PAPER – 19: COST AND MANAGEMENT AUDIT

The following table lists the learning objectives and the verbs that appear in the syllabus learning aims and examination questions:

	Learning objectives	Verbs used	Definition
LEVEL C	KNOWLEDGE What you are expected to know	List	Make a list of
		State	Express, fully or clearly, the details/facts
		Define	Give the exact meaning of
	COMPREHENSION What you are expected to understand	Describe	Communicate the key features of
		Distinguish	Highlight the differences between
		Explain	Make clear or intelligible/ state the meaning or purpose of
		Identity	Recognize, establish or select after consideration
		Illustrate	Use an example to describe or explain something
	APPLICATION How you are expected to apply your knowledge	Apply	Put to practical use
		Calculate	Ascertain or reckon mathematically
		Demonstrate	Prove with certainty or exhibit by practical means
		Prepare	Make or get ready for use
		Reconcile	Make or prove consistent/ compatible
		Solve	Find an answer to
		Tabulate	Arrange in a table
	ANALYSIS How you are expected to analyse the detail of what you have learned	Analyse	Examine in detail the structure of
		Categorise	Place into a defined class or division
		Compare and contrast	Show the similarities and/or differences between
		Construct	Build up or compile
		Prioritise	Place in order of priority or sequence for action
		Produce	Create or bring into existence
	SYNTHESIS How you are expected to utilize the information gathered to reach an optimum conclusion by a process of reasoning	Discuss	Examine in detail by argument
		Interpret	Translate into intelligible or familiar terms
		Decide	To solve or conclude
	EVALUATION How you are expected to use your learning to evaluate, make decisions or recommendations	Advise	Counsel, inform or notify
		Evaluate	Appraise or asses the value of
		Recommend	Propose a course of action

Paper 19 - COST AND MANAGEMENT AUDIT

Time allowed-3hrs Full Marks: 100

Working Notes should form part of the answer.

—Wherever necessary, suitable assumptions should be made and indicated in answer by the candidates.

1. **Answer the four Questions [15×4=60]**

(a) (i) State the objective of CAS-4. [2]

Solution:

The main objectives of Cost Accounting Standard on Cost of Production for Captive Consumption are:

(i) The purpose of this standard is to bring uniformity in the principles and methods used for determining the cost of production of excisable goods used for captive consumption.

(ii) The cost statement prepared based on standard will be used for determination of assessable value of excisable goods used for captive consumption.

(iii) The standard and its disclosure requirement will provide better transparency in the valuation of excisable goods used for captive consumption.

(ii) X Ltd. which absorbs overheads at a pre-determined rate, provides the following information: overheads actually incurred ₹4,50,000; overhead absorbed ₹1,00,000. It was found that 60% of the unabsorbed overheads were due to defective planning. How would unabsorbed overheads due to defective planning be treated in cost accounts? [3]

Solution :

	₹
Overhead incurred	4,50,000
Overhead absorbed	1,00,000
Under absorption	3,50,000

60 percent of under absorbed overhead is due to defective planning. This being abnormal, should be debited to Profit and Loss A/c (60% of ₹ 3,50,000) = ₹ 2,10,000

(iii) Distinguish between cost allocation and cost absorption. [2]

Solution :

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

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

(iv) In a manufacturing concern 20 workmen work in a group. The concern follows a group incentive bonus system whereby each workman belonging to the group is paid a bonus on the excess output over the hourly production standard of 250 pieces, in addition to his normal wages at hourly rate. The excess of production over the standard is expressed as a percentage and 2/3 of this percentage is considered to be the share of the workman and is applied on the notional hourly rate of ₹6.00 (considered only for purpose of computation of bonus). The output data for a week are stated below:

Days	Man hours worked	Output (in pieces)
Monday	160	48,000
Tuesday	172	53,000
Wednesday	164	40,000
Thursday	168	52,000
Friday	160	46,000
Saturday	160	42,000
	984	2,81,000

You are required to:

(I) Work out the amount of bonus for the week and the average rate at which each workman is to be paid the same.

