CA INTER

COSTING

THEORY BOOK

Appicable for May / Sep 2024 Exams

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Basic Concepts

ABC Analysis of Theory Questions

Q.1	Explain the meaning of cost, costing and cost accounting?			C
Q.2	Define Cost Units and provide some examples?			C
Q.3	Define Cost Centres and describe its types?			C
Q.4	Write Short note on Cost Objects?			C
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	Costs?			
Q.23	You have been asked to install a costing system in a manufacturing company. What practical difficulties will you expect and how will you propose to overcome the same?		B	
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Question 1 Explain the meaning of cost, costing and cost accounting?

Answer:-Cost:- Amt of expenditure incurred in producing a product or providing a service.
Costing:-Procedure of ascertaining cost of product being manufactured or service being rendered.
Cost Accounting:-Process beginning with recording of income & expenditure and ending with preparation of periodical statements and reports for controlling costs

Question 2 Define Cost Units and provide some examples?

Answer:-Unit of product, service or/and time in relation to which costs isexpressed e.g. cost per passenger km

Question 3 Define Cost Centres and describe its types ?

Answer:- It is dept. product or job for which cost is ascertained. Cost Centres are of two types
1. **Personal Cost Centre*:*** It consists of a person or group of persons e.g. machine operator.
2. **Impersonal Cost Centre:** It consists of a location or an equipment e.g. location of factory

Cost Centre in a manufacturing concern: 2 Types
1. ***Production Cost Centre:-***where raw material is convertedinto finished product.
2. ***Service Cost Centre:*** It is a cost centre which provide service to a productioncost centre.

Question 4 Write Short note on Cost Objects?

Answer:-Cost object is anything for which a separate measurement of cost is required. Cost object may be a product (Computer, TV) a service (Transport service) a project, a customer (Metro rail project) etc.

Question 5 Describe objectives of Cost Accounting?

1. **Ascertainment of Cost:** To determine cost for a job, process or product.

2. **Determination of Selling Price:** Aims at earning profit so good mark-up on cost.
3. **Cost Control:** Actual cost incurred in producing a product does not exceed its standard cost.
4. **Cost Reduction:** Reducing cost further from standard cost level.
5. **Ascertaining the profit of each activity:** Match cost with the revenue& determine costing P&L
6. **Assisting management in decision making:** Help Selection a course of action out of two or more alternative courses.

Question 6 State difference between Cost Control and Cost Reduction?

Cost Control	Cost Reduction
Actual cost should not exceed standard cost If it exceeds, investigation is needed.	Reducing cost further from standard cost level without impairing product quality.
Main objective - Control cost so as not to exceed the standard limits.	Main objective - Achieve real and permanent reduction in cost p.u. of goods mfd.
Standards are treated as milestone	Standards are assumed to have much extra cost.
Preventive function	Corrective function.
Emphasis on past and present.	Emphasis on present and future.

Question 7 State difference between Financial Accounting and Cost Accounting

Sl No.	Basis	Financial Accounting	Cost Accounting
1.	Objective	To provide information about financial performance.	To provide information of ascertainment of cost for the purpose of cost control and decision making.
2.	Nature	Records all expenses as direct or indirect	Records all expenses as material, labour and OH cost.
3.	Recording of Data	Records Historical data.	Useofbothhistorical costs & pre-determined costs.
4.	Users of information	Users are shareholders, creditors, financial analysts and government and its agencies etc.	User is only internal mgt
5.	Analysis of costs and profits	Shows total profit or loss of company	Shows profit or loss of each product
6.	Time Period	Financial statements are prepared usually for a year.	Its reports and statements are prepared as and when required.

Question 8 State difference between Cost Accounting and Management Accounting?

	Basis	Cost Accounting	Management Accounting
11	Nature	It records the quantitative aspect only	It records both qualitative and quantitative aspect.
2	Objective	It records the cost of producing a product and providing a service	It Provides information to management for planning and co-ordination

3	Area	It only deals with cost Ascertainment.	It is wider in scope as it includes F.A., budgeting, Tax, Planning.
4	Recording of data	It uses both past and present figures.	It is focused with the projection of figures for future.
5	Development	It's development is related to industrial revolution.	It develops in accordance to the need of modern business world.
6	Rules and Regulation	It follows certain principles and procedures for recording costs of different products	It does not follow any specific rules and regulations.

Question 9 Describe advantages of Cost Accounting System?

1. **Cost Determination:-**To determine total cost and unit cost of a product or service.
2. **Helping in Cost Reduction:-**Find new methods of mfd and reduce cost per unit of product.
3. **Product Profitability Analysis:-**To eliminate unprofitable products and identifyexact causes for decrease or increase in the profit/loss of the business.
4. **Determination of selling price:-**Good mark up for profit earning.
5. **Cost Control and Variance Analysis:-** check adverse variance and avoid in future.
6. **Cost Comparison and Benchmarking:-**Cost comparison helps in cost control. Uniform costing&inter-firm comparison methods are used for comparison between same industry firms.

Question 10 Describe Limitations of Cost Accounting?

1. **Expensive:** Detailed analysis in allocation & absorption of overheadsneed additional work& hence additional salary.
2. **Requirement of Reconciliation:** Profit as per cost & financial records is different.
3. **Duplication Work**: Maintain two setsof accounts i.e. Financial Account and Cost Account.
4. **Inefficiency:** Costing system itself does not control costs but its usage does.

Question 11 Describe importance of Cost Accounting?

1. **Control of Direct and Indirect cost*:***Control over material cost (avoid over stocking), labour cost (Avoid high labour turnover rate)& overheads cost (avoid unnecessary exp.)
2. **Measuringefficiency & fixing responsibility*:*** Compare actual with std and fix responsibility for any deviations.
3. **Budgeting*:*** Actual performance is compared with budgeted performance like sales budget.
4. **Price determination*:***Good mark up for profit earning.
5. **Curtailment of loss during off-season*:*** Reduce overhead by utilising idle capacity during off-season.
6. **Expansion*:*** Production estimationhelp in deciding future expansion.
7. **Arriving at decisions*:*** Decision need correct cost information otherwise without proper cost accounting decision would be like taking a jump in the dark.

Question 12 Describe the factors to be considered before installation of Costing system?

1. **Objective:** Whether to fix selling prices or control costs or both.
2. **Nature of Business:** The costing system, suitable to company, should be introduced.
3. **Organisational Hierarchy:** Instant information about Costs to different level ofmanagement.
4. **Knowing the product:** Nature of product determines the type of costing system to beimplemented. In case of perishable or short self- life, marginal costing method is required to know the contribution and minimum selling price.
5. **Knowing the production process:** Prior complete knowledge of all production process is required. Cost apportionment can be done on the most appropriate and scientific basis.
6. **Method of maintenance of cost records:** Integrated accounts should be maintained so difference in profit of cost and financial accounts.
7. **Statutory compliances and audit**: Books & Accounts to comply with statutoryrequirements.

Question 13 Explain Essential requirements of a Good costing System (GCS)?

1. **Informative and Simple:** GCS should be tailor-made, practical, simple& easy to operate.
2. **Accuracy:** Data provided by GCS should be accurateotherwise wrong decision may be taken.
3. **Support from Management & subordinates:** Necessary cooperation and participationof various deptsof company is required.
4. **Cost-Benefit:** The Cost of installing and operating the system should justify the results.
5. **Trust:** Management should trust Costing System & provide ahelp in its development & success.
6. **Flexible:-**GCS should be flexible to adopt the changing requirements of the business.
7. **Detail:-**It should provide information in detail and also avoid unnecessary details.

Question 14 Classify Costs on the basis of nature or element?

1. **Direct Materials:** Those materials which can be conveniently identified with and can be directly allocated to a particular product, job or process e.g. Refill in Pen, Milk in ice cream.
2. **Direct Labour:** Those labour which can be conveniently identified with and can be directly allocated to a particular product, job or process e.g. Halwai in confectionary.
3. **Direct Expenses:**All direct costs other than direct material cost and direct labour costs are termed as direct expenses e.g. royalty based on output produced.
4. **Indirect Materials:** Those materials which cannot be conveniently identified with and cannot be directly allocated to a particular product, job or process e.g. lubricant oils used in machine.
5. **Indirect Labour** Those labour which cannot be conveniently identified with and cannot be directly allocated to a particular product, job or process e.g. labour employed in security department
6. **Indirect Expenses:** All indirect costs other than indirect material cost and indirect labour costs are termed as direct expenses e.g. rent of building.
7. **Overheads:** It is sum of indirect material costs, indirect labour costs and indirectexpenses. OH = Production OH + Admin OH + Selling OH and Distribution OH.

Question 15 Classify Costs on the basis of Functions?

1. **Prime Cost** = Direct material cost + Direct Labour Cost + Direct Expenses
2. **Factory Cost or Works Cost** = Prime Cost + factory overheads + opening WIP – closing WIP
3. **Cost of Production** = works costs + Administrative overheads
4. **Cost of Goods Sold** = Cost of production + opening stock of FG – closing stock of FG
5. **Cost of Sales**= Cost of goods sold + selling and distribution expenses

Question 16 Classify Costs on the basis of Variability or Behaviour?

1. **Fixed costs** – Those costs which remain same in totality and do not increase or decrease with volume of output but fixed cost per unit of output produced increases with a decrease in volume of production and vice-versa.
2. **Variable Costs** – Those costs which vary in direct proportion to volume of production. Direct material cost, direct labourcost and direct expenses are variable costs. Variable cost per unit remain same whether production volume is increased or decreased.
3. **Semi-variable costs –**Those costs which varies with the volume of output but not in same proportion in which output is increased e.g. telephone expenses.

Question 17 Classify Costs on the basis of Controllability?

1. **Controllable Costs**:-Costs which can be controlled by management e.g. cost of raw materials.
2. **Uncontrollable Costs**–Costs which cannot be controlled by management e.g. Rent of factory.

Question 18 Classify Costs on the basis of Normality?

(a) Normal Cost - Cost which is normally incurred at a given level of output. It is treated as part of cost of production e.g. cost of materials and labour.

(b) Abnormal Cost - Cost which is not normally incurred at a given level of output. It is charged to Costing Profit and loss Account e.g. cost of abnormal material losses.

Question 19 Classify Costs on the basis of Management Decision Making?

1. **Pre-determined Cost -** Cost which is computed in advance before production start on some scientific basis of all factors e.g. standard cost of material. May be std cost or estimated cost.
2. **Standard Cost** - A pre-determined cost, which is calculated from managements 'expectedstandard of efficient operation' e.g. e.g. cost of standard material to be consumed.
3. **Marginal Cost** –It is sum of direct material, direct labour, direct expenses and variable overhead.
4. **Estimated Cost** – A pre-determined cost which is computed in advance before the production start on some scientific basis of past actual costs adjusted with anticipated future changes.
5. **Differential Cost** - Increase or decrease in total cost (variable as well as fixed) due to change in activity level, technology, process or method of production.
6. **Imputed Costs** - Notional costs which do not involve any cash outlay.Interest on own capital.
7. **Capitalised Costs** - Costs which are initially recorded as assets &subsequently treated as exp.
8. **Product Costs** –Costs which are charged to products or services. Variable manufacturing cost under marginal costing technique and manufacturing costs (variable and fixed) under absorption costing technique are products costs.
9. **Opportunity Cost** –Cost of next best alternative. This cost refers to the value of sacrifice made or benefit of opportunityforegone in accepting an alternative course of action.
10. **Out-of-pocket Cost** - Cost which involves cash outflow e.g. wages of workers.
11. **Shut down Costs** - Costs which continue to be incurred even when a plant istemporarily shutdown *e.g.* rent of building.
12. **Sunk Costs** - Historical costs incurred in the past are known as sunk costs. They play norole in decision making in the current period.
13. **Discretionary Costs** – Costs which can be avoided /reduced by managerial decisions e.g. advertising, research and development etc.
14. **Period Costs** - Costs which are not charged to the products but arecharged as expenses against the revenue of the period in which they are incurred.
15. **Explicit Costs -** Costs which require immediate cash payment e.g.when materials are purchased, labour are employed. These are required to be paid instantly in cash

16. **Implicit Costs -** Costs do not involve any immediate cash payment e.g. depreciation of machine.

Question 20 Describe various methods of Costing?

1. **Job Costing:-**Cost of each job is ascertained separately e.g. customer order in printing press.
2. **Batch Costing:-**Extension of job costing. A batch may represent a number of small orders passed through the factory in batch.
3. **Contract Costing:-**Cost of each contract is ascertained separately e.g. construction of bridges.
4. **Single or Output Costing:-**Cost of a product is ascertained e.g. only one produce like bricks.
5. **Process Costing:-**Cost of each stage of work is ascertainede.g.cost of making paper from pulp.
6. **Operating Costing:-**Used by concerns rendering services like transport or hospital.
7. **Multiple Costing:-**Combination of two or more methods of costing outlined above. Suppose a firm manufactures bicycles including its components; the parts will be costed by the system of job or batch costing but the cost of assembling the bicycle will be computed by the Single or output costing method. The whole system of costing is known as multiple costing.

Question 21 Describe various techniques of Costing?

1. **Uniform Costing**:-When a number of firms in an industry agree among themselves to follow the same system of costing and to adopt common terminology for various items and processes then they are said to follow a system of uniform costing.
2. **Marginal Costing:-**Ascertainment of marginal cost by differentiating between fixed and variable costs. It is used to ascertain effect of changes in volume on profit using P/V ratio.
3. **Standard Costing and variance analysis:-**It involves Fixation of standards for each element of costs, Comparison of actual costs with standard costs to ascertain the variances and take action for adverse variances.
4. **Historical Costing:-**Actual costs are ascertained after they are incurred.
5. **Direct Costing:-** Practice of charging all direct costs to operations, processes or products and writing off all indirect costs against profits in which they arise.
6. **Absorption Costing:-** Practice of charging all variable manufacturing costs and fixed production overheads to operations, processes or products and writing off all administrative, selling and distribution overheads against profits in the period in which they arise.

Question 22 Explain:

(i) **Pre-production Costs:** These are the costs which are incurred inmaking 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 is taken up.

(ii) **Research and Development Costs:** Research costs are the costs incurred for theoriginal and planned investigation undertaken with a prospect of gaining new technical knowledge and understanding.
Development costs are the cost incurred in applying research findings to a plan or design for the production of new or substantially improved products, processes, or services prior to the commencement of commercial production.

(iii) **Training Costs:** Costs which are incurred in relation to providing training to theworkers, 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 and costs associated with training centre etc. The total cost of training section is thereafter apportioned to production centers.

(iv) **Conversion cost**: It is the cost incurred to convert raw materials into finished goods. It isthe sum of direct wages, direct expenses and manufacturing overheads.

Question 23. You have been asked to install a costing system in a manufacturing company. What practical difficulties will you expect and how will you propose to overcome the same?

1. **Lack of top management support:** Installation of a costing system does not receive theadequate support of top management. They consider it as interference in their work. They believe that such, a system will involve additional paperwork. They also have a misconception in their minds that the system is meant for keeping a check on their activities.
2. **Resistance from cost accounting departmental staff:** The staff resists because of fearof loosing their jobs and importance after the implementation of the new system.
3. **Non co-operation from user departments:** The foremen, supervisor and other staffmembers may not co-operate in providing requisite databecause this would increase their responsibilities and will increase paper work.
4. **Shortage of trained staff:** Since cost accounting system's installation involvesspecialised work, there may be a shortage of trained staff.

To overcome these practical difficulties, necessary steps required are:

- ❖ To convince to top management regarding utility of the system.
- ❖ Resistance and non-co-operation can be overcome by behavioural approach.
- ❖ Proper training should be given to the staff at each level
- ❖ Regular meetings should be held with the cost accounting staff, user departments, staff and top management to clarify their doubts.

Question 24*Define Explicit costs. How is it different from implicit costs?*

Answer: Explicit costs:These costs are also known as out of pocket costs. They refer to those costswhich involves immediate payment of cash. Salaries, wages, postage and telegram, interest on loan etc. are some examples of explicit costs because they involve immediate cash payment. These payments are recorded in the books of account and can be easily measured.

Main points of difference:The following are the main points of difference between Explicit andImplicit costs.
1. Implicit costs do not involve any immediate cash payment. They are also known as imputed costs or economic costs.
2. Implicit costs are not recorded in the books of account but yet they are important for certain types of managerial decisions such as relative profitability under two alternative courses of action.

Question 25 Distinguish between Marginal Costing and Differential Costing?

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 on profit.
Differential Costing is a technique of costing which uses differential costsand differential revenues for ascertaining the acceptability of an alternative.
The technique is termed as incremental costing when the difference between costs is increase in costs.The technique is termed as decremental costing when the difference between costs is decrease in costs. The main points of distinction between marginal costing and differential costing are as below:

1. The technique of marginal costing requires a clear distinction between variable costs and fixed costs whereas no such distinction is made in the case of differential costing.
2. In marginal costing, contribution ratio is the main yard stick for performance evaluation and for decision making whereas under differential costing, differential costs are compared with the incremental or

decrementalrevenue for choosing an alternative.

3. Differential cost analysis is possible in both absorption costing and marginal costing whereas marginal costing in itself is a different technique.
4. Marginal costsare incorporated in the cost accounting whereas differential costs are worked out separately.

Question 26 Explain Profit centres and investment centres? OR Define Responsibility centre?

Responsibility Centre :- it is a unit of function of the organisation under the control of a manager who has direct responsibility for its performance. Responsibility centre are classified into following 5 categories:-

1. Cost centre:- it is a responsibility centre for which costs are accumulated. The main objective of cost centre is to minimise the costs of centre.
2. Revenue Centre:- it is a responsibility centre for which revenues are accumulated. The main objective of revenue centre is to maximise revenue of the centre.
3. Profit centre:- it is a responsibility centre for which both revenues and costs are accumulated. The main objective of this centre is to maximise profit of the centre.
4. Contribution Centre:- it is a responsibility centre for which both revenues and variable costs are accumulated. The main objective of this centre is to maximise contribution of the centre.
5. Investment centre:- it is a responsibility centre for which costs, revenues and investment in assets are accumulated. The main objective of this centre is to maximise return on capital employed or return on investment of the centre.

Question-27 Discuss briefly the relevant costs with examples ?

Answer:A cost is relevant when it satisfies two conditions i.e. it should occur in future & it should be different among alternative courses of action.Relevant costs affect decision taken by management e.g. while considering a proposal for plant replacement by discarding the existing plant, the original cost of the old plant are irrelevant.

Question-28 State the method of costing and the suggestive unit of cost for the following industries

	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

Question 29State the types of cost in the following cases:

(i) Interest paid on own capital not involving any cash outflow - Type of cost - Imputed cost
(ii) Withdrawing money from bank deposit for the purpose of purchasing new machine for expansion purpose – Type of cost - Opportunity cost
(iii) Rent paid for the factory building which is temporarily closed – Type of cost - Shut down cost
(iv) Cost associated with the acquisition and conversion of material into finished product – product cost

Question 30 Identify the methods of costing for the following:

(i) Where all costs are directly charged to a specific job. – **Job costing**
(ii) Where all costs are directly charged to a group of products. --- batch costing
(iii) Where cost is ascertained for a single product. – unit costing / single costing / output costing
(iv) Where the nature of the product is complex and method cannot be ascertain – multiple costing

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Operating Costing

ABC Analysis of Theory Questions

Q.1	Explain briefly, what do you understand by Operating Costing. Discuss units of cost used in operating costing?		B	
Q.2	Explain Absolute and Commercial Tonne – Kms ?		B	
Q.3	What do you understand by Operating Costs? Describe its essential features and state where it can be usefully implemented?	A		
Q.4	Distinguish between Operating Costing and Operation Costing ?	A		
Q.5	State the appropriate 'Cost Unit' for the following industries?	A		

Question 1 Explain briefly, what do you understand by Operating Costing. Discuss units of cost used in operating costing?

Answer:- OC:- Method of ascertaining cost of providing a service to customer (Used in service industries) e.g. transport companies, cinema halls, hospitals

Units of cost:- Simple cost unit (when only one cost unit is used) + Composite cost unit (when two units are merged into one).

Service industry	Simple Cost Unit
Transport Services	Per kilometre

Service industry	Composite Cost Unit
Passenger transport	Per passenger – km

Question 2 Explain Absolute and Commercial Tonne – Kms ?

Answer:- Composite unit may be computed in two ways.

1. **Absolute Tonne-km.:** it is the sum total of tonne-km., arrived at by multiplying various distances by respective load quantities carried.it uses **weighted** average concept.

$$\sum(\text{Weight Carried} \times \text{Distance})_1 + (\text{Weight Carried} \times \text{Distance})_2 + \ldots. (\text{Weight Carried} \times \text{Distance})_n$$

2. **Commercial Tonne-km.:** Commercial tonne-km., are arrived at by multiplying total distance km., by average load quantity. It uses **simple** average concept.

$$\sum (\text{Distance}_1 + \text{Distance}_2 + \ldots\ldots \text{Distance}_n) \text{ X } \frac{W1 + W2 + \ldots. Wn}{n}$$

Question 3 What do you understand by Operating Costs? Describe its essential features and state where it can be usefully implemented?

