-
10.	A	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-

Q.No.1. DEFINITIONS / MEANINGS

- a) **Budget:** CIMA Official Terminology has defined the term 'budget' as "Quantitative expression of a plan for a defined period of time. It may include planned sales volumes and revenues; resource quantities, costs and expenses; assets, liabilities and cash flows."
- b) **Budget Centre:** A section of an organization for which separate budget can be prepared and control exercised.
- c) **Budgetary Control:** Guiding and regulating activities with a view to attaining redetermined objectives, effectively and efficiently.
- d) **Budget Manual:** The Budget manual is a schedule, document or booklet which shows, in written forms the budgeting organisation and procedures.
- e) **Budget Period:** The period of time for which a budget is prepared and used. It may be a year, quarter or a month.

Q.No.2. EXPLAIN THE ESSENTIALS OF BUDGET.

(N11 - 2M) (PM)

ESSENTIALS OF BUDGET:

- a) It is prepared in advance and is based on a future plan of actions
- b) It relates to a future period and is based on objectives to be attained.

It is a statement expressed in monetary and/or physical units prepared for the implementation of policy formulated by management.

Q.No.3. WHAT ARE THE CHARACTERISTICS OF THE BUDGET.

(PM)

THE MAIN CHARACTERISTICS OF BUDGET ARE AS FOLLOWS:

- 1) A budget is concerned for a definite future period.
- 2) A budget is a written document.

- 3) A budget is a detailed plan of all the economic activities of a business.
- 4) All the departments of a business unit co-operate for the preparation of a business budget.
- 5) Budget is a mean to achieve business and it is not an end in itself.
- 6) Budget needs to be updated, corrected and controlled every time when circumstances changes. Therefore it is a continuous process.
- 7) Budget helps in planning, coordination and control.
- 8) Different types of budgets are prepared by industries according to business requirements.
- 9) A budget acts a business barometer.
- 10) Budget is usually prepared in the light of Past Experience.
- 11) Budget is a constant endeavor of the Management.

Q.No.4. DESCRIBE THE SALIENT FEATURES OF BUDGET MANUAL.

(M14 - 4M) (PM)

SALIENT FEATURES OF BUDGET MANUAL:

- a) Budget manual contains much information which is required for effective budgetary planning.
- b) A budget manual is a collection of documents that contains key information for those involved in the planning process.
- c) 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
- d) Budget Manual contains a form of organization chart to show who is responsible for the preparation of each functional budget and the way in which the budgets are interrelated.
- e) It contains a timetable for the preparation of each budget.
- f) Copies of all forms to be completed by those responsible for preparing budgets, with explanations concerning their completion is included in Budget Manual.

Q.No.5. LIST THE EIGHT FUNCTIONAL BUDGETS PREPARED BY A BUSINESS.

(N09 - 3M) (PM)

THE VARIOUS COMMONLY USED FUNCTIONAL BUDGETS ARE:

a) Sales Budget	e) Direct Material Purchase Budget
b) Production Budget	f) Direct Labour (Personnel) Budget
c) Plant Utilisation Budget	g) Factory Overhead Budget
d) Direct Material Usage Budget	h) Production Cost Budget.

Q.No.6. EXPLAIN BRIEFLY THE CONCEPT OF FLEXIBLE BUDGET AND FIXED BUDGET

(N08 - 2M) (PM)

- 1) **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".

SUITABILITY FOR FLEXIBLE BUDGET:

- a) Seasonal fluctuations in sales and/or production, for example in soft drinks industry;

- b) A company which keeps on introducing new products or makes changes in the design of its products frequently;
- c) Industries engaged in make-to-order business like ship building;
- d) An industry which is influenced by changes in fashion; and
- e) General changes in sales.

2) **Fixed Budget:** According to CIMA official terminology, "a fixed budget, is a budget designed to remain unchanged irrespective of the level of activity actually attained". It is also known as a Static budget.

Essential conditions:

- a) When the nature of business is not seasonal.
- b) There is no impact of external factors on the business activities
- c) The demand of the product is certain and stable.
- d) Supply orders are issued regularly.
- e) The market of the product should be domestic rather than foreign.

Q.No.7. DIFFERENCE BETWEEN FIXED AND FLEXIBLE BUDGETS: (N11,M16 - 4M) (SM)

NO	FIXED BUDGET	FLEXIBLE BUDGET
1	It does <u>not change</u> with actual volume of activity achieved. Thus it is known as <u>rigid</u> or <u>inflexible budget</u>	It can be <u>re-casted</u> on the basis of <u>activity level</u> to be achieved. Thus it is not rigid.
2	It <u>operates</u> on <u>one level of activity</u> and under <u>one set of conditions</u> . It assumes that there will be <u>no change</u> in the <u>prevailing conditions</u> , which is <u>unrealistic</u> .	It consists of <u>various budgets</u> for <u>different levels of activity</u> .
3	Here as all costs like - <u>fixed</u> , <u>variable</u> and <u>semi-variable</u> are <u>related</u> to <u>only one level of activity</u> so <u>variance analysis</u> does not give <u>useful information</u> .	Here analysis of variance provides <u>useful information</u> as <u>each cost</u> is <u>analysed according to its behaviour</u> .
4	If the <u>budgeted</u> and <u>actual activity levels</u> differ significantly, then the aspects like <u>cost ascertainment</u> and <u>price fixation</u> do not give a <u>correct picture</u> .	Flexible budgeting at different levels of activity <u>facilitates the ascertainment of cost</u> , <u>fixation of selling price</u> and <u>tendering of quotations</u> .
5	Comparison of <u>actual performance</u> with <u>budgeted targets</u> will be <u>meaningless</u> specially when there is a difference between the two activity levels.	It provides a <u>meaningful basis</u> of <u>comparison</u> of the <u>actual performance</u> with the <u>budgeted targets</u> .

Q.No.8. DISCUSS THE COMPONENTS OF BUDGETARY CONTROL SYSTEM. (M-09,2M) (SM)

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:

- a) **Physical Budgets:** Sales Quantity, Product Quantity., Inventory, Manpower budget.
- b) **Cost Budgets: Manufacturing** Cost, Administration Cost, Sales & Distribution cost, R & D Cost.

- c) **Profit Budget:** A budget which enables in the ascertainment of profit, for example, sales budget, profit and loss budget, etc.
- d) **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.

Q.No.9. DESCRIBE THE STEPS INVOLVED IN THE BUDGETARY CONTROL TECHNIQUE.

(N-13,4M) (PM)

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

- a) **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.
- b) **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.
- c) **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.
- d) **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.
- e) **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.
- f) **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.

Q.No.10. STATE THE CONSIDERATIONS ON WHICH CAPITAL EXPENDITURE BUDGET IS PREPARED.

(N12 - 4M) (PM)

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.

THE END