(II) Compute the total wages including bonus payable to Ram Jadav who worked for 48 hours at an hourly rate of ₹ 2.50 and to Francis Williams who worked for 52 hours at an hourly rate of ₹ 3.00. [5]

Solution:

(I)

Actual production per week	2,81,000 pieces
Standard production (250 pieces × 984)	2,46,000
Excess production over standard	35,000

Excess production as a percentage over standard production

= (35,000 ÷ 2,46,000) × 100 = 14.228%

Each workman's share 2/3 × 14.228 = 9.485%

Bonus on notional hourly rate ₹6 × 9.485% = ₹0.569

Amount of bonus 984 hrs. × ₹0.569 = ₹560

(II) Computation of wages

Ram Jadav

Basic wages: 48 hrs × ₹2.50	₹120.00
Bonus : 48 hrs. × ₹0.569	27.31
Total	147.31

Francis William

Basic wages: 52 × ₹3	156.00
Bonus : 52 × ₹0.569	29.59
Total	185.59

(v) State the disclosures requirements in the cost statements as per CAS-3. [3]

Answer:

CAS – 3 relates to principles and methods of determining overheads. The following factors are to be disclosed:

- The basis of assignment of overheads to cost objects.
- Overhead incurred in foreign exchange.
- Overheads relating to resources received from or supplied to related parties.
- Any subsidy / grant / incentive or any amount of similar nature received / receivable reduced from overhead.
- Credits / recoveries relating to overheads.
- Any abnormal Cost not forming part of the overheads.
- Any unabsorbed overheads.

(b)(i) The Companies (Cost Records & Audit) Rules, 2014 provides exemption from cost audit to a company which is covered under rule 3, and whose revenue from exports, in foreign exchange, exceeds seventy five per cent of its total revenue. How to determine the percentage to total revenue in the following cases:

(I) In a company who is manufacturing Pharmaceutical products, the revenue from export of pharmaceutical products earned in foreign exchange divided by total revenue including other income etc. is 58%.

(II) The revenue in foreign exchange earned from export of pharmaceutical products plus revenue in foreign exchange earned from rendering of research & development service divided by total revenue including other income etc. is 82%. [5]

Answer:

Cost audit is applicable for specified products/services. Rule 4(3) states "The requirement for cost audit under these rules shall not apply to a company which is covered in rule 3, and (i) whose revenue from experts, in foreign exchange, exceeds seventy five per cent of its total revenue". The inclusion or coverage of a company under Rule 3 is in respect of products/services listed under Table-A and Table-B and consequently the computation of 75% is to be calculated for the specific products/services covered under Rule 3 and not in respect of all the products/services of the company.

The total revenue and turnover of R&D Activities, not being covered under Rule 3 cannot be taken into consideration for computation of 75%.

In this connection it is also clarified that "total revenue" of a company is to be considered as the total revenue as defined in Schedule III of the Companies Act, 2013. Total Revenue as defined in Schedule III is Total Operating Revenue plus Other Incomes.

(ii) A cost auditor is required to certify under Para 1(vii) of the Cost Audit Report – "Detailed unit-wise and product/service-wise cost statements and schedules thereto in respect of the product/service under reference of the company duly audited and certified by me/us are/are not kept in the company". Whether product Cost Sheet prepared SKU wise/ type-wise/ size-wise/ specification-wise by the company is required to be certified by the cost auditor and kept in the company? [6]

Answer:

Rule 5(2) of the Companies (Cost Records and Audit) Rules 2014 requires that "the cost records referred to in sub-rule (1) shall be maintained on regular basis in such manner as to facilitate calculation of per unit cost of production or cost of operations, cost of sales and margin for each of its products and activities".

The Rules have identified products as per CETA heading as defined in Rule 2(aa) which states "Central Excise Tariff Act Heading means the heading as referred to in the Additional Notes in the First Schedule to the Central Excise Tariff Act, 1985[5 of 1986]".

First Schedule to the Central Excise Tariff Act, 1985 states – "heading" in respect of goods, means a description in list of tariff provisions accompanied by a four-digit number and includes all sub-headings of tariff items the first four-digits of which correspond to that number.

The above definitions make it clear that maintenance of cost accounting records should conform to the CETA Heading and detailed unit-wise and product/service-wise cost statements and schedules thereto are required to be certified by the cost auditor.

(iii) Revised Form CRA-2 has been made available by the Ministry of Corporate Affairs conforming to the Companies (Cost Records and Audit) Rules, 2014 on 31st December, 2014. What are the required attachments to Form CRA-2? [2]

Answer:

The Form has provided an attachment button for attachment of certified copy of the Board Resolution appointing the cost auditor. The consent letter of the cost auditor should be attached as optional attachment.

(iv) How would you treat Separation cost due to voluntary retirement, retrenchment, termination etc. as per CAS 7 related to Employee Cost? [2]

Answer:

The separation costs related to voluntary retirement, retrenchment termination etc shall be amortized over the period benefitting from such costs. The amortized separation costs for the period shall be treated as indirect cost and assigned to cost objects in an appropriate manner.
However unamortized amount related to discontinued operations shall not be treated as employee cost.