Answer: Operating Costs = costs incurred by undertakings which do not manufacture any product but provide a service example are — Transport companies, Theatres etc. Features of operating costs as follows:

1. The operating costs can be classified under three categories e.g. in case of transport companies
   - Operating/running charges: It includes expenses of variable nature e.g. expenses on petrol, diesel, lubricating oil, grease etc.
   - Maintenance charges: It includes expenses of semi-variable nature e.g. cost of tyres and tubes, repairs and maintenance, spares and accessories, overhaul, etc.
   - Fixed/standing charges: It includes garage rent, insurance, road licence, depreciation, interest on capital, salary of operating manager, etc.
2. The cost unit used is composite like passenger-Km; Kilowatt-hour, etc.

Question-4 Distinguish between Operating Costing and Operation Costing ?

Answer: Operating Costing: Method of ascertaining cost of providing a service to customer rather than on the cost of manufacturing a product (Used in service industries) e.g. transport companies, cinema halls, hospitals. Within an org. itself certain depts provide services known as service dept e.g. hospital, internal transport etc.

Operation Costing: Method under which cost are ascertained for each **operation** involved in manufacturing of goods. It is refinement of process costing. At the end of each operation, the unit operation cost is computed by dividing total operation cost by total output.

Question 5 State the appropriate 'Cost Unit' for the following industries:

Answer:

Industry	Cost Unit
Steel	Per Tonne
Bricks Making	Per 1000 bricks
Sugar	Per quintal or per 100 kg
Power/ Electricity	Per kilowatt hour

Cost Sheet

ABC Analysis of Theory Questions

Q.1	Define unit costing, cost sheet, production statement and distinction between cost sheet and production statement?	A		

Question 1 Define unit costing, cost sheet, production statement and distinction between cost sheet and production statement?

Answer:-

Unit costing is a form of process costing under which costs are accumulated and analysed under various elements of costs and the cost per unit is ascertained by dividing the total cost by the number of units produced. E.g.Cement industries and Brick-making.

A Cost Sheet is a statement showing various components of total cost of output of a particular product or service produced during a particular period. It may be prepared on actual basis or estimated basis.

Production Statement is a statement which shows different components of total cost **e.g.**Prime Cost, Factory Cost, Cost of Goods produced, Opening and Closing Stocks of Finished Goods, Sales, Profit

Cost SheetVSProduction Statement (PS):- PS includes Stock of Finished Goods, Sales and Profit in addition to various components of Total Cost whereas cost sheet includes only the various components of Total Cost.

Material Cost

ABC Analysis of Theory Questions

Q.1	Explain the concept of material and briefly describe importance of proper recording and control of material?		B	
Q.2	Describe objectives, requirements and elements of material control system?		B	
Q.3	Discuss the material procurement procedure?		B	
Q.4	Explain the treatment of various items in valuation of material receipts?	A		
Q.5	Distinguish between Bill of material and material requisition note?	A		
Q.6	Explain the duties of store-keeper of materials?			C
Q.7	Discuss in brief the methods of recording of stores?			C
Q.8	Explain advantages and disadvantages of Bin cards and stock control cards?			C
Q.9	Explain advantages of stores ledger?			C
Q.10	Distinguish between bin card and stores ledger?	A		
Q.11	List down the various techniques of inventory control?		B	
Q.12	Define various stock levels of inventory control technique?	A		
Q.13	Explain the concept of “ABC” analysis as a technique of inventory control?	A		
Q.14	Write short note on HML, VED, FSN, GOLF, SOS as a technique of inventory control?			C
Q.15	Explain two bin system and establishment of system of budgets as a technique of inventory control system?			C
Q.16	Explain in detail perpetual inventory control and continuous stock verification along with their advantages?	A		
Q.17	How the slow-moving and non-moving stores detected and what steps are necessary to reduce such stocks?		B	
Q.18	Explain use of control ratios as inventory control technique?			C
Q.19	List down the various methods of valuation of material issues?			C
Q.20	Explain Specific Price method of valuation of material issues along with its advantages, disadvantages and suitability?			C
Q.2	Explain FIFO method of valuation of material issues along	A		

1	with its advantages, disadvantages and suitability?			
Q.22	Explain LIFO method of valuation of material issues along with its advantages, disadvantages and suitability?	A		
Q.23	Explain base stock method along with its suitability?			C
Q.24	Explain simple price method of valuation of material issues along with its advantages, disadvantages and suitability?			C
Q.25	Explain weighted average price method of valuation of material issues along with its advantages, disadvantages and suitability?			C
Q.26	Explain periodic simple average price method of valuation of material issues along with its advantages, disadvantages and suitability?			C
Q.27	Explain periodic weighted average price method of valuation of material issues along with its advantages and disadvantages?			C
Q.28	Explain Moving simple average price method, moving weighted average price method, replacement price method, realisable price method, Standard price method, inflated price method and Re-use price method ?			C
Q.29	Explain the treatment of waste, scrap, spoilage and defectives and provide the ways to control these?	A		
Q.30	How normal and abnormal loss of material arising during storage is treated in cost accounts?	A		
Q.31	What is material handling cost? How will you deal with it in cost accounts?		B	
Q.32	At the time of physical stock taking, it was found that actual stock level was different from the clerical or computer records. What can be possible reasons for such differences? How will you deal with such differences?		B	
Q.33	State whether the following statements are true. Give reasons?		B	

Question 1 Meaning of material and importance of proper recording (Booking) and control (Avoid extra purchase) of material?

Answer:- Material means**all commodities/ physical objects** which are used by an organisation for finished goods. Material may be **direct material or indirect material**.

Direct material means materials which can be easily identified with and can be directly allocated with product e.g. Milk in ice-cream.
Indirect material means material which cannot be easily identified with and cannot directly allocated with product thread used in cloths.

Importance of proper recording & control of material:-
1. **Quality of FG** depends upon quality of raw material.

2. **Cost** of production **of FG**depends purchase cost of raw material.
3. **Production** may get **stopped** if right kind of material in right quantity is not available.
4. Over stocking of raw material increases **holding cost** of material thereby increase cost of FG.
5. If more material **wasted** in warehouse & in production process then losses may happen.
6. **Production deptt**. Should always have right information about available quantity of material.

Question 2 Describe objectives, requirements and elements of material control system?

Answer:-Material control is a systematic control over the procurement, storage and usage of material so as to maintain an even flow of material to right department at right time and in right quantity.

Objectives of system of material control:

1. To minimise interruption in production process due to shortage of materials & stores.
2. To minimum raw material cost and maximise raw material quality. To avoid "Out of stock" & "over stocking" situation.
3. To reduce wastages in manufacturing process.
4. To inform stock of raw material available & initiate material purchase alarm.
5. To ensure completion of customers' order on time.

Requirements of material control:

1. Proper **Co-ordination** among all departments *e.g.* purchase dept., inspection dept., storage dept., accounting dept. payment dept., is required.
2. Properly **defined purchase procedure**, ensuring most favourable price & most favourable terms & conditions, is required.
3. Proper **standard forms** ensuring proper way, of placing the order & of noting receipt of materials, is required.
4. Proper **material budgets** ensuring, least Cost in purchasing material, is required.
5. Proper **check overtransactions**, involving materials purchase & equipment purchase, is required.
6. Proper **storage of materials** with adequate safety is required.
7. Perpetual **inventory system** &continuous stock taking system is required.
8. Proper **system** to store material and issue to right department, at right time and in right quantity is required.
9. Proper **accounts** showingmaterial costs at the stage of material receipt and consumption is required.
10. Proper **material stock account,** showing materials purchased, issue from stock, inventory balances, obsolete stock, goods returned to vendors, and spoiled or defective units, is required.

Elements of Material Control:

1. **Purchasing** of materials
2. **Receiving** of materials
3. **Inspection** of materials
4. **Storage** of materials
5. **Issuing** materials
6. Maintenance of **inventoryrecords**
7. **Stock audit**.

Question 3 Discuss the material procurement procedure?

Answer:- Main steps involved in purchase procedure are as follows:-

1- **Bill of Materials (BOM)**:-
- It is prepared by planning dept& sent to stores dept., cost accounting dept., and production control department.
- it shows description of all material required for a job along with required quantities.
- It is also known as materials specification list(MSL) or simply material list (SML).

Advantages of using "BOM"
Stores Department:
1. BOM helps in preparing **material purchase requisition** (Material to be purchased).
2. BOM is authorisation document for **issuing the material**.
3. Stores clerk issues material to production dept. if the details of material asked are shown in BOM also.

Cost Accounting Department:
1. BOM helps in preparing **material budget** for a job.
2. BOM avoid excess use of material hence avoiding **material cost variances.**

Production Control Department:
1. BOM helps in **controlling usage** of materials.
2. BOM eliminate making of separate material requisition.

2- **Material Requisition Note:**
- It is prepared when a single or few items (NOT ALL ITEMS) of materials are required.
- It is prepared by the **production department**.
- It is also known as material requisition slip.

3- **Purchase Requisition (PR):-**
- It is a form used for making a written request to the **purchasing department** to purchase materials.
- This form is filled up by the **store keeper** for **regular materials** and by the departmental head in case special materials is required.
- Techniques of maximum, minimum, reorder level and EOQ are used.

4- **Inviting Tender/ Requesting for proposal (RFP):** it is responsibility of purchase dept.Materials purchase department face following questions:
(i) What to purchase?
(ii) When to purchase?
(iii) How much to purchase?
(iv) From where to purchase.
(v) At what price to purchase.

Tender Invitation / Notification:- Material purchase department gathers information about rate, quantity and quality of required material from selected vendors by inviting quotations.

5- **Selection of Quotation/ Proposal:**
- After invitation of tender from the vendors, interestedvendors, fulfilling all the criteria mentioned in the tender notice, send their price quotations to the purchase department.
- Thereafter a comparative statement is prepared.
- Price; quantity; quality offered; time of delivery; mode of transportation; terms of payment; reputation of supplier; are the factors considered in selecting a proposal.

6- **Preparation and execution of Purchase Orders:**
- After deciding on the bestquotation, Purchase manager issues the formal purchase order.
- Purchase order is a written request to supplier to supply materials at specified rates & within a specified period.

7- **Receipt and inspection of materials:**
- After giving purchase order, material is received & inspected.
- After satisfactory inspection, materials are received and Goods Received Note (Goods inward note) is issued.
- But if materials are not found in good condition then goods are returned back to the vendor along with a Material Returned Note (Material outward return note).

8 **Checking and passing of bills for payment:**
- Invoice received from the supplieris sent to the accounting section to check quantity & price with goods received note & purchase order respectively.
- The accounting section after checking its accuracy finally passes the invoice for payment.

Question 4 Explain the treatment of various items in valuation of material receipts?

Answer :-Valuation of material receipts means ascertaining cost of material purchased.
Treatment of items related to purchase of materials is shown as below:-

Sl No.	Items	Treatment (Add to / Deduct from cost of purchase)
	Discount & Subsidy	
1.	Trade Discount	Deduct from purchase price.
2.	Quantity Discount	Deduct from purchase price.
3.	Cash Discount	Not deduct from purchase price (Interest & Finance Charges)
4.	Subsidy / Grant / Incentives	Deduct from purchase price
	Duties & Taxes	
5.	Road Tax / Toll Tax	Add to Purchase cost
6.	Octroi / Entry Tax	Add to Purchase cost (If borne by buyer)
7.	GST	Add to Purchase cost (If not getting credit)
8.	Purchase Tax	Not added to purchase cost (Credit available)
	Penalty & Charges	
9.	Demurrage	Not Add to purchase cost (Since Penalty)
10.	Detention charges / Fine	Not Add to purchase cost (Since Penalty)
11.	Penalty	Not Add to purchase cost (Since Penalty)
	Other Expenditures	
12.	Insurance charges	Add to Purchase cost
13.	Commission / Brokerage Paid	Add to Purchase cost
14.	Freight Inwards	Add to Purchase cost
15.	Cost of containers	Add to Purchase cost (If non-returnable) Not add to purchase cost (If returnable)
16.	Shortage	Cost of shortage due to normal reasons is absorbed by good units while cost due to abnormal reasons is charged as loss in P&L A/c.

Question 5 Distinguish between Bill of material and material requisition note?

Answer:-

Bills of Material (BOM)	Material Requisition Note (MRN)
Prepared by planning dept.	Prepared by the production dept.
It shows description of all material required for a job along with required quantities.	It is prepared when a single or few items (NOT ALL ITEMS) of materials are required.
it can replace MRN.	It cannot replace **BOM**.
It can be used for the purpose of inviting quotation.	It can be used in calculating **historical cost** only.
It shows quantity of material to be drawn from stores.(Quantitative Control)	It shows material actually drawn from stores.

Question 6 Explain the duties of store-keeper of materials.

Answer:-Properly storing material after purchase in stores is more important
Duties of store keeper:

1. **General control over store**:- Store keeper should verify the physical quantities of material with Goods received note & ensure proper storage at right place.
2. **Safe custody of materials:** Store keeper should ensure **quality of material** remain intact.
3. **Maintaining records:** Store keeper should maintain proper record of quantity received,issued & balance in hand.
4. **Initiate purchase requisition:** Store keeper should initiate purchase requisitions for regular material when its stock level reaches re-order level fixed.
5. **Maintaining adequate level of stock:** Store keeper should maintain adequate stock level at all time to avoid interruption of production process.
6. **Issue of materials:** Store keeper should issue materials only against the MRN approved by the appropriate authority and also refer BOM.
7. **Stock verification and reconciliation:** Store keeper should verify the book balanceswith the actual physical stock to check pilferage, deviation if any.

Question 7 Discuss in brief the methods of recording of stores?

Answer:-The record of stores may be maintained in three forms:

1. **Bin Cards: It consists of two terms 'Bin' and 'card'.**
    - **Bin** refers to a**Almirah / box / container / space** where material is kept.
    - A Card is tied outside each bin to record the **quantities of material received, issued, returned and in hand in the bin.**
    - This card also contains information like maximum level, minimum level, reorder level, code of material etc.
    - A separate bin is maintained for each item of material and is given separate identification number.

- It also called stock card.

2. **Stock Control Cards:**
    - This card is maintained by stores department for**every item of material**.
    - It records receipt, issue, return, in hand and material on orders given.
    - It records **quantity of material** only.
    - These cards are placed **at one place** in cabinets or trays or loose binders.

Distinction between Bin Card and Stock Control Card

Bin Card	Stock Control Card
It does not show materials on order	It shows materials on order
It is kept outside each bin	It is kept at one place in cabinets or trays or loose binders
It is written by person handling material	It is written by person solely engaged in clerical work
It is likely to be smeared with dirt and grease.	It is kept in neat and clean way.
It facilitates easy physical identification of an item of material	It does not facilitate an easy physical identification of an item of materials.

3. **Stores Ledger:** Stores Ledger is a subsidiary ledger in which a separate account is opened for each item of materials in the store to records both the quantity and cost of the materials received, issued, returned and in hand. **(Use computer)**

Question 8 Explain advantages and disadvantages of Bin cards and stock control cards?

Answer:- Advantages of Bin Card:-

1. Entries in Bin Card are made at the same time when goods are received or issued.
2. Comparison of actual quantity in hand with book balance is possible at any time.
3. A separate container is made for each item of material.

Disadvantages of Bin Card:-

1. Records of materials are spread over a wide area.
2. Bin cards get smeared with dirt and grease.
3. Making bin card is clerical work but performed by person involved in handling of material.

Advantages of Stock Control Card:-

1. These cards are placed at one place in cabinets.
2. Records are kept in a neat and clean manner by people specially engaged in clerical work.
3. Overall position of stocks can be obtained without going around the store.(Since Placed at one place)

Disadvantages of Stock Control Cards:-

1. On the spot comparison of physical stock with book balance is not possible.
2. Physical identification of materials in stock is not easy since SCC are placed in cabinets.

Question 9 Explain advantages of stores ledger?

Answer:-

1. **Distribution of work:** among a number of clerks hence receipts and issues are posted quickly

and regularly.
2. **Centralised record:** If organisationhaving a number of depots.
3. **Testing of accuracy:** can be mechanically tested moreconveniently.
4. **Cost effective:** Recurring cost ofmaintaining records is less than if kept manually.
5. **Control over stock:** If up-to-date records are available, saving in both the amount of investment in stock and their cost is possible.

Question 10 Distinguish between bin card and stores ledger?

Answer:-Difference between Bin Card & Stores Ledger

Bin Card	Stores Ledger
Maintained by store keeper in store.	Maintained by costing dept.
Contains only quantity of material received, issued & returned.	Contains both quantity and cost of material.
Bin cards are updated instantly with each receipt & issue.	Posting in stores ledger is done at periodic intervals
Each transaction is posted quickly.	Transactions are summarized & posted at intervals.
Inter- dept. transfer not recorded.	Inter- dept. transfer recorded.

Question 11 List down the various techniques of inventory control?

Answer:-The main objective of inventory control is to maximum efficiency in production with minimum investment in stock of raw materials, stores & consumables.

Techniques of Inventory control:
1. Setting of various stock levels.
2. ABC analysis.
3. Two bin system.
4. Establishment of system of budgets.
5. Use of perpetual inventory records and continuous stock verification.
6. Determination of economic order quantity.
7. Review of slow and non-moving items.
8. Use of control ratios.

Question 12 Define various stock levels of inventory control technique?

Answer:-Setting of Various Stock Levels:
1. **Re-Order Quantity:** Re-order quantity is the quantity of materials for which purchaseorder is placed. It is known as EOQ.

Economic Order Quantity (EOQ)
Meaning:-The size of the order at which both ordering and carrying cost are minimum is known as EOQ.

- **Ordering cost:** It includes cost of placing an order, cost of inspecting goods, cost of receiving goods and cost of placing an order. **Ordering cost shall be less when numbers of orders made annually are less and vice-versa.**
- **Carrying Cost:-**The cost for holding the inventories, It includes the cost of capital invested in inventories, cost of storage space, insurance cost, etc.
- **Annual consumption of inventory**:- it means annual requirement of material.

Formula:-EOQ= $\sqrt{\dfrac{2\,AO}{C}}$

A= Annual usage of units, O= Ordering cost per order, C= Annual carrying cost per unit p.a.

Assumptions underlying E.O.Q.:

(i) **Ordering cost** per order and **carrying cost per unit per annum** are **fixed**.

(ii) Annual usage of inventory is **known.**

(iii) **Cost per unit** of the material is **constant** and is known as well.

(iv) The quantity of material **ordered** is **received immediately***i.e.* the **lead time is zero.**

2. **Re-order level:-**
   Meaning:-It is the level of material at which a fresh purchase order of material should be placed. Order is placed in such a way that fresh supplies are received just before the minimum level is reached.
   Formula:- Re-order level = Maximum Usage X Maximum Lead Time
   (or)
   = Minimum level + (Average Usage X Average lead time)

   Re-order period or lead time**:** Time gap between placing an order and receiving the stock.
3. **Minimum level**:-It is the level of stock below which stock in hand should not be allowed to fall (lowest inventory balance which must be maintained in hand at all times).
   Formula:-Minimum level of inventory = re-order level – (Normal Usage X Normal Lead Time)
4. **Maximum level**:-It is the level of stock above which stock in hand should not be allowed to exceed (maximum inventory quantity held in stock at any time).
   Formula:- Maximum level of inventory = re-order level + re-order quantity – (Minimum Usage X Minimum Lead Time)
5. **Average Stock Level**:- It is the average stock held by an organisation.
   Formula:- ASL = Minimum Level + $\dfrac{\Re - order\ Quanity}{2}$
   OR $\dfrac{Maximum\ Level + Minimum\ Level}{2}$
6. **Danger Level**:- It is the level at which normal issues of raw material inventory are stopped and emergency issues are made on special approval by competent authority.
   Formula:- DL = Normal Usage X maximum lead time for emergency purchases
7. **Buffer Stock**: Some quantity of stock kept as contingency to be used in case of sudden big order. Such stock is known as buffer stock.

Question 13 Explain the concept of "ABC" analysis as a technique of inventory control?

Answer:-All items of material are grouped into three categories A, B and C according to their **use value** during a period. High use value items are controlled more closely than low use value items.

1. 'A' Category of items consisting of **about 10 % of the total physical items of material handled** and about **70% of inventory use value**.
2. 'B' Category of items consisting of about **20% of the total physical items of material handled** and about **20% of inventory use value.**
3. 'C category of items consisting of about 70% of total physical items of material handled

and about **10% of total inventory use value.**

'A' category of items controlled effectively by using a **regular system**, which ensures neither over-stocking nor shortage of materials for production.
'B' category of items, same degree of control as applied in 'A' category of items is not required. This category of items are controlled by routine control measures.
'C' category of items, there is **no need of exercising constant control**. Orders for items in this group is placed either after six months or once in a year considering consumption requirements.

Illustration:-

Category	No. of Items	% of Total number of items	Item Value (₹)	% of Total Value
A	100	10%	70,000	70%
B	200	20%	20,000	20%
C	700	70%	10,000	10%
Total	**1000**	**100%**	**1,00,000**	**100%**

Advantages of ABC Analysis

1. More control over high value items (A category items –Large Invt.).
2. Low control over low value items.
3. Minimum total ordering and carrying cost.
4. Maintain high inventory turnover rate.

Question 14 Write short note on HML, VED, FSN, GOLF, SOS as a technique of inventory control?

Answer:-

1. **HML:** Inventory items are classified as high cost, medium cost & lowcost items.
2. **VED:** Inventory items are classified as vital, essential and desirable items under this system.
   - Vital items are important since their unavailability will result in storage of production.
   - Essential items are required for efficient running of production process hence stock must be maintained.
   - Desirable items does not affect production immediately but help in more efficiency and less fatigue.
3. **FSN:** Inventory items are classified as fast moving, slow moving and non-moving items.
4. **GOLF:** Inventory items are classified as Governmentsupply, ordinary supply, local and foreign supply.
5. **SOS:** Inventory items are classified as seasonal and off seasonal items.

Question 15 Explain two bin system and establishment of system of budgets as a technique of inventory control system?

Answer:-Two Bin System:

- Each bin (Container) is divided into two parts - one, **smaller part**,(Stock of material equal to minimum stock level is kept) and the other, **largest part** to keep the **remaining quantity**.

- First material is issued out of the larger part but as soon as it becomes necessary to use quantity out of the smaller part of the bin, fresh purchase order is placed.
- It is also called double bin system.

Establishment of system of budgets:

- R**equirement** of material during a specific period usually a **year is determined in advance**.
- The exact quantity of various types of inventories and the time when they would be required is determined using **production plans and production schedules**.
- Now **inventories requirement budget is prepared** to discourage unnecessary investment in inventories.

Question 16 Explain in detail perpetual inventory control and continuous stock verification along with their advantages?

Answer:-There are 2 inventory systems

1. **Periodic inventory system**:- it is system of calculating quantity and cost of inventory on the basis of actual physical count of all inventory items at the end of accounting period.
2. **Perpetual inventory system**:- it is a system of recording material balances after each receipt and issue of material. **(USE COMPUTER)**

Advantages of perpetual inventory:

(1) **Reconciliation** of physical stocks with book balances.
(2) Preparation of **P&L Account** (for interim period) due to prompt availability of stock figures.
(3) Identification of **stock discrepancies**& instant corrective action to avoid re-occurrence.
(4) Identification of **obsolete and slow-moving materials** to avoid these.
(5) Helpful in **Fixation of the various stock levels**.
(6) **Closure of normal work** for stock taking is not required.
(7) Helps in avoiding **over-stocking & under stocking situation**.

Periodic inventory system	Perpetual inventory system
Quantity & cost of inventory is ascertained on the basis of actual physical cou.	Quantity & cost of inventory is ascertained on the basis of records.**(USE COMPUTER)**
Closing down of work for stock taking is required.	Closing down of work for stock taking is not required.
Simple and less expensive	More expensive
Continuous stock taking is not facilitated.	Continuous stock taking is facilitated.
Quantity & Cost of inventory is directly calculated applying method of valuation of inventories like FIFO, LIFO.	Quantity & Cost of inventory is calculated as residual figure:- Closing inventory = opening inventory + purchases – Cost of material issued
Cost of material issued is calculated as a residual figure:- Cost of materials issued = opening inventory +purchases – closing stock	Cost of material issued is directly calculated by applying the method of valuation of inventories like FIFO, LIFO.

Continuous Stock Verification:-

- Physical stock verification is done for each item of material on **continuous basis**.

- It is comparison of physical stocks with stock records on **continuous basis**.

Advantages of continuous stock-taking:

1. Closure of **normal work** for stock taking is not required.
2. Identification of **stock discrepancies**& instant corrective action to avoid re-occurrence.
3. **Staff of stores** remain active because of surprise check element.
4. **Unnecessary buying** of material is reduced.
5. **Final Accounts** and interim accounts can be prepared quickly (Stock figure available)

Perpetual Inventory system	Continous Stock Taking
It is a system of recording material balances after each receipt and issue of material.	It is a physical verification of a number of items daily or at frequent intervals.
It emphasis on recording of book balances.	It emphasis on physical verification of recorded book balances with actual physical balances.

Question 17 How the slow-moving and non-moving material detected and what steps are necessary to reduce such stocks?

Answer:-Slow moving and Non- moving items:- items (not regularly used in production process) hence reduce unnecessary investment in such stock.

<u>Ways to detect</u>:-

1. By preparing **periodic reports** (on monthly or quarterly basis) about purchase, consumption and stock of these items in quantity and value both.
2. By calculating the **inventory turnoverperiod** of various items (in number of days of consumption).
3. By calculating **inventory turnover ratio** periodically (issues of such material as a % of average stock held).
4. By implementing **well-designed information system**.

<u>Necessary steps to reduce</u>:-

1. Proper **procedure&guidelines** should be decided for **disposal** of these items before they further deteriorates in value.
2. Diversify production to **use up such materials**.
3. Use these **materials** as **substitute** in place of other materials.

Question 18 Explain use of control ratios as inventory control technique?

Answer:-

1. **Input Output Ratio:**
   - it is the ratio of **quantity of input of material to production and the standard material content of the actual output.**
   - It compares actual consumption and standard consumption of material to check material usage variance.
2. **Inventory Turnover Ratio (ITR)**:
   - High inventory turnover ratio indicates that the material is a fast moving.
   - Low turnover ratio indicates over-investment in inventories of material.

$$\textbf{ITR} = \frac{Cost\ of\ materials\ consumed\ during\ the\ period}{Average\ stock\ held\ during\ the\ period}$$

$$\textbf{Where}\ \text{Average stock} = \frac{Opening\ stock + closing\ Stock}{2}$$

$$\text{Average No. of days of inventory holding} = \frac{360\ Days / 12\ Months}{Invetory\ Turnover\ Ratio}$$

Question 19 List down the various methods of valuation of material issues?

Answer:-

1. **Cost Price Methods:**
   1.1 Specific price method.
   1.2 First-in First-out method.
   1.3 Last-in-First-out method.
   1.4 Base stock method.
2. **Average Price Methods:**
   2.1 Simple average price method.
   2.2 Weighted average price method.
   2.3 5Periodic simple average price method.
   2.4 Periodic weighted average price method.
   2.5 Moving simple average price method.
   2.6 Moving weighted average price method
3. **Market Price Methods:**
   3.1 Replacement price method.
   3.2 Realisable price method.
4. **Notional Price Methods:**
   4.1 Standard price method.
   4.2 Inflated price methods.
   4.3 Re-use Price Method.

Question 20 Explain Specific Price method of valuation of material issues along with its advantages, disadvantages and suitability?

Answer:-This method is suitable when materials are specifically purchased for a **specific job** &materials are issued to that specific job at price at which it is purchased.
Suitability:-Each lot of material need to be separately stored & a separate account is made for it.
Advantages:-

1. The cost of materials issued to specific job represent**actual costs.**
2. This method is best suited when **specific products** is required under a job order.

Disadvantages:-

1. Difficult to calculate cost of material issued when **purchases & issues are numerous**& price keeps on changing.

Question 21 Explain FIFO method of valuation of material issues along with its advantages, disadvantages and suitability?
Answer:-Meaning:-

- Materials are issued in the order in which they arrive in the store or the items longest in stock are issued first.

- Materials are issued at a price which may not be current market price.

Suitability:-

- **Suitable in times of falling price** because the cost of material issued as charged to production will be high while the replacement cost (New Purchase cost) of materials will be low.
- But, in the case of **rising prices**, if this method is adopted, the cost of material issued as charged to production will be low as compared to the replacement cost of materials.

Advantages and disadvantages

Advantages	Disadvantages
Simple to understand & easy to operate.	Clerical mistake may happen if prices fluctuate frequently.
In times of **falling price** because the cost of material issued as charged to production will be high while the replacement cost (New Purchase cost) of materials will be low.	in the case of **rising prices**, if this method is adopted, the cost of material issued as charged to production will be low hence profit will be unreasonably high.
In times of falling price, Closing stock of material will be very close to current market price.	

Question 22 Explain LIFO method of valuation of material issues along with its advantages, disadvantages and suitability?

Answer:-Meaning:-

- Materials are issued in the reverse order in which they arrive in the store or the items earliest in stock are issued first.
- Materials are issued at a price which is always current market price.

Suitability:-

- **Suitable in times of rising price** because the cost of material issued as charged to production will reflect current market cost.
-

Advantages and disadvantages

Advantages	Disadvantages
Cost of material issued as charged to production will reflect current market cost.	Clerical mistake may happen if prices fluctuate frequently.
During inflation, profit shown is relatively lower since cost of material issued reflect current market prices of material.	Cost of production of different jobs may be different in case of wide fluctuation in price.
During falling price time, cost of material issued (reflect current market price) will be less hence Sale price of FG becomes less & hence become competitive.	In time of falling prices, stock value need to be written off by the cost or the market price whichever is lower.
During inflation, profit shown is relatively lower since thereby avoid	Income tax authorities does not accept LIFO method since value of closing stock

paying undue taxes.	is different from current market value.

FIFO	LIFO
Goods received first are issued first.	Goods received last are issued first.
Closing inventory represents cost of recent purchases.	Closing inventory represents cost of earlier purchases.
Cost of goods sold includes cost of earlier purchases.	Cost of goods sold includes cost of recent purchases.
Balance sheet is not distorted since inventory are recorded at current market price.	Balance sheet is distorted since inventory are recorded at old market price.
In case of rising prices, higher income is reported since current revenue is matched with old purchase costs. As a result, income tax liability is increased.	In case of rising prices, lower income is reported since current revenue is matched with current purchase costs. As a result, income tax liability is decreased.

Question 23 Explain base stock method along with its suitability?

Answer:-Minimum quantity of stock (Purchased at fixed price) is held as reserve which is used when emergency arises & price of material increases. This minimum stock is base stock. Quantity in excess of base stock is valued as per FIFO/LIFO.

Question 24 Explain simple price method of valuation of material issues along with its advantages, disadvantages and suitability?

Answer:-Meaning:- issued material is valued at average price. Suitable only when materials are purchased in uniform lots & price do not fluctuate.

$$\text{Average Price} = \frac{Total\ of\ unit\ prices\ of\ each\ purcahses}{Total\ number\ of\ purchases}$$

Example: If Materials issued are from 3 consignments with prices of Rs.20, Rs.27 & Rs.22, the Simple Average Price would be (20 + 27 + 22) ÷ 3 =Rs.23

Advantages	Disadvantages
• **Simple to understand and easy to operate**	• Cost of issued material does not reflect actual cost since it is averaged. • Not suitable when price of material fluctuates.

Question 25 Explain weighted average price method of valuation of material issues along with its advantages, disadvantages and suitability?

Answer:-Meaning:-issued material is valued at weighted average price (Divide total cost of materials in the stock by total quantity of materials).

Weighted Average Price = $\frac{\text{Total cost of materials received}}{\text{Total quantity purchased}}$

Advantages	Disadvantages
• It consider variation in price fluctuation. • Issue price per unit need not to be calculated unless new lot of material is purchased.	• Cost of issued material does not reflect actual cost since it is averaged.

Question 26 Explain periodic simple average price method of valuation of material issues along with its advantages, disadvantages and suitability?

Answer:-Meaning:- Similar to Simple Average Price Method except price paid during the period for different lots of materials purchased are added up and the total is divided by the number of purchases made during the period.
SuitableWhen qualities & rate are different in different lot.

Periodic Simple Average Price = Total of Prices paid in a period/No. of purchases in the period

Advantages	Disadvantages
• simple to understand and easy to operate	• Not suitable for jobbing industry. • Not consider quantities purchased at different prices. • Same disadvantages of simple average cost method

Question 27 Explain periodic weighted average price method of valuation of material issues along with its advantages and disadvantages?

Answer:-Meaning: Similar to weighted average price method except that

- Calculations of issue prices are made periodically (monthly).
- Rate so arrived is used to calculate cost of issued material during that period
- Rate so arrived is used for valuing the inventory at the end of the period.

Periodic Weighted Average Price = $\frac{\text{Total cost of purchases} \in \text{a period}}{\text{Total Qty purchased} \in \text{that period}}$

Advantage:

- Superior to the periodic simple average price method since consider quantities also.
- Even out the effect of fluctuations.
- Same advantages of simple weighted average price method.

Disadvantage:

- Not suitable for jobbing industry.

Question 28 Explain Moving simple average price method, moving weighted average price method, replacement price method, realisable price method, Standard price method, inflated price method and Re-use price method ?

Answer:-

1. **Moving Simple Average Price Method :-**Rate for material issues is determined by dividing

thetotal of the periodic simple average prices of a given number of periods by the numbers of periods.

For example, if a three monthly period is chosen, the Moving Simple Average Prices will be for April shall be Average of Simple Average Prices for January, February and March.

Advantage: Evens out price fluctuationsover a longer period

***Disadvantage*:**detailed computations and monthly revision of issue rates.

2. **Moving Weighted Average Price Method:-**Rate is calculated by dividing the total of the periodicweighted average price of a given number of periods by the number of periods.
3. **Replacement Price Method:-**Material is issued at replacement price (current market price). **Suitable** in rising prices period.

Advantage: Product cost reflects the current market prices.

Disadvantage: Market price of material to be determinedbefore each issue of material.

4. **Realisable Price Method:-** Material is issued at a price at which it can be sold in market.
5. **Standard Price Method:-**Material is issued at pre-determined standard price (Not actual cost).

Advantages	Disadvantages
To calculate cost of issued material, just multiply quantity by std. rate. (Simple)	Std. price is not market price. Hence loss or profit arise.
Control over material cost & Check over purchase dept. efficiency	Difficult to fix std. price if price fluctuates.

6. **Inflated Price Method:-** Material is issued at inflated rate to absorb loss of material due to natural factors i.e. evoporation
7. **Re-use Price Method:-** material is issued at price different from price paid for it. Method used when rejected material is used.

Question 29 Explain the treatment of waste, scrap, spoilage and defectives and provide the ways to control these?

Answer:-Waste:- That portion of raw material lost & has no recoverable value. (May be visible (Shrinkage) / invisible (evoporation)

Treatment:-

- Cost of **normal wastage** borne by good material.
- Cost of **abnormal wastage** charged to P&L A/c.

Control:- Fix Normal wastage standard + Compare Actual wastage with std. fixed + Assign responsibility to Purchase / storage / production / inspection staff

Scrap:- Material appeared as residual out of a mfd process & has recoverable (Sale) value. (Always Visible)

Treatment:-

- Scrap value is negligible:- Cost of scrap borne by good material & Sale of scrap treated as income.
- Scrap value is significant & scrap identifiable to a job:- Full cost of scrap is debited to scrap A/c & credited to that job A/c. Sale value of scrap is credited to scrap A/c and Net profit or loss in TF to P&L A/c.
- Scrap value is significant & scrap not identifiable to a job:- Sale value of scrap (Net of selling & Dist. Cost) is deducted from material cost.

Control:-Fix Normal scrap standard + Compare Actual scrap with std. fixed + make periodical scrap report showing depts. responsible.

Spoilage:-that portion of production (FG) which cannot be rectified & has to be sold as it is (Without further processing). It is loss of material, labour & overhead incurred upto spoilage stage.
Treatment:-

- Cost of normal spoilage borne by good production units + Sale value of spoilage charged to account where cost is charged.
- Cost of abnormal spoilage (Faulty workmanship) charged to costing P&L & sale value credited to P&L.

Control:-Fix Normal spoilage standard + Compare Actual spoilage with std. fixed + make periodical spoilage report showing abnormal & normal spoilage along with dept. responsible.

Defectives:- Production units which can be rectified &can be converted in good units by incurring material, labour and OH. Cost incurred to rectify a defective product called rectification / rework cost.
Treatment of Rectification cost:-

- Normal defective + defective related to a job = Charge cost to that job.
- Normal defective + defective not related to a job = Charge cost to production overheads.
- Normal defective + defective due to fault of a Dept. = Charge cost to that Dept.
- Normal defective + defective due to wrong customer instructions = Recover cost from customer
- Abnormal defective (Poor workmanship) = Charge cost to P&L A/c

Control:-Control over number of defectives & Over rework cost (Fix Std. no. of defectives & rework cost) & compare with actual, take action

Question 30 How normal and abnormal loss of material arising during storage is treated in cost accounts?

Answer:- Step 1:- Transfer difference between book balance of stock & Actual physical balance of stock to "Inventory Adjustment A/c".
Step 2:- If Reason of difference is normal then

- TF such difference to "Overhead control A/c" **OR**
- Price of material issued to production may be inflated.

Step 3:- if Reason of difference in abnormal then debit cost of difference to P&L A/c

Question 31 What is material handling cost? How will you deal with it in cost accounts?

Answer:-Material handling cost: Expenses involved in handling of material (In receiving, storing & issuing)

First approach suggests

- Include material handling cost to cost of material by calculating "material handling rate" on the basis of cost of material issued or on the basis of weight of material issued.

Second approach suggests

- Include material handling cost to manufacturing overhead and charge to products on the basis of direct labour hours or machine hours.

Question 32 At the time of physical stock taking, it was found that actual stock level was different from the clerical or computer records. What can be possible reasons for such

differences? How will you deal with such differences?

Answer:-Possible reasons are

1. **Wrong entry** made in **stores ledger account** (Computer records)
2. Some material placed at wrong physical location hence remained uncounted.
3. **Arithmetical errors** made when calculating material stock balances as per bin card (Physical)

Deal with Differences

Step 1:- Transfer difference between book balance of stock & Actual physical balance of stock to "Inventory Adjustment A/c".

Step 2:- If Reason of difference is normal then

- TF such difference to "Overhead control A/c" **OR**
- Price of material issued to production may be inflated.

Step 3:- if Reason of difference in abnormal then debit cost of difference to P&L A/c

Question 33 State whether the following statements are true. Give reasons?

I. Safety stock increases as demand increases.
II. In ABC analysis high cost items are most likely to fall in category A, and least cost items are likely to fall in category C.
III. To protect against stock outs, a large batch size is a must.
IV. E.O.Q. is based on a balancing between inventory carrying cost and shortage costs.
V. Lead time is the time interval elapsing between the placement of a replenishment order and the receipt of last instalment of goods against the order.

Answer:-

Sl No.	True / Not True	Reason
1	Not True	Safety stock held so production not stop in case any delay in supply of material happens. We will increase quantity of raw material to be purchased if demand increases, not the safety stock.
2	Not True	Material is categorised in A, B & C on the basis of their consumption value (Not on the basis of their cost)
3	True	Large batch size reduce risk of stock out
4	Not True	EOQ minimise ordering and carrying cost.
5	Not True	Lead time is time between placing an order & time when each order is received (Not the last order)

Job & Batch Costing

ABC Analysis of Theory Questions

Q.1	Explain meaning of Job Costing and its process?	A		
Q.2	Define Batch Costing and Distinguish between Job Costing & Batch Costing?	A		
Q.3	In Batch Costing, how is Economic Batch Quantity determined? OR Z Ltd. Produces product ZZ in batches, management of the Z Ltd. wants to know the number of batches of product ZZ to be produced where the cost incurred on batch setup and carrying cost of production is at optimum level ?	A		

Question 1 Explain meaning of Job Costing and its process?

Answer :- Job Costing:- Specific order costing under which each job is treated as a cost unit & costs are ascertained separately for each job and a separate Job Cost Sheet is prepared for each job. Example visiting card printing job

Process:-

1. Prepare a separate cost sheet for each job.
2. Charge cost of materials issued on the basis of BOM
3. Charge Labour cost incurred on basis of time card.
4. Charge OH to know total cost when job is complete.

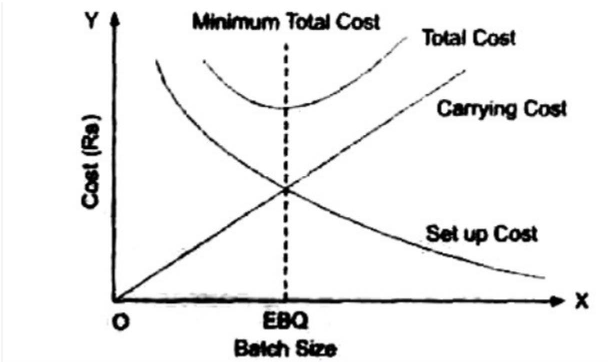
Question 2 Define Batch Costing and Distinguish between Job Costing & Batch Costing?

Answer :- Batch Costing:- Specific order costing under which each batch is treated as a cost unit & costs are ascertained separately for each batch and separate Batch Cost Sheet is prepared for each batch. **Example** readymade garments manufacturing industry

Distinction between Job Costing and Batch Costing = Meaning + Example as above

Question 3 In Batch Costing, how is Economic Batch Quantity determined? OR Z Ltd. Produces product ZZ in batches, management of the Z Ltd. wants to know the number of batches of product ZZ to be produced where the cost incurred on batch setup and carrying cost of production is at optimum level? Answer :-

Meaning	EBO is that batch quantity at which set up & processing Costs and carrying Cost are minimised
Setting up & Processing Costs	Costs incurred in setting up & processing operations before start of production of batch. There is an **inverse** relationship between Batch size and Set up & Processing costs.
Carrying Costs	Costs incurred in maintaining a given level of inventory. There is **positive** relationship between batch size and carrying costs.



$$E.B.Q = \sqrt{\frac{2 \times \text{Annual Demand} \times \text{Set up cost per batch}}{\text{Cost of carrying per unit of production per annum}}}$$

Labour Costing

ABC Analysis of Theory Questions

Q.1	Explain meaning of labour cost and classification thereof?	A		
Q.2	What are the departments involved in control of labour costs along with functions?		B	
Q.3	Explain the important factors in control of labour cost?			C
Q.4	Define Time keeping along with objectives of time keeping and pre-requisites of a good time keeping system?	A		
Q.5	Explain in details the method of time keeping?			C
Q.6	What is time-booking and describe objectives of time booking?	A		
Q.7	Describe payroll procedure step-by-step?			C
Q.8	Define idle time. Describe causes and treatment of normal and abnormal idle time?	A		
Q.9	Define overtime premium. Describe causes and treatment of overtime premium in cost accounting?	A		
Q.10	Elaborate effect of overtime premium on productivity along with steps for controlling overtime?	A		
Q.11	Define labour turnover and methods to calculate labour turnover?	A		
Q.12	Explain causes of labour turnover?	A		
Q.13	What are the effects of labour turnover and its associated cost. Suggest remedial steps to minimise labour turnover?	A		
Q.14	Explain the factors to be considered before introducing an incentive scheme?		B	
Q.15	What are the principles to be considered in designing a sound wage incentive system?		B	
Q.16	Explain in detail the essential characteristics of a good incentive scheme?		B	
Q.17	Explain meaning, merits, demerits and suitability of Time Rate system?		B	
Q.18	Distinction between Time wage rate system and Piece Rate wage system?	A		
Q.19	Explain meaning, advantages and dis-advantages of straight piece work rate method of wage payment and incentive?		B	
Q.20	Explain Taylor’s differential piece work system. Also describe its advantages and dis-advantages?			C
Q.21	Explain Gantt Task and Bonus system. Also describe its advantages and disadvantages?			C
Q.22	Explain Emerson’s efficiency system?			C

Q.23	Explain Points scheme (Bedeaux system), Hayne's system, Accelerated premium system and Premium bonus methods?			C
Q.24	Explain Halsey and Halsey weir systems. Also describe its advantages and disadvantages?			C
Q.25	Explain Rowan System along with its advantages and disadvantages?			C
Q.26	Explain group system of wage payment. Discuss methods used for distributing wages to each worker?			C
Q.27	Explain group bonus and group bonus scheme. Also describe objectives and advantages of group bonus scheme?		B	
Q.28	Explain incentive schemes for indirect workers?			C
Q.29	Explain profit-sharing and Co-partnership schemes. Also describe advantages and disadvantages?	A		
Q.30	What are the ways to calculate workers share in net profits of a firm. Explain treatment of bonus in costing?	A		
Q.31	Describe the principles to be considered in deciding method of fixation of remuneration payable?		B	
Q.32	Write short notes on efficiency rating procedures?		B	
Q.33	What is labour productivity. Explain factors for increasing labour productivity?		B	
Q.34	Discuss briefly, how you will deal with casual workers and workers employed on outdoor work in Cost Accounts? Or write short note on casual workers and out-workers	A		
Q.35	Distinguish between Job Evaluation and Merit Rating?	A		
Q.36	What do you mean by time and motions study? Why is it so important to management?		B	

Question 1 Explain meaning of labour cost and classification thereof?

Answer:- Labour cost: cost of wages & other benefits paid by employer to workers on the basis of time/putput produced using physical/mental exertion.

Labour cost = direct labour cost + indirect labour cost.

- **Direct LC**: Wages paid to employees which **can be** directly attributed to product, process or Job.
- **Indirect LC**: Wages paid to employees which **cannot** be directly attributed to a product, process or job.

Distinction between Direct & Indirect LC:

Direct LC	Indirect LC
Payment to labour directly engaged in production process.	Payment to labour not directly engaged in production process.
Can be directly attributed to product, process or Job	**cannot** be directly attributed to a product, process or job
Varies positively with volume of production.	May not vary with volume of production.
Example:- Wages paid to all labour engaged on construction site.	Example:- wages paid to all labour working in purchase dept. stores dept. time-keeping dept.

Question 2 What are the departments involved in control of labour costs along with functions?

Answer:- Labour cost control means **control over the cost incurred on labour** (does not mean that wages of workers should be reduced). Aim is to keep **wages per unit of output as low as possible.**

Departments	Functions of Deptt.
Personnel Dept (Hire & Fire Employees)	1. On receipt of **labour requisition** from the various departments it searches for the required skills and qualification. 2. It ensures that the persons recruited posses the requisite **qualification and skills** required for the job. 3. Arranges proper **training** for the newly recruited workersand workshops for existing workers. 4. Maintains all personal and **job related records** of the employees. **5.** Evaluation of **performance** from time to time.
Engineering and Work Study Dept (Job Analysis & Job Evaluation)	1. Prepares plans and specifications for each job. 2. Provides training and guidance to the employees 3. Supervises production activities 4. Conducts time and motion studies. 5. Undertakes job analysis. 6. Conducts job evaluation.
Time-keeping Dept (Attendance records)	This Department is primarily concerned with the maintenance of attendance records of the employees and the time spent by them on various jobs, etc.
Payroll Dept (Prepare Payroll & disburse wages)	The preparation of payroll of the employees and it disburses salary and wage payments.
Cost Accounting Dept. (Allocate Total Labour Cost to All Jobs)	This department is responsible for the accumulation and classification etc. of all type of costs. Labour costs so collected is analysed and allocated to various jobs, processes, departments by this department.

Question 3 Explain the important factors in control of labour cost?

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

1. Assessment of **manpower requirements**.
2. Control over **time-keeping and time-booking**.
3. **Time & Motion** Study.
4. Control over **idle time and overtime**.
5. Control over **labour turnover**.
6. **Wage systems** (Time based / Piece Based)
7. **Incentive** systems.
8. Control over **casual, contract and outdoor workers**.
9. **Job Evaluation and Merit Rating**.
10. Labour **productivity**.

Question 4 Define Time keeping along with objectives of time keeping and pre-requisites of a good time keeping system?

Answer:- Time-keeping: Correct recording of the employees' attendance time (Arrival & departure time)

Objectives of TK:

1. To calculate wages for Time based employees
2. To calculate overtime.
3. To control labour cost.
4. To calculate idle time.

Requisites of a Good TK System:

1. Not allow **proxy** for another worker.
2. Provision of recording the time of **piece workers** also.
3. Record **arrival & departure time** of workers & calculate wages payable.
4. Time recording method should be **mechanical** so no disputes between workers & time-keeper.
5. **Late-comers** should record late arrivals (Any relaxation should not be allowed).
6. Sufficient **clocks** should be installed so workers not have to wait for recording arrivals & departures time.
7. Frequent **surprise visits** at the factory gate by responsible person.

Question 5 Explain in details the method of time keeping?

Answer:- Two methods = manual methods (Human interference Required) + mechanical methods (Machine Based).

Manual Method 1:- Attendance Register Method

- Attendance register is kept at factory gate + Time keeper notes the arrival & departure time of each employee himself.
- Suitable when no. of workers is not large.
- Possibility of dishonest practice of recording wrong time by time keeper

Manual Method 2:- Metal Disc Method

- Each worker is allotted a token bearing his identification no. + All tokens are hung on a board at factory gate + On arrival, worker remove token from board & put token in a box kept at factory gate + After fixed reporting time, this box is removed from factory gate hence now late comers has to personally give his token to time keeper So time keeper personally record exact time of his arrival.

  Disadvantages:-
- A worker may remove his companion's token from the board to mark his presence when he is absent.
- Chances of disputes between time keeper & Late comer.
- Chances of inclusion of dummy workers by time-keeper.

Mechanical Method 1:- Time Recording Clocks (Time printing machine)

- Each worker is allotted a time card bearing his identification no. + All time cards are put in a rack at factory gate + On arrival, worker picks his time card from rack & put it in time recording clock (Time printing machine) + this machine print exact time of arrival in proper space.
- This process of printing time is repeated on going for lunch, return from lunch, going home in evening (Departure).

Advantages:

- No chances of disputes between time keeper & employee since time recorded by time recording clock &not by time-keeper.
- No scope of partiality or carelessness by time- keeper.

Disadvantages:

- A worker may pick his companion's time card from rack to mark his presence when he is absent.

Mechanical Method 2:- Dial Time Records

The dial time recorder is a machine which has a dial around the clock. This dial has a number of holes (usually about 150) and each hole bears a number corresponding to the identification number of the worker concerned. There is one radial arm at the centre of the dial. As a worker enters the factory gate, he is to press the radial arm after placing it at the hole of his number and his time will automatically be recorded on roll of a paper inside the dial time recorder against the number. The sheet on which the time is recorded provides a running account of the worker's time.

Advantages:

1. This machine allows greater accuracy and can itself transcribe the number of hours to the wages sheets.
2. This machine can also calculate the wages of the workers and thus avoids much loss of time.

Disadvantages:

The high installation cost of the dial time recorder and its use for only a limited of workers are the drawbacks of this method.

Mechanical Method 3:- Punch card attendance system

Punch card is a card containing digital information of employee e.g. name, staff no. + employee just need to touch card near card reader automatically entry of time-in & time –out.

Advantages:

- Manual intervention to record time is not required.
- No scope of manipulation in attendance records.

Disadvantages:

- Expensive machines to install.
- Proxy of other employee possible.

Mechanical Method 4:- Bio-metric Attendance System

Recording of attendance time through **physical traits** (fingerprint, face, eyes, palm) or **Behavioural traits** (voice recognition).

3 types of system are as follows:-

- **Fingerprint recognition system** – system match fingerprint of employee with those already recorded in system & record arrival & departure time. Benefit:- No proxy attendance possible & each human have unique finger print.
- **Face recognition**- system match human face with those recorded in system. Mainly used in security systems.
- **Time and attendance Tracking technology –** Arrival & Dept. Time along with working hours also recorded in system in order to make payment. Real time technology & money saver (replaced all the paper sheets)

Question 6 What is time-booking and describe objectives of time booking? What is time keeping and lay down point of difference between time booking and time keeping ?

Answer:-

Time Booking:- Recording of the actual time spent by an employee on a single job or process

Time keeping:- Recording the arrival and departure time of each employee.

Objectives of Time-Booking -

1. To ensure that **time paid** for has been properly **utilised** on different jobs.
2. To ascertain the **labour cost** of each job.
3. To **apportion overhead** over various jobs when allocation method of overhead depends upon time spent on different jobs.
4. To calculate the amount of **wages** and bonus payable under the **wage incentive system**.
5. To ascertain **idle labour hours**.

Time keeping	Time Booking
Recording the arrival and departure time of each employee	Recording of the actual time spent by an employee on a single job or process
Objective is to maintain attendance record as per statutory requirements	Objective is to ascertain labour cost for a job
Methods for time keeping are • Manual methods • Mechanical methods	Methods for time booking are • Daily time sheet • Weekly time sheet • Job card

Question 7 Describe payroll procedure step-by-step? What are the general deductions made from payroll?

Answer:- Payroll procedure as below:-

1. **Attendance and Time details**: Time keeping Dept. sends no. of days worked (Time based Pymt) or No. of units produced (Piece Rate based) by all employees to Payroll Dept. Now Payroll Dept. calculate bonus & overtime hours for employees considering Time booking Records.

2. **List of employees and other details**: HR Dept. sends list of employees & their wage rate to payroll Dept.
3. **Computation of wages and other incentives**: Payroll Dept calculate wages for all employees considering details provided by time keeping Dept. & Payroll Dept.
4. **Payment to the employees**: All statutory deduction e.g. employee's contribution to PF, ESI & TDS on salary is deducted before payment of wages to employees.
5. **Deposit of all statutory liabilities**: All statutory deduction made from the employees along with employer's contributions e.g. PF & ESI are paid to respective statutory bodies.

Statutory deductions made from payroll:-

1. **Provident fund**:- Employee's contribution to PF is deducted from the wages of employee. Employer's contribution to PF is equal to contribution by employee.
2. **Employee State Insurance (ESI):-** Employee's contribution to the ESI is deducted from wages.
3. **Tax Deduction at Source (TDS):-** Employer has to deduct TDS if it pays to employee net salary exceeding maximum exemption limit.

Other deductions made from payroll:-

1. **Voluntary contribution to Provident fund**:- Contribution above statutory contribution.
2. **Contribution to any benevolent fund** :- Contribution to any benevolent fund voluntarily by a putting a request to the payroll department.
3. **Loan deductions**:- Installment of any loan taken by the employee.
4. **Other advances:-** Other advances like festival advance.

Question 8 Define idle time. Describe causes and treatment of normal and abnormal idle time?

Answer:- Idle Time = Time for which payment is made but production does not happen (Arise only when Time based Pymt system followed)

Idle time = Time recorded as per time card - Time booked on job as per job card

Idle time = normal idle time + abnormal idle time

Normal IT: Loss of time which is unavoidable e.g. time spent in setting up of a machine.

Causes of Normal IT:-

1. The time lost in reaching from factory gate to place of work.
2. The setting up time spent for a machine
3. Normal fatigue etc.

Normal IT = Normal & controllable IT (machine breakdown, waiting for work, waiting for tools, waiting for materials etc.) + Normal & Uncontrollable IT (set up time for machine, interval between 2 jobs, normal fatigue)

Abnormal IT:- Loss of time which in avoidable.

Causes of abnormal IT:-

1. Power failure, Breakdown of machines
2. Non-availability of raw materials
3. strikes, lockouts

Abnormal IT = Abnormal & Controllable IT (time which could have been put to productive use had the management been more alert and efficient) + Abnormal & Uncontrollable IT (time lost due to abnormal causes, over which management does not have any control *e.g.*, breakdown of machines)

1. .

Accounting Treatment of IT:-

IT Cost	Treatment
Cost of normal & controllable idle time	IT Cost is part of OH Cost.

Cost of normal & uncontrollable idle time	IT Cost charged to job by inflating wage rate per unit.
Cost of abnormal idle time	IT cost charged to costing P&L A/c

Question 9 Define overtime premium. Describe causes and treatment of overtime premium in cost accounting?

Answer:- Working hours above normal working hours is known as 'overtime work'. Wage rate for overtime is higher than normal time wage rate (Normally double). The extra amount so paid over the normal rate is called overtime premium.

Occasional overtime is a healthy sign since it indicates full utilisation of capacity. But **persistent overtime** is a bad sign because it indicates more capacity (labour strength) need to be added or workers wilfully postpone working in normal working hours.

Causes of Overtime	Treatment of overtime Premium
1. Overtime required regularly as a policy due to shortage of labour.	Charge Overtime premium payment to jobs.
2. Overtime desired at customer request to complete the work instantly.	Charge Overtime Premium to that job.
3. Overtime required to increase the output as **general production programme**.	Charge Overtime Premium to production OH.
4. Overtime required to increase output to meet additional market **demand**	Charge Overtime Premium to production OH.
5. Overtime required to meet seasonal **demand**	Charge Overtime Premium to production OH.
6. Overtime worked irregularly to meet requirements of production	Charge Overtime Premium to production OH.
7. Overtime required to make up any shortfall in production due to abnormal situations e.g. earthquake, flood, breakdown of machine.	Charge Overtime Premium to costing profit and loss account.

Question 10 Elaborate effect of overtime premium on productivity along with steps for controlling overtime?

Answer:- Overtime work should be resorted only when it is **extremely essential** because it involves extra cost. The overtime payment increases the **cost of production** in the following ways:

1. Overtime premium payment (OTP) is **extra payment** above normal rate.
2. More Overtime may lead to **output less** than normal due to normal fatigue.
3. Overtime provision may attract not to work in normal working hours to employees.
4. Reduced Output & increased OTP will increase cost of production.

Steps for controlling overtime:

1. Maintain Std. output during normal working hours to allow for overtime hours.
2. Obtain permission from senior authority for overtime working by justification.
3. Compare actual output rate of overtime hours with actual output rate working hours.
4. Submit periodical reports on overtime wages to top management (Preventive Action).
5. Put upper limit of overtime hours over each category of workers.

Question 11 Define labour turnover (LT) and methods to calculate labour turnover?

Answer:- Change in workforce (New workers leave org. for better opportunity & new workers join org. as opportunity) is called LT.

1. **Replacement rate method** : LT = $\frac{Number\ of\ workers\ replaced \in a\ period}{Average\ number\ of\ Workers\ on\ roll}$ X 100

2. **Separation method:** LT = $\frac{Number\ of\ separations\ during\ the\ period}{Average\ number\ of\ Workers\ on\ Roll}$ X 100

3. **Flux method:** Flux Method = $\frac{No.\ of\ separations + No.\ of\ replacements}{Average\ number\ of\ Workers\ on\ roll}$ X 100

OR

= $\frac{No.\ of\ separations + No.\ of\ replacements + No.\ of\ New\ Recruitments}{Average\ number\ of\ Workers\ on\ roll}$ X100

Question 12 Explain causes of labour turnover?

Answer:- Causes of LT : 3 Categories

1. Personal Causes
2. Unavoidable Causes
3. Avoidable Causes

Personal causes:- Employee leave at his will

1. Change of job for betterment.
2. Premature retirement due to ill health or old age.
3. Domestic problems and family responsibilities.
4. Not happy with job & working conditions.

Last one can be avoided by creating healthy conditions.

Unavoidable causes:- Mgt Fire employee

1. Seasonal nature of the business (Remedy:- Change nature of business)
2. Shortage of raw material &market for the product. (Remedy:- Contact new source of supplier)
3. Change in factory location. (Remedy:- Avoid change)
4. Disability making worker unfit for work (Remedy:- Provide training)

Avoidable causes:-Mgt should avoid these to reduce high turnover rate

1. Dissatisfaction with job, remuneration, hours of working etc.
2. Unhealthy relationship with management, supervisors or fellow workers.
3. Lack of training facilities.
4. Lack of recreational & medical facilities;
5. Low wages & allowances.

Question 13 What are the effects of labour turnover and its associated cost. Suggest remedial steps to minimise labour turnover?

Answer:- Effects of Labour Turnover :-

1. Flow of **production** gets disturbed.
2. **Efficiency** of new & unexperienced workers remains low initially.
3. **Productivity** of new but experienced workers also low in the beginning
4. Increased **training cost**
5. New workers cause increased **wastage of materials**.
6. Increased **recruitment cost**.

Costs associated with LT :-

1. **Preventive costs (PC):** These cost incurred to maintain low LTR e.g. cost of medical services, welfare & pension schemes. High preventive costs helps low LTR.

2. **Replacement costs (RC):** These cost incurred due to high LTR. If employee leave org after acquiring training & experience of good word, then again training cost, recruitment cost incurred to employ other. High Replacement cost incurred if high LTR.

Hence Co. should maintain balance between PC & RC to keep low LTR.

Steps to Minimise Labour Turnover

1. **Exit interview:** To know reasons of resignation.
2. **Job analysis and evaluation:** Carry job analysis & evaluation for each job & then recruit suitable employee.
3. **Scientific system of recruitment, placement and promotion:** defined parameters to recruit new.
4. **Healthy working atmosphere:-** Education & training to workers, settle worker's grievances**.**
5. **Use of committee:** Make committee comprising of management persons & workers to handling workers grievances.

Question 14 what do you mean by "Incentive to worker" and explain the factors to be considered before introducing an incentive scheme?

Answer:- Incentive means monetary/non-monetary benefit (Given to individual worker/group of workers to encourage for putting best on jobs).

Relevant Factors:-

1. **System of Quality Control*:*** Introduce incentive scheme if SQC helps determination of Quality of production (otherwise Time Based Pymt system).
2. **Maximise production*:*** Introduce incentive scheme if maximising output or producing high quality product is the need.
3. **Precision in measuring quantity of Work*:*** Introduce incentive scheme if Worker's output can be measured precisely.
4. **Role of Management in Incentive Schemes:** Introduce incentive scheme depending upon whether work is repetitive (Benefit to worker if work done in less than std hours) or job work where mgt to continue plan the work (Benefit to worker if Quality maintained perfectly with saving in std. hours).
5. **Effort of Workers*:*** Introduce incentive scheme if Qty of output solely depends upon worker (His Efficiency)
6. **Standards of Performance*:*** Introduce incentive scheme if fixing std is not much expensive.
7. **No Discrimination*:*** Introduce incentive scheme if it motivates to all kinds of workers (Skilled/Unskilled) (Should not raise wage rate for unskilled in comparison to skilled).
8. **Comparative Study*:*** Introduce incentive scheme if it ensures uniformity in wage payment prevailing in similar industries**.**
9. **Attitude of Workers*:*** Introduce incentive scheme if labour unions take it positively (Ensure guaranteed time based wage with incentive to earn more).

Question 15 What are the principles to be considered in designing a sound wage incentive system?

Answer:- Obj. of wage incentive = improve productivity + increase production

1. **Just and Fair***:* Incentive scheme should be fair to employer (No High Labour cost) & employee (Increase wage pymt).
2. **Well defined scheme**: Incentive scheme should be easy to understand. Set std. in consultation with workers & set achievable std.
3. **Worker's Expectations***:* Incentive scheme should not limit additional earnings of workers if they work efficiently.
4. **Stability***:* Incentive scheme should stable (Not changed without consulting workers).
5. **Charge on employees***:* Incentive scheme should not penalise workers for reasons beyond their control.

6. **Incentive based on quality**: Incentive scheme should consider only good units.
7. **Adequate Resources**: Incentive scheme should ensure sufficient material/tools (Avoid sitting idle / Interruption in production).
8. **Limited Costs**: Incentive scheme should not involve heavy costs on org. (Compare std & Actual cost)
9. **Morale booster**: Incentive scheme should improve morale of workers & be in conformity with the local trade union agreements.
10. **Guaranteed wages**: Incentive scheme should ensure guaranteed time based pymt.

Question 16 Explain in detail the essential characteristics of a good incentive scheme?

Answer:-

1. Incentive scheme should be fair to employer (No High Labour cost) & employee (Increase wage pymt).
2. Incentive scheme should be easy to understand. Set **achievable** std. in **consultation** with workers.
3. Incentive scheme should not limit additional earnings of workers if they work efficiently.
4. Incentive scheme should stable (Not changed without consulting workers).
5. Incentive scheme should not penalise workers for reasons beyond their control.
6. Incentive scheme should consider only good units.
7. Incentive scheme should ensure sufficient material/tools (Avoid sitting idle / Interruption in production).
8. Incentive scheme should not involve heavy costs on org. (Compare std & Actual cost)
9. Incentive scheme should improve workers morale & be in conformity with local trade union agreements.
10. Incentive scheme should ensure guaranteed time based pymt.

Question 17 Explain meaning, merits, demerits and suitability of Time Rate system?

Answer:-

Meaning:- Worker paid on time basis (Hour, Day, Weekly, Monthly).
Wages Amt = Time worked (as shown by gate card) X Wage Rate time based.

Suitability:-

1. When services of workers is **not restricted** to a **particular Dept**.(Peon / Supervisor)
2. When **quality of work** is more important than quantity of work.
3. When **output machine** based e.g automatic chemical plants.
4. Where workers are **new trainees** whose output cannot be expected to reach minimum standard.

Merits:-

1. Simple to understand & easy to calculate wages.
2. Guaranteed time wages ensured
3. Quality is not compromised.
4. Feeling of security to workers & reduction in labour turnover rate.

Demerits:-

1. No monetary incentive to raise production.
2. No diff. in efficient & inefficient worker.
3. Labour cost per unit of output increases.
4. High degree of supervision required.

Question 18 Distinction between Time wage rate system and Piece Rate wage system?

Time Wage Rate System	Piece Rate Wage System
Worker paid on time basis	Worker paid on per unit of output basis
Equal wages to efficient & inefficient workers	More wages to efficient workers
High quality output	Low quality output
Less chances of wastage of material and machinery.	More chances of wastage of material and machinery.
High supervision required	High supervision not required
Trade unions prefer it	Trade unions oppose it

Question 19 Explain meaning, advantages, dis-advantages and suitability of straight piece work rate method of wage payment and incentive?

Answer:- Straight piece work system:- worker paid at a fixed rate per unit produced (Time spent is not considered)

Wages = Number of units produced X Piece Rate per unit

Advantages:-

1. Simple & easy to calculate wages.
2. Motivation to workers for more production
3. Labour cost per unit known in advance
4. Higher production so OH cost per unit decreases.

Disadvantages:-

1. Sub-standard quality of products.
2. To produce large quantity workers may damage machines & increase wastage of materials.
3. Not guaranteed time wages to workers (workers feel insecure).
4. Opposed by trade unions and workers.
5. High Labour turnover rate

Suitability:-

1. When the quantity of work is more important than quality of work.
2. When high degree of supervision not possible.
3. When standard output of a worker can be easily measured

Question 20 – DELETED FROM SYLLABUS – NOT REQUIRED TO STUDY
Explain Taylor's differential piece work system. Also describe its advantages and dis-advantages. Explain Merrick differential piece rate system?

Answer:- Taylor's differential piece work system

Factors:-

a. Standard time is fixed for each work,
b. 2 piece rates are fixed –

Computation to Total Earnings

For worker who	Total earnings
1. Produces below standard output	= Actual output x Normal Piece Rate x 80%
2. Produces equal to or above standard output	= Actual output x Normal Piece Rate x 120%

Advantages:-

- Simple to understand & easy to operate.
- Attractive for efficient workers.
- Reduction in OH cost per unit because of increased production

Disadvantages:-

- Severe penalty to efficient worker if a slight reduction in output below standard output happens.
- Not guaranteed time wages to workers (workers feel insecure).
- ER & EE relation spoil if the standard output is put at high level.

Merrick Differential Piece Rate System –

Factors:-

a. Standard time is fixed for each work,
b. 3 piece rates are fixed –

Efficiency attained	Piece rate
Upto 83%	100% of Normal piece rate
More than 83% but upto 100%	110% of Normal piece rate
More than 100%	120% of Normal piece rate

Computation to Total Earnings

For worker who	Total earnings
1. Produces upto 83% of standard O/P	= Actual O/P x Normal Piece Rate
2. Produces above 83% but upto 100% of standard O/P	= Actual O/P x Normal Piece Rate x 110%
3. Produces above 100% of standard O/P	= Actual O/P x Normal Piece Rate x 120%

Advantages:-

- Simple to understand & easy to operate.
- Attractive for efficient workers.
- Reduction in OH cost per unit because of increased production.
- No Severe penalty to efficient worker if a slight reduction in output below standard output happens

Disadvantages:-

- Not guaranteed time wages to workers (workers feel insecure).
- ER & EE relation spoil if the standard output is put at high level

Question 21 – DELETED FROM SYLLABUS – NOT REQUIRED TO STUDY
Explain Gantt Task and Bonus system. Also describe its advantages and disadvantages?
Answer:- Gantt Task and Bonus system

Factors:-

a. Combination of time rate & piece rate.
b. Standard time is fixed for each work.
c. It guarantees the day wages to the worker.
d. 3 rates of payments are fixed –

Worker	Rate of Payment
1. For worker who produces below standard output	Guaranteed Time Rate
2. For worker who produces equal to standard output	120% of Time Rate
3. For worker who produces above standard output	120% of Piece Rate

Computation to Total Earnings

Worker	Total earnings
1. For worker who produces below standard output	= AH x Time Rate
2. For worker who produces equal to standard output	= AH x Time Rate x 120%
3. For worker who produces above standard output	= Actual output x Normal piece rate x 120%

Advantages:-

- Simple to understand & easy to operate.
- Attractive for efficient workers.
- Reduction in OH cost per unit because of increased production.
- No Severe penalty to efficient worker if a slight reduction in output below standard output happens

Disadvantages:-

- Not guaranteed time wages to workers (workers feel insecure).
- ER & EE relation spoil if the standard output is put at high level

Question 22 – DELETED FROM SYLLABUS – NOT REQUIRED TO STUDY
Explain Emerson's efficiency system?
Answer:-

Factors:-

- Standard time is fixed for each work.
- It guarantees day wages to the worker & provide bonus (specific % of guaranteed wages)
- Calculation of specific % of guaranteed time based wages

Level of efficiency	**Specific % of guaranteed time based wages** (Guaranteed time based wages means normal wages based on hourly rate)

Upto 66.66%	NIL
More than 66.66% but upto 100%	It increases in steps and becomes 20% at 100% efficiency level.
More than 100%	20% + 1% extra for each 1% extra efficiency

Advantages:-

- Simple to understand & easy to operate.
- Attractive for efficient workers.
- Reduction in OH cost per unit because of increased production
- Guaranteed wage to less efficient workers & provide security.

Disadvantages:-

- Guaranteed wage rate discourage less efficient workers to produce more.
- No incentive when level of efficiency is upto 66.66%

Question 23 – DELETED FROM SYLLABUS – NOT REQUIRED TO STUDY
Explain Points scheme (Bedeaux system), Hayne's system, Accelerated premium system and Premium bonus methods?

Answer:- Points Scheme or Bedeaux System:

- Calculate std. time for a job in minutes.
- Guaranteed wages promised.
- Bonus is paid if time is saved (actual time is less than standard time)
- Bonus equal to 75% of time saved.
- Total Earnings = Actual Time Taken x Time Rate + 75% of Time Saved x Time Rate

Hayne's System:

- Calculate std. time for each job & express it in man-minutes called as "MANIT".
- Worker paid on hourly rate for the time spent on job.
- Benefit of time saved is shared between **worker and foreman** ratio of 5:1 if work is repetitive.
- Benefit of time saved is shared among **worker, employer & foreman** ratio of 5:4:1 if work is non-repetitive

Accelerated Premium System:

- Std output is fixed.
- Skilled worker get high wages (earnings) if actual output increases beyond std. output.
- Rate of increase in earnings rates also increases with rate of increase in outputs.

Premium Bonus Methods :

- Calculate std time for a job.
- If task is completed in std time or above std. time then Guaranteed wages paid.
- If task is completed in less than std time then benefit of time saved is shared between ER & EE in pre-defined ratio (Constant sharing Plan / Variable sharing Plan)

Question 24 Explain Halsey and Halsey weir systems. Also describe its advantages and disadvantages?

Answer:- Under Halsey system :- Std. time is fixed. If work completed in less than std. time, bonus paid (50% of wages for time saved). Also Called Halsey fifty percent plan.

Wages = Time taken X Time rate + **50%** of time saved X Time Rate

Halsey Weir System is same as Halsey System except that bonus paid to workers is 30% of the time saved i.e.

Wages = Time taken X Time rate + **30%** of time saved X Time Rate

Advantages:-

- Simple to understand & easy to calculate.
- Guaranteed wages given.

- Incentive to efficient worker to complete task in less than standard time.
- Incentive to employer for better production facilities since employer receive 50% share in savings.

Disadvantages:-

- Difficult to fix std. time so precisely.
- Sharing principle may not be liked by EE.

Question 25 Explain Rowan System along with its advantages and disadvantages?

Answer:- A std time is fixed for a job & bonus is paid if time is saved.

Wages = Time taken X Rate per hour + $\frac{Time\,Saved}{Time\,allowed}$ X Time Taken X Rate per hour

Advantages:-

- Simple to understand & easy to calculate.
- Guaranteed wages given.
- Incentive to efficient worker to complete task in less than standard time.
- Incentive to employer for better production facilities since employer receive 50% share in savings.

Disadvantages:-

- Difficult to fix std. time so precisely.
- Sharing principle may not be liked by EE.

Question 26 Explain group system of wage payment? Discuss methods used for distributing wages to each worker?

Answer:- when jobs are to be performed collectively by a number of workers. Each man's work depends other man's work performed. Hence Not possible to measure separately the output of each worker. Here workers constituting a group are treated as a unit & combined output of such unit is considered for wage calculation.

The methods usually used to distribute wages to each worker as below:

1. **Equal**, if all workers are of same grade, same skill, same wage rate & worked for same duration.
2. **Pro-rata to time-rate** when the time spent by the individual worker is the same but wage rate is different
3. On the basis of the **time rates and attendance** of each worker.
4. On the basis of **pre-determined percentage**; if % pre-determined on the basis of skill, wage rate etc
5. Pay wage rate time based to unskilled workers & distribute balance amount to skilled by any of above method. Applicable when group consists of unskilled & skilled workers.

Question 27 Explain group bonus & group bonus scheme. Also describe objectives & advantages of group bonus scheme?

Answer:- Group Bonus = bonus paid for collective efforts of group of workers (Distributed among workers on some agreed basis – normally in proportion of wages on time basis)

Group bonus scheme = Bonus paid to group of employees working together (Suitable when individual efforts cannot be decided for payment of bonus). Ex. Construction work, team work of masons and labourers which produces results.

Objectives of GBS:

- To create **team spirit** among workers.
- To create **interest** among workers to improve performance.
- To reduce **wastage in materials** & **idle time**.
- To produce **optimum output** at minimum cost.

Advantages of GBS:

- It creates a sense of team spirit (personal benefits depends upon group efforts)
- It creates healthy competition among workers (Eliminate excess waste of material)
- It creates easy understanding of target output.

Question 28 Explain incentive schemes for indirect workers?

Answer:- Indirect workers not involved directly in production (Packing & cleaning staff, Inspection staff) so difficult to set standard output & time.

But necessary to provide incentives to indirect workers also due to following reasons:

1. **Dissatisfaction**: No incentive will lead to dissatisfaction among indirect workers.
2. **Entitlement**: Bonus is also an entitlement (Right) for Indirect workers since indirect contribute.
3. **Team Spirit**: Bonus payment to indirect workers creates team spirit.
4. **Increase in efficiency:** increased efficiency of services as plant repairs & material handling
5. **Dependence on indirect labour**: efficiency of direct workers reduced when work depends upon service rendered by indirect workers.

Question 29 Explain profit-sharing and Co-partnership schemes. Also describe advantages & disadvantages?

Answer:- Profit sharing schemes = Workers paid share in profit of org. at pre-determined ratio along with wages. (Recognise efforts of workers towards profit making)

Co-partnership scheme **=** workers share profit of org. in the form of shares (Recognise efforts of workers towards profit making)

Advantages	Disadvantages
EE feel their importance in earning profit by org so improve production, efficiency.	Worker get demotivated if profit reduces
Reduction in Labour turnover rate if minimum period of service is put as condition for participating in such schemes.	Profit depends on good work of workers & other factors also. Profit may be less if other factors work negatively thereby dissatisfaction among workers in spite of good work
Better team work & better co-operation	Less share in profit my hamper zeal to work
	EE may doubt the profit declared
	No individual recognition of EE

Question 30 What are the ways to calculate workers share in net profits of a firm. Explain treatment of bonus in costing?

Answer:- Ways to calculate:

1. A fixed % may be allowed to workers as bonus at the end of the financial year.
2. A fixed % of the department's profit can be allowed as profit sharing if profit earned is department wise
3. Profits may be computed per unit of output & a part of profit may be allowed to workers as bonus.

Treatment in Costing: In India, payment of bonus is compulsory under the Payment of Bonus Act.
Minimum bonus as per Act = (8.33% of wages earned or ₹ 100) whichever is higher
Maximum bonus as per Act = 20%.

There can be two methods of dealing with bonus:

1. Treat as **overheads** if bonus paid to indirect workers.
2. Inflate wage rate by including bonus if bonus paid to direct workers.

Question 31 Describe the principles to be considered in deciding method of fixation of remuneration payable?

Answer:- Principles are

1. **Geographical Area Based:** Wage-rates in an industry should be fixed in conformity with the general wage-levels in geographical area.
2. **Performance \ Job Based:** Wage-rates should be fixed considering degree of skill, effort required for a job.. Higher wages should be fixed for high skill requiring job.
3. **Minimum Wages:** Wage-rates should guarantee a minimum wage (Otherwise insecurity/ High Labour Turnover Rate)
4. **Maintain Standard of living:** Wage-rates should be fixed ensuring reasonable standard of living.
5. **Incentive as per output:** wage rate should ensure possibility of earning extra amt by extra efforts.

Question 32 Write short notes on efficiency rating procedures?

Answer:- Efficiency is usually related with performance. Level of efficiency (LOE) = $\frac{Time\ allowed}{Time\ taken}$

- If the time taken equals or less than standard time, he is rated as efficient.
- If the time taken more than standard time he is rated as inefficient.

For efficiency rating of employees the following procedures may be followed:

1. **Determining std time:** Determine std time required by worker for a job (using time & motion study)
2. **Measuring Actual Performance of workers:** Record actual O/P with actual time.
3. **Computation of efficiency rating:** compute LOE using above formula.

Question 33 What is labour productivity. Explain factors for increasing labour productivity?

Answer:- Labour productivity : $\frac{Standard\ Time\ for\ doing\ actual\ amount\ of\ work}{Actual\ time\ taken\ ¿}\ do\ work\ ¿$

LP is used to measure efficiency of workers (Check effectiveness in utilisation of men, money & material).

Factors for increasing LP*:*

1. Employ right person with right skill.
2. Place right man on right job.
3. Provide right training to young & old workers.
4. Always avoid excess or shortage of labour in factory.
5. Study job for simplification and standardisation.

Question 34 Discuss briefly, how you will deal with casual workers and workers employed on outdoor work in Cost Accounts? OR Write short note on casual workers and outdoor workers?

Answer:- Casual workers: workers employed temporarity for short duration if permanent labour force is not sufficient to produce required units of output OR regular workers are on leave due to their illness or any other reason.

Treatment in cost accounts:- Wages paid to casual workers in the nature of direct labour treated as direct labour cost forms part of prime cost. Wages paid to casual workers in the nature of indirect labour are treated as production overheads.

Outdoor workers: Workers not perform work in factory (either perform work in their homes or at customer site). 2 categories

1. Those who are on the list of regular workers. They are provided raw material to perform task at customer's site as per instructions of management of the organisation.
2. Those who are not on the list of regular workers. They are provided raw material to perform task at their home.

Rigid control over out-workers as follows:

1. Reconcile materials issued with the output.
2. Check Completion of task in given time.
3. Surprise checks to ensure physical presence of workers at home/customer's site.

Question 35 Distinguish between Job Evaluation and Merit Rating?

Answer:- Job Evaluation:- Evaluation (rating) of various jobs as per responsibility & skills required for them. (To determine basic wage & salary for a job).

Merit Rating:- Rating (relative worth) of each worker as per performance of each employee.

Job Evaluation	Merit Rating
Evaluation (rating) of various jobs as per responsibility & skills required for them	Rating (relative worth) of each worker as per performance of each employee
It rate job.	It rate job-holder.
To determine basic wage & salary for a job	To determine fair wages for each worker

Question 36 What do you mean by time and motions study? Why is it so important to management?

Answer:- Time study:- To determine std time to perform a task by an average worker. (Stopwatch used for TS)

Motion study:- To closely observe movement of men & material from one place to another to eliminate unnecessary movements thereby increase production.(Camera used for MS)

Why important to management :-

1. Improved flow of work to ensure effective use of men, money & material.
2. Improvement or Elimination of Unnecessary movement for best workers efforts & reduction in fatigue.
3. High level of efficiency achieved.
4. Setting of std time for labour cost control & cost reduction.
5. Fixing wage & introducing effective incentive scheme.

Overheads

ABC Analysis of Theory Questions

Q.1	Explain meaning of overhead and describe meaning of fixed overhead, variable overhead and semi-variable overhead? OR Classification of Overheads by behaviour / Variability?		**B**	
Q.2	Discuss classification of overheads on the basis of Function and Element ?		**B**	
Q.3	Discuss in brief the advantages of classification of overheads into fixed and variable ?		**B**	
Q.4	Write short notes on Cost classification, cost allocation, Cost apportionment and absorption? Distinction between cost allocation and cost apportionment ?	**A**		
Q.5	Explain departmentalisation of overhead along with its advantages ?	**A**		
Q.6	Explain the methods of absorbing overheads to various products or jobs ?	**A**		
Q.7	Describe types of overhead Rates?	**A**		
Q.8	Explain the treatment of under-absorbed and over-absorbed overheads in cost accounting?	**A**		
Q.9	Describe methods of treatment of administrative overheads?		**B**	
Q.10	Discuss Various Capacity Levels?		**B**	
Q.11	Explain treatment of some specific items in Cost Accounting?	**A**		

Question 1 Explain meaning of overhead and describe meaning of fixed overhead, variable overhead and semi-variable overhead? OR Classification of Overheads by behaviour / Variability?

Answer:- OH means cost which cannot be easily identified with & directly related to a particular cost centre
OH = Indirect cost = Indirect material cost (Stationary used in factory) + Indirect labour cost (Salary of factory manager) + indirect expenses (Rent of factory building)

OH by Behave = Fixed OH + Variable OH + Semi-variable OH

Fixed Overhead	Not vary with change in the volume of production within installed capacity of factory. Fixed OH per unit decreases as production increases and vice-versa e.g. Rent of factory building
Variable Overhead	Vary in direct proportion to the volume of production within installed capacity. Total variable OH decrease as production decreases & vice-versa e.g. stationary used
Semi-variable overhead	Costs of which one part remains fixed within installed capacity & other part varies with the change in the volume of production but not in same proportion e.g telephone expenses consists of hire charges (Fixed) and call charges (Variable).

Question 2 Discuss classification of overheads on the basis of Function and Element ?

Answer :- OH by Function = Production OH + Admin OH + Selling OH + Distribution OH

Prod/Mf/Factory OH	All OH incurred by prod. Dept in production of goods & services e.g. Salary factory manager
Admin OH	All OH incurred by Admin. Dept in general mgt of org. e.g. Salary of Managing director
Selling OH	All OH incurred by Selling Dept in creating demand & getting customer order e.g. Rent of sales office.
Distribution OH	All OH incurred by Dist. Dept which begins with making the packed product available for despatch and ends with making the reconditioned returned empty package, if any, available for re-use e.g. Salary of distribution driver of vehicle.

OH by Element = Indirect material cost (Stationary used in factory) + Indirect labour cost (Salary of factory manager) + indirect expenses (Rent of factory building)

Indirect Materials Costs	Material cost which cannot be easily identified with & directly related to a particular cost centre e.g. (Stationary used in factory)
Indirect Labour Cost	Labour cost which cannot be easily identified with & directly related to a particular cost centre e.g. (Salary of factory manager)
Indirect Expenses	indirect exp. which cannot be easily identified with & directly related to a particular cost centre e.g. (Rent of factory building)

Question 3 Discuss in brief the advantages of classification of overheads into fixed and variable ?

Answer :-

1. **Controlling Expenses:** FC are non-controllable while VC can be controlled by motivating EEs.
2. **Marginal costing:-** Calculating Marginal cost needed for using marginal cost technique.
3. **Budget:** Flexible budget shows different amount of expenditure (FC & VC) at different levels of activity.
4. **Decision Making:** Decision as to export price & shut down or continue needs segregation of FC & VC.
5. **Absorption Rate:-** Separate absorption rates for fixed & variable overhead required to charge product.

Question 4 Write short notes on Cost classification, cost allocation, Cost apportionment and absorption? Distinction between cost allocation & cost apportionment ?

Answer:- Cost Classification:- Process of categorisation of cost according to behave, function & element.

OH by Behave = Fixed OH + Variable OH + Semi-variable OH
OH by Function = Production OH + Admin OH + Selling OH + Distribution OH
OH by Element = Indirect material cost + Indirect labour cost + indirect expenses

Cost Allocation: Process of charging the full cost of an individual cost centre for which this cost was incurred e.g. separate electricity bill of production,admin and S&D dept charged to respective dept.

Cost Apportionment: process of charging proportion of common exp. Incurred for two or more cost centres e.g. only 1 electric meter installed for production,admin and S&D dept and bill apportioned on the basis of number of light points.

Absorption: Process of charging OH cost to one unit of output. OH absorbtion methods:-

Machine hour rate	Labour hour rate	% of direct material cost
% of direct labour cost	% of prime cost	Rate per unit of output

Allocation	Apportionment
Process of charging the full cost of an individual cost centre for which this cost was incurred.	Process of charging proportion of common exp. Incurred for two or more cost centres.
separate electricity bill of production,admin and S&D dept charged to respective dept.	only 1 electric meter installed for production,admin and S&D dept and bill apportioned on the basis of number of light points.

Only 1 dept is beneficiary	2 or more depts. Are beneficiaries

Question 5 Explain departmentalisation of overhead along with its advantages ?

Answer:- Departmentalisation :- Process of allocation & apportionment of overheads to various departments.
All Dept. divided into production Depts & service Depts. Prod. Dept involved in production process while service dept provides services to all production depts. & other service depts.. Departmentalisation of overhead refers to apportionment of overhead between production & service department & then re-apportionment of all service department overheads to production departments.

Advantages of Departmentalisation:

1. **Better Estimation of Expenses**: Hence better cost control & reduction.
2. **Better Control**: By comparing actual overhead with budgeted overhead.
3. **Ascertainment of Cost for each department**: Greater accuracy in ascertaining cost of each job/product.
4. **Valuation of WIP:-** Calculation of correct cost of WIP since WIP is charged with the overheads of only those departments through which it has passed & not the overheads of entire organisation.

Question 6 Explain the methods of absorbing overheads to various products or jobs ?

Answer :-

1. **Percentage of Direct material cost:** Overhead Rate = $\frac{Total\ production\ overheads\ of\ a\ department}{Budgeted\ direct\ material\ cost\ of\ all\ products}$ X 100

   Suitable when the prices of materials do not fluctuate.
2. **Percentage of Prime cost method:** Overhead Rates = $\frac{Total\ production\ overheads\ of\ a\ department}{Prime\ Cost}$ X 100
3. **Percentage of direct labour cost:** Overhead Rates = $\frac{Total\ production\ overheads\ of\ a\ department}{Direct\ Labour\ Cost}$ X 100

Suitable when labour rates do not fluctuate widely. **Disadvantages:-** It ignores distinction between job done by skilled worker & by unskilled worker & ignores distinction between job done by manual labour and by machines

4. **Labour hour rate:** Direct Labour Hour Rate = $\frac{Total\ production\ overheads\ of\ a\ department}{Direct\ Labour\ Hours}$

   Suitable where manual labour is a dominant factor of production. **Disadvantage:-** ignores distinction between job done by manual labour and by machine.
5. **Machine hour rate:** Machine Hour Rate = $\frac{Total\ production\ overheads\ of\ a\ department}{Number\ of\ machine\ Hours}$

   It is suitable when major portion of production is performed by machines
6. **Rate per unit of output method:** Overhead Rates = $\frac{Amount\ of\ Overhead}{No.\ of\ Units}$

   Suitable where output is uniform. Disadvantage that it ignores the distinction between job done by manual labour and those done by machine.

Question 7 Describe types of overhead Rates?

Answer:- Overhead absorption rate may be Actual overhead rate (Based on actual OH incurred) & Pre-determined overhead rate (Based on estimated OH to be inurred)

AOR:- Calculated after the actual overheads have been incurred. = $\frac{Actual\ overheads\ for\ the\ period}{Actual\ base\ for\ the\ period}$

POR:- Calculated in advance before the incurrence of actual overheads. = $\frac{Budgeted\ overheads\ foe\ the\ period}{Budgeted\ base\ for\ the\ peiod}$

Actual Overhead Rate	Pre-determined Overhead Rate
AOR is calculated by dividing the **actual** overheads by the **actual** base.	POR is calculated by dividing the budgeted overheads by the **budgeted** base.
Formula	Formula
Actual overheads are used.	Budgeted overheads are used.
Calculated after actual OH have been incurred	Calculated before the incurrence of actual OH
Not facilitate cost control.	Cost control by comparison of actual OH with pre-determined OH recovered.

Overhead absorption rate may be blanket rate (single rate for the entire factory) & Departmental OH Rate (separate rate for each department)

Blanket overhead rate =

$$\frac{\text{Total Overheads for all departments / cost centres}}{\text{Total Base for all departments / cost centres}}$$

Departmental Overhead rate =

$$= \frac{\text{Total Overheads of a department / cost centre}}{\text{Base for that department / cost centre}}$$

BOR	DOR
single rate for the entire factory	separate rate for each department
single OH absorbtion rate.	Under this practice there are **multiple rates**.
Computed for the entire factory.	Computed for each of the departments.
Suitable when one product is manufactured.	Suitable when two *or* more products are manu-factured.
Formula	Formula

Question 8 Explain the treatment of under-absorbed and over-absorbed overheads in cost accounting?

Answer:- Under absorbed overhead means that OH absorbed in production is less than actual OH. **Over absorbed overhead** means that OH absorbed in production is more than actual OH.

Reason of under/over absorbed OH:- Wrong estimation of overhead exp. / Output / machine Hr / Labour Hr.

Treatment of under/over absorbed OH:- Any One Method

1. Use of supplementary rate method
2. Writing off to costing profit and loss account.
3. Carry over to next accounting period method.

Use of SR method:- Suited when amount of over/under absorption large & due to normal reasons like increase in labour rates. SR = $\frac{amount\ \frac{of}{¿}\ under\ absorbed\ overheads}{Actual\ Base}$

In case of under absorption	The cost of sales, stocks of FG & WIP increased by applying positive SR.
In case of Over absorption	The cost of sales, stocks of FG & WIP reduced by applying negative SR.

Writing off to costing P&L account:- Suited when under/over absorbed overhead is not very high **OR** due to abnormal reasons like defective planning.
Under absorbed overheads is transferred to debit of costing P&L account.
Over absorbed overheads is transferred to credit of costing P&L account.

Carry over to next accounting period:- Suited when normal business cycle extends to more than one year this. Just carry this year's under/over absorbed overheads to next year accounting for absorption.

Question 9 Describe methods of treatment of administrative overheads?

Answer:- (1) When Admin considered as a separate function like Production and Sales

Method	Administration Overhead rate
1. As a percentage to Works Cost	$= \frac{\text{Total Administration Overheads}}{\text{Total Works Cost}} \times 100$
2. As a percentage to Conversion Cost	$= \frac{\text{Total Administration Overheads}}{\text{Total Conversion Cost}} \times 100$
3. As a percentage of Sales Value	$= \frac{\text{Total Administration Overheads}}{\text{Total Sales (value)}} \times 100$
4. As a percentage of Gross profit	$= \frac{\text{Total Administration Overheads}}{\text{Gross Profit}} \times 100$
5. A rate per Unit Produced	$= \frac{\text{Total Administration Overheads}}{\text{No. of units produced}} \times 100$

(2) When Admin considered only for benefit of production & sales:- Admin OH lose their identity & get merged with production & selling and distribution OH.

(3) When Admin considered as not having direct relationship with production and sales:- Admin OH treated as period costs & hence transferred to the Costing P&L A/c.

Question 10 Discuss Various Capacity Levels?

Meaning	Capacity of a factory refers to its ability to produce with the available resources and facilities. It is expressed in terms of (a) Units of product *e.g.* 100 cars per day [20 costing Question per day] (b) Production Hours e.g. 100 hours per day [Study 10 hours per day]		
Types **1. Maximum / Rated Capacity**	It refers to the maximum possible production capacity of a factory which can never be achieved practically and it is only a theoretical capacity. ***Example*** A factory can work 8 hours per day. Here, Maximum capacity = 365 days × 8 = 2,920 hours		
2. Practical Capacity	It refers to the maximum capacity of a factory **reduced** by capacity lost due to Normal repairs & maintenance, Sundays, Holidays etc. Thus, **Practical capacity = Maximum capacity – Normal loss of capacity** **Example** A factory can work 8 hours per day during a six day week and remains closed for 18 holidays (exclusive of Sundays) during a year. Average idle hours per month is 20 for cleaning and maintenance.		
	Maximum capacity (365 days × 8 hours)		2,920 hours
	Less: Idle capacity due normal reasons:		
	Sundays (52 × 8)	416 hours	
	Holidays (18x8)	144 hours	

	Maintenance (20 × 12)	240 hours	800 hours
	Practical Capacity		2,120 hours
3. Normal Capacity	It refers to average capacity utilization of factory during **one full business cycle** which may extend over 3 to 5 years ignoring the abnormal year of highest and lowest utilisation. **Example** Practical Capacity is 32,400 hours and Actual Capacity during the last 5 years was: I 30,000 II 38,000, III 31,000 IV 30,800, V 26,900. Here year II being two high and Year V being too low are to be ignored. Hence, Normal Capacity = Average of (30,000 + 31,000 + 30,800) = 30,600 hours.		
4. Actual Capacity	It refers to the capacity actually utilised during a given period.		

Question 11 Explain treatment of some specific items in Cost Accounting?

Answer:-

1. **Treatment of Interest on capital:** Controversy whether interest on capital be treated as costs or not. (**Note Intt on Capital means Intt on own fund)**

Arguments in favour of Inclusion:

1) Include intt. as wages is reward for labour & interest is reward for capital.
2) Include intt. In calculating actual Carrying cost of maintaining.
3) Include intt. While comparing cost of different jobs needing different capital.
4) Include intt. while comparing cost under old method (Labour based) & new method (Machine based).
5) Include intt. To calculate true profits.
6) Include intt. while submitting tenders of cost plus contracts etc.

Arguments against inclusion:

1. Not Include Intt. Since it is economics concept (Not costing concept).
2. Not Include Intt. Since it is pure finance (not connected to cost of manufacture)
3. Not Include Intt. since difficult to determine fair rate of interest.
4. Not Include Intt. Otherwise value of closing stock will increase which means recognition of unrealized profit.

Conclusion:- Include intt. While comparing cost for managerial decision making & Not Include Intt. While calculating cost undet cost A/c.

2. **TREATMENT OF DEPRECIATION**:- Dep.(reduction in value of a fixed asset due to use/passage of time)

Dep. on fixed assets of factory e.g. factory building	Part of Production OH.
Dep.on fixed assets of administration office e.g. office building	Part of Administration OH.
Dep.on fixed assets of selling office e.g. show room building	Part of Selling OH.
Dep.on fixed assets of distribution office e.g. warehouse, delivery van)	Part of Distribution OH.

3. **Packing expenses:**
   - Charged to Prime Cost if Cost of Primary Packing is incurred for protecting the product.
   - Charged to Distribution Overheads if Cost of Secondary Packing is incurred to facilitate transportation of product from storage to place of customers
   - Charged to Selling overheads if Cost of Secondary Fancy Packing is incurred to attract customers
   - Charged to specific job if Cost of Special Packing is incurred at the request of customer
4. **Fringe benefits:** (Indirect benefits e.g. medical facilities, housing facilities) in addition to basic salary & allowances like DA & HRA. (To improve morale, loyalty & stability of employees)
   1) FB charged directly to product by supplementary labour rate if the amount is substantial.
   2) FB treated as production OH if the amount is not substantial
5. **Expenses on removal and re-erection of machines:** Exp.incurred in factory due to change in method of

production & an addition or alteration in factory building (Treat Part of production OH)
Such expenses charged to Costing P&L A/c if due to abnormal reasons as faulty planning.

6. **Bad debts:**
    1) Treated as Selling OH if **normal amt** of Bad Debts is arising in normal course of business.
    2) Exclude from Cost A/c if **Abnormal Amount** of Bad Debts arises.

    One view is that bad debts are financial losses and hence should be excluded from Cost Accounts.
7. **Training Expenses =** Salaries/Wages to Trainees + Costs incurred in training dept + Loss arising from initial lower production.
    1) Treat as Production OH if Training expenses belongs to Factory trainees.
    2) Treat as Administration OH if Training expenses belongs to Office & Adm. Trainees.
    3) Treat as Selling overheads if Training expenses belongs to Sales Trainees.
    4) Treat as Distribution overheads if Training expenses belongs to Distribution Trainees.
    5) Treat as loss in Costing P&L if Training expenses are due to high labour turnover.
8. **Canteen Expenses / Expenses on Welfare Activities :**
    1) Treat as Production OH if Expenses belongs to welfare of factory staff.
    2) Treat as Adminisration OH if Expenses belongs to welfare of Administration Staff.
    3) Treat as Selling OH if Expenses belongs to welfare of Sales Staff.
    4) Treat as Distribution OH if Expenses belongs to welfare of Distribution Staff.
9. **Carriage and cartage expenses:** (Exp incurred on inward/outward of materials & goods from one place to another.
    1) Treat as part of direct material cost if it relates to Direct Materials.
    2) Treat as part of Production overheads if it relates to Indirect Materials.
    3) Treat as part of Distribution overheads if it relates to Distribution of Finished Goods.
    4) Charge to Costing P&L if it relates to Shifting of Direct/Indirect Materials/Finished goods under abnormal conditions such as fire, flood etc.
10. **Night shift allowance:** (extra amount paid to employees who work during night hours)
    1) Charge Production OH if it is paid to meet demand in general beyond normal capacity.
    2) charge directly to job concerned if it is paid to meet some specific customer order.
    3) charge to Costing P&L if it is paid to produce during night hours due to abnormal circumstances (say No Power during the day hours).
11. **Research and Development Expenses:-** Research Cost means cost of searching new or improved products or methods.
    1) Treat as Production OH if the **Research cost** relates to Manufacturing Activities.
    2) Treat as Administration OH if **Research cost** relates to General Management Administration.
    3) Treat as Selling & Distribution OH if the **Research cost** relates to Marketing Activities.
    4) Directly charge to a particular product if the **Research cost** relates to Particular Product.
    5) Treat as deferred revenue loss & charge to Costing P&L over a period generally not exceeding 3 years the **cost** of Unsuccessful **Research**.

    Developments Cost :- Cost of process which begins with the implementation of the decision to produce a new or improved product or to employ a new or improved method and ends with the commencement of actual production of that product or by that method.
    1) Directly charge to a product if **Development** Costs relates to a particular product.
    2) Treat as deferred revenue expenditure & charge to Costing P&L over a period generally not exceeding 3 years if the amount of **development** cost is Substantial.
12. **Cost of Idle capacity/Facilities:-** Part of practical capacity which cannot be utilized due to abnormal reasons like shortage of raw-materials, shortage of labour, shortage of power etc.

    Idle Capacity = Practical Capacity – Actual capacity

    Idle capacity cost refers to costs associated with idle capacity which could not be recovered.

    ICC = Total Costs related to plant / Normal capacity × Idle capacity

Exp:- Practical capacity of plant is 2,120 hours & Actual capacity of plant is 1,800 hours. Fixed Overheads of plant for the year is Rs. 5,30,000.

ICC = 5,30,000 X $\frac{2120\,hours - 1800\,hours}{2120\,hours}$ = Rs. 80,000

- ICC charged to capacity utilized by using a Supplementary OH Rate If idle capacity is due to unavoidable reasons like repairs, maintenance etc.
- ICC charged to Costing P&L if Idle capacity is due to abnormal reasons like power failure
- ICC charged to production cost by inflating OH rates If idle capacity is due to seasonal factors.

13. **Cost of Small Tools:-** Small tools include drill bits, screw cutter etc. (short effective life)
    1) Capitalize purchase cost & depreciate over life if their life is ascertainable. Charge dep. to Factory OH.
    2) Charge purchase cost fully to depts to which they have been issued, if life is not ascertainable.

14. **TREATMENT OF COST OF OBSOLESCENCE OF FIXED ASSETS**:- Obsolescence means diminution in the intrinsic value of a fixed asset. It arises when before the expiry of expected normal useful life, the asset needs replacement by a new or improved asset due to external factors like technological improvements.
    Provision for obsolescence should be made while determining the rate of depreciation and should be treated as part of production overheads. The loss arising on account of obsolescence is generally charged to Costing Profit & Loss Account.
15. **Leave Wages:-** wages for an accrued leave
    1) Charge to production by adjusting wage rate if Leave wages belongs to Factory direct workers.
    2) Treat as a part of Production overheads if Leave wages belongs to Factory indirect workers.
    3) Treat as a part of Administration overheads if Leave wages belongs to Administration workers
    4) Treat as part of Selling overheads if Leave wages belongs to Sales workers.
    5) Treat as part of Distribution overheads if Leave wages belongs to Distribution workers
16. **Treatment of Bonus (Profit sharing):-** Profit sharing bonus is paid out of profit and hence it is an appropriation of profit.

Bonus	Accounting Treatment
Minimum Bonus under Pymt of bonus Act	
to Factory direct workers	Treat as part of Direct Labour Cost.
to Factory indirect workers	Treat as part of Production overheads.
to Administration workers	Treat as part of Adm. overheads
to Sales workers	Treat as part of Selling overheads.
to Distribution workers	Treat as part of Distribution overheads.
Bonus over & above the minimum Bonus	Charge to Costing P&L A/c.

17. **Treatment of Fines realised from workers**:- Credit fine to a Separate Fine Fund & utilise it for welfare of workers. Incomes and expenses relating to Fine Fund are not included from Cost Accounts.
18. **Treatment of Leave Travel Concession (LTC):-**
    1) Treat as part of direct labour cost if LTC is given to Factory Direct Workers.
    2) Treat as part of Production overheads if LTC is given to Factory Indirect Workers.
    3) Treat as part of Administration overheads if LTC is given to Administration employees.
    4) Treat as part of Selling overheads if LTC is given to Sales employees.
    5) Treat as part of Distribution overheads if LTC is given to Distribution employees.

Standard Costing

ABC Analysis of Theory Questions

Q.1	Write Short Notes on Standard Cost, Standard Costing and Variance Analysis?	**A**		
Q.2	Discuss the reasons for which standard costing is preferred?		**B**	
Q.3	Describe the types of variances?		**B**	
Q.4	Distinction between Standard costing and Budgetary Control?	**A**		
Q.5	Describe advantages of standard costing and also analyse critically ?		**B**	
Q.6	Describe three distinct groups of variances that arise in standard costing ?			**C**
Q.7	Calculation of variances in standard costing is not an end in itself, but a means to an end." Discuss ?	**A**		

Question 1 Write Short Notes on Standard Cost, Standard Costing and Variance Analysis?

Answer:- **Standard Cost** = Cost what should have been incurred (basically estimated cost on scientific basis).

Standard Cost	Estimated Cost
Means what cost should be?	Means what cost will be?
SC determined using scientific basis.	EC determined adjusting past figures to possible future changes.
Used for cost control.	Used for quoting selling price of new product.
Used by a firm having standard costing system	Used by a firm having historical cost system.

Standard Costing = method of costing which compares actual cost with standard cost. Steps as below

1) Fixation of realistic standard cost for each element i.e. material, labour & OH.
2) Comparison of actual cost with standard cost & find out difference between two known as variance.
3) Analysis of variances to ascertain the reasons for the adverse variances.
4) Management to take corrective action.

Variance analysis = method of analysis of variances and finding out reasons behind unfavorable cost variance (

1) Calculate actual amount of Variances.
2) Find out reasons of such variances.
3) Assign the person responsible for such variances & take corrective action to avoid it.

Question 2 Discuss the reasons for which standard costing is preferred?

1. **Prediction of future cost for decision making:** SC helps in calculating from a project/ order/ activity proposed to be undertaken thereby useful for decision making purpose. That's why is it preferred.
2. **Provide target to be achieved:** SC fix target cost thereby helping mgt to continuously monitor the performance & take action immediately for deviations. That's why is it preferred
3. **Used in budgeting and performance evaluation:** SC helps in setting flexible budget & performance level of each dept. thereby enabling mgt to trace responsible deptt/person for adverse variance
4. **Interim profit measurement and inventory valuation:** SC provide std. cost which are used to prepare profitability statement for some interim period if required.

Question 3 Describe the types of variances?

1. Controllable Variance = Variance is CV if it can be controlled by depts. of company e.g. Excess use of material is fault of production dept but if this is due to defective material then it is fault of inspection dept.
2. Uncontrollable variance = Variance is UV if it cannot be controlled by depts. of company e.g. increase in market price of material, increase in wage rate in market.
3. Favorable variance = When actual cost is less than std cost then difference is known as 'favourable' variance but when actual cost is more than standard cost, difference is known as 'unfavourable', 'adverse' variance. Favourable variance is indicated by (F) & adverse variance by (A).

Question 4 Distinction between Standard costing and Budgetary Control?

Standard Cost	Budgetary Control
Controlled by comparing actual cost with standard cost of actual output.	Controlled by comparing actual figures with budgeted figures of sales, production, capital assets etc.
Narrow scope since it covers only production costs.	Wide scope since it covers all business operations, sales, capital & expenses.
Mainly concerned with calculation & control of each element of cost.	Mainly concerned with overall profitability & financial position of business.
Projection of cost accounts only.	Projections of financial accounts & cost accounts.
It involves detailed variance analysis item by item in respect of each element of cost.	It involves budgeting and control of total expenses and revenues based on estimates.

Question 5 Describe advantages of standard costing and also analyse critically?

Answer:- Advantages of Standard Costing

1. Facilitates Effective Delegation of Authority:- everybody know what they have to achieve & by what standard they will be judged.
2. Facilitates Cost Control:- Exact causes of deviation of actual figures from standard figures is revealed
3. Facilitates Motivation:- Workers who attain standard output are rewarded. Dept which incur less than std cost are awarded.
4. Facilitates Coordination:- All depts. as purchasing, production, selling, considered together while fixing std
5. Facilitates use of MBE Principle:- management by Exception states that management need to concentrate only on the areas & problems which require its attention
6. Facilitates Cost Audit:- if variances are satisfactorily explained, then accuracy of costing is safely assumed

Criticism of Standard Costing

1. Variation in price: precise estimation of cost not possible (price level of material & labour is highly variable)
2. Varying levels of output: Non–achievement of unrealistic standards may adverse effect motivation of EEs.
3. Changing standard of technology: SC require continuous revision (business conditions keeps on charging)
4. Unsuitability:- Standard costing system not suitable in jobbing industries (production non – repetitive nature)
5. Difficulty in Setting Standards:- Sometimes difficult to set up standard costs due to uncertain economic conditions, great fluctuations in prices.
6. Non Facilitate Cost Reduction:- Standard costing facilitates only cost control & not cost reduction.

Question 6 Describe three distinct groups of variances that arise in standard costing ?

1) **Variances of Efficiency**:- Variances arise due to efficiency or inefficiency in use of materials or labour e.g. Material usage variance, material mix variance
2) **Variances of Price Rates**:- Variances arise due to difference between Actual Rate & Standard Rate of Material, Labour & Overhead e.g. Material price variances
3) **Variances due to Volume**:- Variances arise due to difference between Actual Activity & Standard Level of Activity e.g. Fixed overhead capacity variances.

Question 7 “Calculation of variances in standard costing is not an end in itself, but a means to an end.” Discuss?

Answer :- Write abour std costing & variance analysis (From Q.1) and conclusion as below:-

Mere calculation & analysis of variances is of no use. The success of variance analysis depends upon how quickly and effectively the corrective actions can be taken on the analysed variances. In other words, the calculation of variances in standard costing is not an end in itself, but a means to an end.

Reconciliation of Profit

ABC Analysis of Theory Questions

Q.1	What is the need for reconciliation of Cost and Financial Accounts? State the possible reasons for difference between profits shown by cost accounts and financial accounts?		**B**	

Question 1 What is the need for reconciliation of Cost and Financial Accounts? State the possible reasons for difference between profits shown by cost accounts and financial accounts?

Answer:- In Non – Integral System where separate sets of books are maintained for costing and financial transactions, the profit shown by one set of books may not agree with that of the other set of books. Hence, the need for reconciliation of profit arises:

1. To identify the reasons for the difference between results of Cost & Financial Accounts.
2. To check the arithmetical accuracy and reliability of both the sets of books.

The various reasons for the difference are given below:-

1. Under or Over absorbed of Overheads:- The overheads absorbed at a pre-determined rate in cost accounts may be different from the actual overheads recorded in financial accounts. The effect of over / under absorption of overheads on profits is shown below:

Particulars	Effect on Profits on Cost Accounts	Effect on Profits on Financial Accounts
1. Over absorption of OH in Cost Accounts	Less Profits	More Profits
2. Under absorption of OH in Cost Accounts	More Profits	Less Profits

2. Different Bases for Valuation of Stocks:- In financial accounts, Stock of Finished Goods is valued at cost *or* market price whichever is lower but in cost accounts, it is valued at cost. The effect of over/under valuation of stock on profits is shown below:

Particulars	Effect on Profits on Cost Accounts	Effect on Profits on Financial Accounts
1. Over valuation of Opening Stock in Cost A/c	Less Profits	More Profits
2. Under valuation of Closing Stock in Cost A/c	Less Profits	More Profits
3. Under valuation of Opening Stock in Cost A/c	More Profits	Less Profits
4. Over valuation of Closing Stock in Cost A/c	More Profits	Less Profits

3. Different Methods of Depreciation:- In financial accounts, (SLM) or (WDV) method may be used but in cost accounts Machine Hour Rate Method is used.

4. Items Included Only in Financial Accounts (Not in cost Accounts)

1) Incomes e.g. Profit on sale of Fixed Assets.
2) Expenditures e.g. Loss on sale of Investments, Preliminary expenses W/off
3) Appropriations e.g. Dividend Distribution Tax, Income Tax

5. Items Included Only in Cost Accounts (Notional Expenses):- (Not in financial accounts) e.g. notional Interest on Capital, Notional Rent on premises owned

Joint Product & By Product

ABC Analysis of Theory Questions

Q.1	Discuss in brief Joint products, By-products and Co-products?		**B**	
Q.2	Distinguish between Joint products and By-products? OR Distinguish between joint product and Co-product?	**A**		
Q.3	Discuss briefly methods of apportionment of joint-cost into joint-products ?		**B**	
Q.4	Discuss the treatment of by-product cost in Cost Accounting.		**B**	

Question 1 Discuss in brief Joint products, By-products and Co-products ?

Answer :- JP = two or more products of almost equal value which are produced in natural proportions (This proportion can't be changed by mgt) simultaneously from same material in same process. e.g. in case of oil refining, JP are kerosene, petrol, diesel etc.

BP = product of relatively small value emerged incidentally in mdf main product e.g. in case of Rice mill, Rice is main product & Husk is by-product.

CP = two or more products (Not of almost equal value) which are not necessarily produced in natural proportions (This proportion can be changed by mgt), not necessarily from same raw material, not necessarily in same process e.g. wheat & gains are produced in 2 separate farms with separate cultivation process.

Question 2 Distinguish between Joint products and By-products? OR Distinguish between joint product and Co-product?

JP	BP
Almost equal value.	Relatively small value.
Produced simultaneously.	Emerge incidentally in manufacturing main product.

Mgt is free to treat all products produced as JP or one product as main product & other product as by-product.

JP	CP
Produced in natural proportions which cannot be changed by mgt	Not produced in natural proportion & proportion can be changed by mgt.
Using same raw material.	Not necessarily using same raw material.
Produced simultaneously in the same process.	Not necessarily be produced in same process.
Almost equal value.	Not necessarily be of equal value.

Question 3 Discuss briefly methods of apportionment of joint-cost into joint-products ?

Answer :- Methods of Apportioning joint costs over Joint Products

Method	Joint Costs are apportioned on the basis of ----
Physical unit method	Physical volume of JPs at spilt off point (Not suitable when cost has no relation to physical volume of JPs)
Average unit cost	average cost per unit (AC p.u.= $\frac{Total\ joint\ Costs}{Total\ number\ of\ units\ of\ joint\ products}$) Not Suitable when physical units of JPs are different e.g. one in kg. & other in litre.
Survey / Points value	value assigned to the products according to their relative importance considering

method	technical survey of all factors involved in the production & distribution of JPs.
Contribution Margin	Segregate Joint cost in fixed & variable. variable portion apportioned on basis of physical volume of products & fixed portion apportioned on basis of contribution margin ratio. Contribution margin = Sales value – Variable costs Contribution margin ratio = $\frac{Contribution\ of\ an\ individual\ product}{Total\ contribution\ of\ all\ products}$ x100
Market Value at time of Separation point method	Market value of JPs at the separation point. Suitable when • All JPs **not** subject to further processing **OR** further processing costs incurred disproportionately
Market Value after further Processing method	Market value of the JPs after further processing. Suitable when • All JPs subject to further processing **OR** further processing costs incurred disproportionately
Net Realisable Value Method	NRV of the JPs at separation point. NRV = Sales value after further processing – further processing costs Suitable when • All JPs subject to further processing **OR** further processing costs incurred disproportionately

Question 4 Discuss the treatment of by-product cost in Cost Accounting.

Case 1:- When BP has small value

Treatment:- Don't apportion joint cost of JPs to BP. Credit Sale value of BP as income in costing P&L **OR** Credit Sale value of BP to process A/c in which BP arose.

Case 2:- When BP has considerable value

Treatment:- Yes apportion joint cost of JPs to BP using Any of 7 methods above. Credit Sale value of BP to BP A/c. Transfer P&L in BP A/c to Costing P&L A/c.

Case 3:- When BP required further processing and BP has small value **OR** considerable value

Treatment:- BP has small value (Same treatment as in case 1 above) OR BP has considerable value (Same treatment as in case 2 above)

Case 4:- When BP used by undertaking itself

Treatment:- Debit replacement price (Market price) of BP to process A/c in which BP arose & credit replacement price (Market price) of BP to BP A/c.

Budgets & Budgetary Control

ABC Analysis of Theory Questions

Q.1	Define budget and budgeting?			C
Q.2	Discuss essential elements, characteristics and objectives of a budget?			C
Q.3	Discuss Budgetary Control system, its features, objectives, advantages, limitations and steps involved in budgetary control system?		B	
Q.4	What is zero base budgeting? What are the advantages of zero base budgeting?	A		
Q.5	Discuss Fixed and Flexible budget. Briefly state the circumstances in which there arises need for preparation of flexible budget. Distinction between fixed and flexible budgets?	A		

Question 1 Define budget and budgeting?

Budget = quantitative expression of a plan for future period e.g. planned sales volume & cash flows

Budgeting = Process of making budgets & making use of budgets for further planning, coordination & control.

Question 2 Discuss essential elements, characteristics and objectives of a budget?

Essential Elements:- Budget should be

Flexible for revision + broken inti various functional budgets + compared with actual, variances analysed & corrective action taken + linked to reward system + fix responsibility to mgt persons

Characteristics:- Budget is

Prepared on past basis + prepared for future period + detailed plan of all financial activities + of different types (production/purchase/exp. Budget) + written document

Objectives:- Budget should

Reflect organisation plan (Sales budget) + fix responsibility to mgt persons + motivate EEs to attain goals with reward + co-ordinate all business activities to achieve profit targets + compared with actual, variances analysed & corrective action taken

Question 3 Discuss Budgetary Control system, its features, objectives, advantages, limitations and steps involved in budgetary control system?

Answer:- **Budgetary Control:** Involves budgets making, continuous comparison of actual with budgets for achievement of targets & Place responsibility for failure to achieve budget targets.

Features:- Budget helps in

Determination of Obj. to be achieved + List of activities to be undertaken for Obj. achievement + Plans activities in physical & monetary terms (Sales Qty & Value) + Compare actual performance with target, find discrepancies + take corrective action.

Objectives:- Budget should

Reflect organisation plan (Sales budget) + fix responsibility to mgt persons + motivate EEs to attain goals with reward + co-ordinate all business activities to achieve profit targets + compared with actual, variances analysed & corrective action taken

Advantages

1. **Efficiency:-** Conduct business activities in targeted manner (Sales Target)

2. **Control on expenditure:-** Control each dept. exp. (production cost budget and wages budget)
3. **Finding deviations:-** Reveal deviation between target & actual performance
4. **Effective utilisation of resources:-** men, money, material in best utilisation
5. **Implementation of Standard Costing System:-** Std. costing system implemented
6. **Cost Consciousness:-** Encourage cost control & cost reduction.

Limitations

1. **Based on Estimates:-** estimates becomes useless if future business conditions changes.
2. **Time factor:-**Top mgt has to devote considerable time in budget implementation.
3. **Co-operation Required:-**Staff co-operation not available since it directly identifies responsible person.
4. **Expensive:-** as it needs proper organisation structure with responsibility (much Time & much money)
5. **Not a substitute for management:-** Budget is not a substitute for management.
6. **Rigid document:-** budget not consider expected change in internal & external factors.

Steps involved in the budgetary control technique

1. **Definition of objectives**:- properly define items of revenue & expenditure to be achieved.
2. **Location of the key factor**:- Identify in advance limiting factor for proper budgeting.
3. **Appointment of controller**:- Appoint a whole time senior executive known as budget controller
4. **Budget Manual:-** Prepare a BM (collection of key informations)
5. **Budget period**:- should be decided considering business cycle.
6. **Past statistics:-** Consider past data only when similar conditions likely to repeat in future.

Question 4 What is zero base budgeting? What are the advantages of zero base budgeting?

Answer:- ZBB means making of budgets without any reference to past budgets & actual figures. Features:-

1. Critically evaluate each budget item whether old or new.
2. Concentration on "**why**" needs to spend (not simply on "**how much**" to spend)
3. Effective utilisation of limited resources like cash & corporate target is superior to individual dept target.

Advantages

1. Allocation of limited resources in order of priority.
2. Budgets on cost – benefit analysis. No arbitrary cuts or increases in budget items.
3. Link budget to corporate target.
4. Identify and eliminate areas of wasteful expenditure.
5. Implementation of Management by Objectives

DISTINCTION BETWEEN TRADITIONAL BUDGETING AND ZERO BASE BUDGETING

Traditional Budgeting / Conventional Budgeting	Zero Base Budgeting
Accounting Oriented. Main stress on previous expenditure level	**Decision Oriented (N**ot consider previous level of expenditure)
Main stress is on **how much** will be spend.	Main stress is on **why** needs to spend.
D**oes not promote** Operating Efficiency.	**Promotes** Operating Efficiency.
It **does not** identify activities involving wasteful exp.	**Identifies** activities involving wasteful exp.
It **does not** fix any priority.	It **fixes** the priorities.

Question 5 Discuss Fixed and Flexible budget. Briefly state the circumstances in which there arises need for preparation of flexible budget. Distinction between fixed and flexible budgets?

Answer:-

Fixed Budget:- It is a budget designed to remain unchanged irrespective of the level of activity actually obtained.
Flexible budget:- It is a budget which by recognising the difference between fixed, semi – variable and variable costs is designed to change In relation to the level of activity obtained.

The need for preparation of flexible budgets arises in the following circumstances:-

1. In case of industries where there are seasonal fluctuations in sales / production e.g soft drinks industry.

2. In case of company which keeps on doing new changes in design of its products e.g. mobile company.
3. In case of industries engaged in **made-to-order** business like ship building.
4. In case of an industry which is influenced by changes in fashion.
5. In the case of labour intensive industry.

DISTINCTION BETWEEN FIXED BUDGET AND FLEXIBLE BUDGET

FIXED / rigid / inflexible BUDGET	FLEXIBLE BUDGET
Not change with actual volume of activity.	Changes on the basis of activity level to be achieved.
It operates on one level of activity & assumes no change in the prevailing conditions.	It operates on various activity levels.
Since all costs like – fixed, variable and semi - variable are related to only one level of activity, variance analysis does not give useful information.	Here analysis of variance provides useful information as each cost is analysed according to its behaviour.
Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between the two activity levels.	It provides a meaningful basis of comparison of the actual performance with the budgeted targets.

Marginal Costing

ABC Analysis of Theory Questions

Q.1	Short Notes on basic terms?	**A**		
Q.2	Describe the characters of marginal costing ?	**A**		
Q.3	Difference between marginal and absorption costing?	**A**		
Q.4	Explain advantages and limitations of marginal costing ?		**B**	
Q.5	Explain the practical application of marginal costing?	**A**		
Q.6	Explain meaning of margin of safety? State the relationship between MOS ratio and operating leverage?		**B**	

Q.1 **Short Notes** on following terms ?

1. **Marginal Costing**:- total cost is divided into variable and fixed cost. Profit = Contribution – Fixed cost whereby Contribution = Sales – Variable Cost. Variable cost treated as production cost while fixed cost treated as period cost.
2. **Marginal Cost**:- Increamental change in variable cost if the volume of output is increased by one unit. Marginal Cost = Direct Labour + Direct Material +Direct Expenses + Variable Overheads whereby
3. **Direct Costing:** Practice of charging all direct cost to products & all indirect costs is written off against profits in the period in which they arise.
4. **Differential cost**:- Difference between total cost of 2 alternatives. It is determined to choose the best cost effective alternative.
5. **Contribution =** Sales Value – Variable Cost
   Under contribution concept, fixed cost is considered as period cost which cannot be suitably apportioned between products. It helps management in following ways:-
   a. While deciding acceptance or rejection of a new order, contribution from new order is compared with contribution on earlier production on the basis of per unit and finally highest contribution giving option is adopted.
   b. While deciding between different methods of production, the method which generates higher contribution is considered.
6. **Key Factor / Limiting Factor:** it is a factor which limits the activities of an undertaking. Examples, Shortage of raw material, Shortage of labour etc.
7. **Cost Volume Profit Analysis**:- CVP analysis is the analysis of three variables cost, volume and profit. Such an analysis explores the relationship between costs, revenue & resulting profit.

   Assumptions:
   1. Changes in the levels of revenues and costs arise only because of changes in the number of product or services units produced and sold.
   2. Total costs can be separated into two components; fixed cost which does not vary with level of output and variable cost which varies with level of output.
   3. When represented graphically, the behaviours of total revenues and total costs are linear in relation to output level within a relevant range and time period.
   4. Selling price per unit, variable cost per unit, and total fixed costs are constant.
   5. All revenues and costs can be added, subtracted, and compared without taking into account the time value of money.

Importance :-

It provides the information about the following matters:

1. The behave of cost in relation to level of activity.
2. Volume of production or sales, where the business will break-even.
3. Relation of profits to variation in level of output.
4. Amount of profit for a projected sales volume.
5. Quantity of production and sales for a target profit level.

Impact of various changes on profit:

An understanding of CVP analysis is extremely useful to management in budgeting and profit planning. It depicts the impact of the following on the net profit:

(i) Changes in selling prices,
(ii) Changes in volume of sales,
(iii) Changes in variable cost
(iv) Changes in fixed cost.

8. **Contribution to Sales Ratio or Profit Volume Ratio or P/V ratio):-** expressed in %.

$$\text{P/V Ratio} = \frac{Contribution}{Sales} \text{X } 100$$

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

A higher P/V ratio explains that the rate of growth of contribution is faster than that of sales.

9. **Break Even Point (B.E.P):-** sales level at which no profit or no loss. Hence total cost equal to total revenue.

$$\text{BEP (in units)} = \frac{¿Cost}{Contribution\ per\ unit}$$

$$\text{BEP (in Vales)} = \frac{¿Cost}{Profit\ volume\ ratio}$$

10. **Margin of Safety**:- difference between Actual sales & breakeven sales. MOS = Actual Sales – Breakeven Sales. MOS shall be NIL when actual sales is equal to breakeven sales level.

$$\text{Margin of Safety} = \frac{Profit}{Profit\ volume\ ratio}$$

11. **Cash Break-even point:** When BEP is calculated only with those fixed costs which are payable in cash, such a BEP is known as cash BEP i.e. ignore dep & other non-cash item

$$\text{Cash breakeven point} = Cash ¿ Cost \frac{¿}{Contribution\ per\ unit}$$

Q. 2 Describe the characters of marginal costing?

1. All cost are classified into fixed and variable cost (i.e. No Semi-variable cost)
2. The marginal or variable costs are treated as product cost.
3. Value of FG & WIP is also comprised only of marginal costs.
4. Fixed costs are treated as period costs and are charged to profit and loss account.
5. Prices are determined with reference to marginal costs and contribution margin.
6. Profitability of departments and products ranked with reference to their contribution margin.

Q.3 Difference between marginal and absorption costing ?

Sl No.	Marginal Costing	Absorption Costing
1.Fixed	FC treated as period cost. Profitability of	FC treated as product cost. Profitability of

Cost	different products is judged by their P/V ratio.	different products is derived after reducing share in FC.
2. Variable cost	Only VC is considered for costing product & for inventory valuation.	Both FC & CS considered for costing product & inventory valuation.
3.cost data	Cost data is presented to highlight the contribution of each product.	Cost data is presented to highlight the profit of each product.
4.cost per unit	Cost per unit of production remains same irrespective of production level since it is values at variable cost.	Cost per unit of production reduces as the level of production increases since FC per unit reduces with level of production increases.

Q. 4 Explain advantages and limitations of marginal costing ?

Advantages:-

1. Simplified pricing policy:- VC per unit remains the same while FC remains constant in total so easy to decide price.
2. Proper recovery of OH:- In costing, OH are recovered on the basis of pre-determined rates (under recovery of overhead if production is less than the budget). MC avoids such over/under recovery of OH.
3. Shows realistic profit:- since stock of FG & WIP is valued on VC basis & FC is written off to profit and loss account as period cost.
4. How much to produce:- Help in deciding BEP(shows impact of increase/decrease in production level on pft
5. More control over Exp.:- Mgt compare actual variable exp. with budgeted variable exp. & take corrective action.
6. Helps in decision making:- Make or buy, shut down or continue
7. Short term profit planning:- By BEP.

Limitations

1. Difficulty in classifying fixed and variable elements: Most of the expenses are neither totally variable nor totally fixed
2. Dependence on key factors: Contribution of a product itself is not a guide for optimum profitability unless it is linked with key factor.
3. Scope for Low Profitability: Sales staff may mistakenly consider marginal cost for total cost & sell at a price; which will result in loss or low profits.
4. Faulty valuation: Overheads of fixed nature should not be excluded particularly in large contracts while valuing the work-in- progress.
5. Unpredictable nature of Cost: Assumption that fixed cost will remain static throughout is not correct e.g. salaries bill may go up because of annual increments. Assumption that variable cost per unit remain static, is not correct e.g. changes in the prices of raw materials.
6. Marginal costing ignores time factor and investment: The marginal cost of two jobs may be the same but time taken for their completion may differ.
7. Understating of W-I-P: Under marginal costing stocks and work in progress are understated.

Q.5 Explain the practical application of marginal costing?

1. Pricing Policy:- VC per unit remains the same while FC remains constant in total so easy to decide price.
2. Decision making:- MC helps management in taking decision like make or buy, shut down or continue
3. Ascertaining realistic profit:- since stock of FG & WIP is valued on VC basis & FC is written off to profit and loss account as period cost.
4. Determination of production level:- Help in deciding BEP (shows impact of increase/decrease in prod. on pft.
5. Shut down business:- Continue firm till sales are sufficient to cover variable cost and avoidable FC.

Q.6 Explain meaning of margin of safety? State the relationship between MOS ratio & operating leverage?

Ans. MOS is the excess of actual total sales over break even sales.

MOS ratio = $\frac{(Actual\,Sales - Break\,Even\,Sales)}{Actual\,Sales}$

BE sales depends on Contribution per unit as BE Sales = $\frac{¿Cost}{Contribution\,per\,unit}$

Contribution is related to operating profit as operating leverage = $\frac{Contribution}{Operating\,Profit}$

If sales are expected to increase, lower operating leverage will result in higher profit and vice-versa. High variable cost and low fixed cost results in higher MOS and thus risk will be lower and vice-versa. So like operating leverage, MOS is measure of risk as to what extent an organisation is exposed to change in sales.

Contract Costing

ABC Analysis of Theory Questions

Q.1	What is Contract Costing and list down the features of contract costing?		**B**	
Q.2	Distinguish between job costing and contract costing?	**A**		
Q.3	Explain the meaning of the terms used in contract costing.		**B**	
Q.4	What is Contract Plus Costing OR Cost plus contract? Describe the features, advantages and disadvantages of Contract Plus Costing?	**A**		
Q.5	Write notes on Escalation Clause.		**B**	
Q.6	Discuss briefly the principles to be followed while taking credit for profit on incomplete contracts.	**A**		

Question 1 What is Contract Costing and list down the features of contract costing?

Answer:- Specific order costing under which each contract is treated as a separate cost unit and costs are accumulated and ascertained separately for each contract. Features:-

- All costs are accumulated and ascertained for each contract separately.
- A separate contract account is prepared for each contract.
- Each contract is usually a large contract normally takes more than 1 year.
- Number of contracts undertaken by a contractor at a time is not usually very large.
- 2 parties are involved first is contractor, the person who undertakes the contract and second is contractee, the person who gives the contract.

Question 2 Distinguish between job costing and contract costing?

Job Costing	Contract Costing
Each job is treated as a separate cost unit.	Each contract is treated as a separate cost unit.
Job work is executed in factory premises.	Contract work is executed at site of contract.
Indirect cost is higher than those in contract costing.	Indirect cost are lower than those in job costing.
Size of a job is smaller than that of a contract.	Size of a contract is larger than that of a job.
The number of jobs undertaken are usually large.	The number of contracts undertaken are usually small.

Question 3 Explain the meaning of the terms used in contract costing?

Value of Work Certified	Work completed which has been certified by architect of contractee. VOWC = Contract Price x Work certified as % of Contract Price
Progress Payment	Contractors receive payments based on the certificate issued by the architect. PP = Value of work certified – Retention money
Retention Money	That portion of value of work certified which is retained by contractee as security. RM = Value of work certified – Payment actually made
Cost of Work Uncertified	Cost of work completed but has not been certified by the architect. COWC = Total Cost incurred till date – Cost of work certified
Notional Profit	= Value of work certified – Cost of work certified
Estimated Profit	= Contract Price – Estimated total cost of contract

Question 4 What is Contract Plus Costing OR Cost plus contract? Describe the features, advantages and disadvantages of Contract Plus Costing?

Answer:- Contract Plus Costing:- Contract price is ascertained by adding a & of profit to the total cost of the contract (Not Possible to estimated contract cost with reasonable accuracy). **Features**

1. Suitable when not Possible to estimated contract cost with reasonable accuracy.
2. Suitable when contract completion shall take number of years.
3. Contractee allowed to check the concerned books, documents and accounts to check cost of contract.
4. Benefit:- Fair price to the contractee & reasonable profit to contractor.

Advantages:

1. Contractor assured of fixed % of profit (no risk of loss).
2. Contractor is safe against rise in costs of materials, labours etc.
3. Contractee can ensure himself about 'the cost of the contract', as allowed to check books.
4. Contractee gets benefit of decline in prices of materials, labours etc.
5. Contractee is assured that the price to be paid will depend on cost actually incurred (Not on estimation)

Disadvantages:

1. Contractor cannot get advantage of favourable market conditions.
2. Contractor does not get benefit of high efficiency (reducing costs).
3. Contractor always have fear of objection by contractee over actual cost incurred.
4. Contractee may bear high costs since contractor is not motivated to control cost.
5. Contractee sometimes has to bear cost of inefficiencies on part of contractor.

Question 5 *Write notes on Escalation Clause and sub-contract?*

Answer:- <u>Escalation Clause</u>: Clause in contract as safeguard against any likely changes in the price of material and labour (prices of materials or labour rise beyond a certain limit, the contract price will be increased by an agreed amount)

<u>Sub-contract</u>: Sometimes contractor may not find it feasible to do all the work himself. He may entrust some portion of the work to another who is called a sub-contractor & work allotted to him is known as sub-contract. The sub-contractor is accountable to the main contractor. Cost of sub-contract is treated as direct costs of the contract.

Question 6 Discuss briefly the principles to be followed while taking credit for profit on incomplete contracts?

Answer:- Covered in practical concepts

Integrated & Non-Integrated Accounts

ABC Analysis of Theory Questions

Q.1	Explain meaning of integrated and non-integrated accounting system. Advantages and essential pre-requisites of integrated accounting system?		**B**	
Q.2	“Is reconciliation of cost accounts and financial accounts necessary in case of integrated accounting system?”		**B**	
Q.3	DISTINCTION BETWEEN NON-INTEGRAL SYSTEM AND INTEGRAL SYSTEM?	**A**		

Question 1 Explain meaning of integrated and non-integrated accounting system. Advantages and essential pre-requisites of integrated accounting system?

Answer:- Non-integral System/Non-integrated System/Inter-locking System/Cost Ledger Accounting system

- System of accounting where two separate sets of books are maintained (One to record cost transactions & other to financial transactions). Reconciliation Needed.

  Integral System/ Integrated System:-
- System of accounting where only one set of book is maintained to record both cost & financial transactions. Reconciliation not needed.

Advantages of IS

Economical	Since Only one set of books need to be maintained. (Less Cost)
No Need for Reconciliation	Since only one figure of profit/loss happens due to one set of books.
No delay in availability of info.	All monetary transactions instantly available.
Suitable for Mechanised A/cing	Since normally computer based
Better Coordination	Better coordinate among different heads of accounting.

Essential Pre-requisites for IS

Extent of Integration	IS offers integration upto stage of prime cost *or* factory cost or full integration of the entire accounting records hence mgt **need to** decide integration level.
Coding System	Suitable coding system **need to be** developed for accounting of financial & cost trans.
Accounting Policy	Accounting policy dealing with provision for accruals, prepaid expenses, other adjustment **need to be** laid down in advance.
Co-ordination	Perfect coordination **need to be** established between staff responsible for financial & cost aspects of accounts.

Question 2 “Is reconciliation of cost accounts and financial accounts necessary in case of integrated accounting system?”

Answer: System of accounting where only one set of book is maintained to record both cost & financial transactions. Reconciliation not needed.

Question 3 DISTINCTION BETWEEN NON-INTEGRAL SYSTEM AND INTEGRAL SYSTEM?

Basis of Distinction	Non-integral System	Integral System
No. of Sets of Books are maintained	2 separate sets of books - one to record cost trans. & other to record financial trans.	1 set of book - to record both the cost & financial transactions.
Cost Ledger maintained	Yes Maintained	No Maintained
Figure of Profit/ Loss	2 figures of profit/ loss – one as per cost books & other as per financial books.	1 figure of profit/loss because only one set of books is maintained.
Need for Reconciliation	There is need for reconciliation of cost accounts and financial accounts because there are two different figures of profit/loss as there are two sets of books.	There is no need for reconciliation because there is only one figure of profit/loss as there is only one set of books.
Economical	Expensive (Duplication of recording transactions in 2 sets of books)	Economical (Avoids duplication of recording the transactions)

Activity Based Costing

ABC Analysis of Theory Questions

Q.1	What is meaning and features of Activity Based Costing ?	A		
Q.2	What is benefits of Activity Based Costing ?	A		
Q.3	What is Difference between Activity based costing and Absorption based costing ?	A		
Q.4	What are the objectives of Activity Based Costing?		B	
Q.5	What are different types of activities Under Activity Based Costing?		B	
Q.6	What ate the importance of Activity Based Costing?		B	
Q.7	What are the uses of Activity Based Costing?		B	
Q.8	What are the limitations of Activity Based Costing?		B	

Question 1:- What is meaning and features of Activity Based Costing ?

Solution:- ABC is that costing in which costs are first traced to activities and then to products. This costing system assumes that activities are responsible for the incurrence of costs and create the demands for activities.

Meaning of Activity based costing :- **CIMA** defines Activity Based Costing as,

'cost attribution to cost units on the basis of benefit received from indirect activities e.g. ordering, setting up, assuring quality.'

Features of ABC are as follows:-

1. ABC is a two-stage approach costing method that first assigns costs to activities & then allocates them to products based on the each product's consumption of activities.
2. The cost accumulated in the two-stage approach is called activity-related costs.
3. An activity is necessary task that an organization undertakes to deliver a product or service.
4. ABC is based on the concept that products consume activities & activities consume resources.
5. ABC can be used by any organization that wants a better understanding of the costs of the goods and services.

Question 2:- What is benefits of Activity Based Costing ?

Solution:- Benefits of ABC

1. Each Product is charged based on the extent to which it used an activity.

2. It recognise the fact that indirect cost depends on many activities other than labour hour and machine hours.
3. Cost of a product is the sum of the costs of all activities whether directly or indirectly.
4. Products do not consume costs directly. Money is spent on activities which are consumed by product/ services. Cost is apportioned over products on the basis of activities involved in that.

Question 3:- What is Difference between Activity based costing and Absorption based costing ?

Solution

Traditional Absorption Costing	Activity Based Costing
Overheads are first apportioned to departments cost centres and then to product.	Overheads are apportioned to various activities and then to product.
It is not realistic and correct way of distributing overheads cost.	It is modern and best way to distribute overhead costs to various products and services.
Overhead is apportioned on the following basis • Direct labour hour rate • Machine hour rate • Prime cost • Direct Material cost • Direct Labour cost	Overhead is apportioned on the basis of activities involved in a production process.
Formula of overhead recovery rate = $\frac{\text{Total overheads}}{\text{Total of any of the above basis}}$	Formula of overhead recovery rate = $\frac{\text{Total overheads}}{\text{Total of related activities}}$

Question 4:- What are the objectives of Activity Based Costing?

Solution The objectives of Activity Based Costing are as under:

1. To improve calculation of product costing.
2. To identify non-value adding activities in the production process & remove them
3. To provide required information for decision making like excess of activities if involved
4. To reduce non-essential use of common resources
5. To Help managers in evaluating the efficiency of internally provided services
6. To calculate the full cost of products for financial reporting purposes and for determining cost-based prices

Question 5 What are different types of activities Under Activity Based Costing?

Solution:- Meaning of Activities: Activities means tasks. For example, purchase of materials is an activity consisting of many tasks like advertisement inviting quotations, Identification of best suppliers, placement of purchase order etc.

Types of Activities: Activities basically fall into four different categories known as the **manufacturing cost hierarchy**. These categories were first identified by **Cooper** in 1990. The categories are:

1. **Unit level activities:** Activities which get affected by number of units produced. **Examples** Use of indirect materials
2. **Batch level activities:-** Activities which get affected by the number of batches. **Examples** Material ordering in batches, Activities related to setting up a production run
3. **Product level activities:-** Activities which get affected by creation of new product. **Examples** Designing the new product.
4. **Facility Level Activities:-** Activities which are necessary regardless of which products are produced and not directly connected to production of individual product. **Examples** Production manager salary

Question 6 What ate the importance of **Activity Based Costing?**

Importance of ABC as under:

1. To link the cost to its causal factor – i.e. the Cost Driver
2. To identify costs for activities.
3. To ascertain product costs with greater accuracy by relating overheads to activities
4. To overcome the inherent limitations of traditional absorption costing (use of blanket overhead rates)
5. To assist managers in budgeting and performance measurement
6. To provide the links between the activities in an organisation and indirect cost incurred.
7. To help in cost control and cost reduction as well as improved profitability.
8. To provide valuable economic information to support a company's operational improvement and customer satisfaction programs.
9. To furnish many significant benefits over traditional costing techniques
   (a) most accurate data about product cost;
   (b) more comprehensive cost information for performance measurement;
   (c) relevant data for management's decision-making;

Question 7 What are the uses of **Activity Based Costing?**

USES OF ABC

The areas in which activity based information is used for decision making are as under: -

1. **Activity costs:** ABC is designed to track the cost of activities, so we can use it to see if activity costs are in line with industry standards. If not, ABC is an excellent feedback tool for measuring the ongoing cost of specific services as management focuses on cost reduction.

2. **Customer profitability:** Though most of the costs incurred for individual customers are simply product costs, there is also an overhead component, such as unusually high customer service levels, product return handling, and cooperative marketing agreements. An ABC system can sort through these additional overhead costs and determine which customers are actually providing a reasonable profit. This analysis may result in some unprofitable customers being turned away, or more emphasis being placed on those customers who are contributing more in profits.
3. **Distribution cost:** Organisation uses a variety of distribution channels to sell its products, such as retail, Internet, distributors, and mail order catalogs. Most of the structural cost of maintaining a distribution channel is overhead, so if we can make a reasonable determination of which distribution channels are using overhead, we can make decisions to alter how distribution channels are used, or even to drop unprofitable channels.
4. **Make or buy:** ABC enables the manager to decide whether he should get the activity done within the firm or outsource the same. Outsourcing may be done if the firm is incurring higher overhead costs as compared to the outsourcer or vice-versa.
5. **Margins:** With proper overhead allocation from an ABC system, we can determine the margins of various products, product lines, and entire subsidiaries. This can be quite useful for determining where to position company resources to earn the largest margins.
6. **Minimum price:** Product pricing is really based on the price that the market will bear, but the marketing manager should know what the cost of the product is, in order to avoid selling a product that will lose a company money on every sale. ABC is very good for determining which overhead costs should be included in this minimum cost, depending upon the circumstances under which products are being sold.
7. **Production facility cost:** It is usually quite easy to segregate overhead costs at the plant-wide level, so we can compare the costs of production between different facilities.

Question 8 What are the limitations of **Activity Based Costing?**

LIMITATIONS OF ABC

Activity based costing help managers in decision making. However activity based costing has certain limitations or disadvantages which as are under:

1. Implementing an ABC system requires substantial resources, which is costly to maintain.
2. Activity Based Costing is a complex system which need lot of record for calculations.
3. In small organisation mangers are accustomed to use traditional costing systems to run their operations and traditional costing systems are often used in performance evaluations.
4. Activity based costing data can be easily misinterpreted and must be used with care when used in decision making. Managers must identify which costs are really relevant for the decisions at hand.
5. Reports generated by this systems do not conform to generally accepted accounting principles (GAAP). Consequently, an organization involved in activity based costing

should have two cost systems - one for internal use and one for preparing external reports.

Process Costing

ABC Analysis of Theory Questions

Q.1	Explain the meaning of process operation and its features ?		B	
Q.2	Explain Operation costing? OR "Operation costing is defined as refinement of Process costing." Explain it?		B	
Q.3	Explain Treatment of Normal Process Loss, Abnormal Process Loss And Abnormal process Gain In Cost Accounting?	A		
Q.4	Explain costing of equivalent production units		B	
Q.5	Distinguish between job costing and process costing?	A		
Q.6	What is inter-process profit? State its advantages and disadvantages ?		B	

Question 1 Explain the meaning of process costing and its features ?

Answer:- Process Costing = Method of costing used when material has to pass through two or more processes for being converted into a final product e.g. crude oil industries. **Features:-**

1. A separate A/c for each process is opened & all expenditure of that process is charged to that process A/c
2. The output of one process becomes input of next process.
3. All the processes are standardised.
4. Costs are collected process-wise.
5. The output of last process becomes finished goods.

Question 2 Explain Operation costing? OR "Operation costing is defined as refinement of Process costing." Explain it?

Answer:- Operation Costing: Method under which cost are ascertained for each **operation** involved in manufacturing of goods. It is refinement of process costing. At the end of each operation, the unit operation cost is computed by dividing total operation cost by total output.

Question 3 Explain Treatment of Normal Process Loss, Abnormal Process Loss And Abnormal process Gain In Cost Accounting ?

Answer :- Normal Process Loss = unavoidable loss which occurs due to inherent nature of materials & production process (can be estimated in advance on basis of past experience). It may be normal waste, normal scrap, normal spoilage, normal defectives.

Treatment in Costing: Cost of normal loss is absorbed by goods units by inflating cost per unit.

Abnormal Process Loss = Loss in excess of Normal loss (due to carelessness of workers, machine breakdown) (cannot obviously be estimated in advance.

Treatment in Costing: The cost of an abnormal loss units is equal to the cost of a good units. Treated as loss

Normal Loss	Abnormal Loss
occurs due to inherent nature	occurs due to abnormal reasons
Can be estimated in advance.	Cannot be estimated in advance.
Normal waste / scrap / sponlage /defectives.	Abnormal waste / scrap / spoilage /defectives.
Treated at Cost of production	Not Treated at Cost of production
Loss borne by good units	Loss charged to costing P&L

Abnormal Process Gain = when actual output is more than expected output **or** when actual losses are less than normal loss

Treatment in Costing: cost of abnormal gain is equal to cost of good units. Cost of abnormal gains is not treated as recovery of cost of production.

Abnormal Loss	Abnormal Gain
When actual loss is more than normal loss.	When actual loss is less than normal loss.
Its cost is debited to costing P&L A/c.	Its cost is credited to costing P&L A/c.

Question 4 Explain costing of equivalent production units ?

Answer :- when mfd is continuous activity & at end of accounting period, there is some production units which is semi-finished. Semi-finished means their percentage of completion with regard to material, labour, overheads is not 100%. Such incomplete production units known as work-in-progress. Such WIP is valued in terms of equivalent production units. Equivalent units = Units of WIP X Percentage of work completed

Question 5 Distinguish between job costing and process costing?

Job Costing	**Process Costing**
Production is special order based	Production is continuous.
Each job is different	Each product is homogenous & standardised.
Cost centre is job.	Cost centre is process.
Cost are ascertained for each job separately.	Cost are ascertained for each process separately.
Job costs are calculated when job is complete.	Process costs are calculated at end of each process.
May or may not be WIP.	Always be WIP.
Usually no transfers from one job to another.	Output of one process is transferred to next process as input.

Question 6 What is inter-process profit? State its advantages and disadvantages?

Answer :- Sometimes 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 & the transfer price is known as inter-process profits. In such case, transferor process makes profit.

Advantages:

- To check whether cost of production under a process competes with its market price.
- Each process becomes profit-centre.

Disadvantages:

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