(c)(i) What are the eligibility criteria for appointment as a cost auditor? [7]

Answer:

Eligibility Criteria under Section 141 of the Companies Act, 2013 read with Rule 10 of the Companies (Audit and Auditors) Rules, 2014 and Section 148 of the Companies Act, 2013.

The following persons are not eligible for appointment as a cost auditor:

a) A body corporate. However, a Limited Liability partnership registered under the Limited Liability Partnership Act, 2008 can be appointed. [Section 141(3)(a)].

b) An officer or employee of the company. [Section 141(3)(b)].

c) A person who is a partner, or who is in the employment, of an officer or employee of the company. [Section 141(3)(c)].

d) A person who, or his relative or partner is holding any security of or interest in the company or any of its subsidiary or of its holding or associate company or a subsidiary of such holding company. [Section 141(3)(d)(i)].

e) Relatives of any partner of the firm holding any security of or interest in the company of face value exceeding ₹1 lakh. [Section 141(3)(d)(i) and Rule 10(1) of Companies (Audit and Auditors) Rules, 2014].

f) A person who is indebted to the company or its subsidiary, or its holding or associate company or a subsidiary or such holding company, for an amount exceeding ₹ 5 lakhs. [Section 141(3)(d)(ii) and Rule 10(2) of Companies (Audit and Auditors) Rules, 2014].

g) A person who has given any guarantee or provided any security in connection with the indebtedness of any third person to the company or its subsidiary, or its holding or associate company or a subsidiary of such holding company, for an amount exceeding ₹ 1 lakh. [Section 141(3)(d)(iii) and Rule 10(3) of Companies (Audit and Auditors) Rules, 2014].

h) A person or a firm who, whether directly or indirectly, has business relationship with the company or its subsidiary, or its holding or associate company or subsidiary of such holding company or associate company. [Section 141(3)(e) and Rule 10(4) of Companies (Audit and Auditors) Rules, 2014].

   "Business Relationship" is defined in Rule 10(4) of Companies (Audit and Auditors) Rules, 2014 and the same shall be construed as any transaction entered into for a commercial purpose, except commercial transactions which are in the nature of professional services permitted to be rendered by a cost auditor or a cost audit firm under the Act and commercial transactions which are in the ordinary course of business of the company at arm's length price - like sale of products or services to the cost auditor, as customer, in the ordinary course of business, by companies engaged in the business of telecommunications, airlines, hospitals, hotels and such other similar businesses.

i) A person whose relative is a director or is in the employment of the company as a director or key managerial personnel of the company. [Section 141(3)(f)].

j) A person who is in the full time employment elsewhere or a person or a partner of a firm holding appointment as its auditor if such person or persons is at the date of such appointment or reappointment holding appointment as auditor of more than twenty companies. [Section 141(3)(g)].

k) A person who has been convicted by a court for an offence involving fraud and a period of ten years has not elapsed from the date of such conviction. [Section 141(3)(h)].

l) Any person whose subsidiary or associate company or any other form of entity, is engaged as on date of appointment in consulting and providing specialised services to the company and its subsidiary companies: [Section 141(3)(i) and Section 144].
   (a) accounting and book keeping services
   (b) internal audit
   (c) design and implementation of any financial information system
   (d) actuarial services
   (e) investment advisory services
   (f) investment banking services
   (g) rendering of outsourced financial services
   (h) management services

(ii) The Companies Act, 2013 has introduced provision regarding rotation of auditors. Is the provision of rotation of auditors applicable to cost auditors also? [6]

Answer:
The provisions for maintenance of cost accounting records and cost audit are governed by Section 148 of the Companies Act, 2013. The provisions of Section 148 clearly states that no person appointed under Section 139 as an auditor of the company shall be appointed for conducting audit of cost records of the company. Section 148 also provides that qualifications, disqualifications, rights, duties and obligations applicable to auditors (financial) shall apply to a cost auditor appointed under this section. The eligibility, qualifications and disqualifications are provided in Section 141 of the Act and powers and duties are provided in Section 143. Section 143(14) specifically states that the provisions of Section 143 shall *mutatis mutandis* apply to a cost auditor appointed under Section 148. There are no other provisions governing the appointment of a cost auditor.

Section 139(3) of the Act, applicable to appointment of auditors (financial), and Rule 6 of Companies (Audit and Auditors) Rules, 2014 deals with the provision of rotation of auditors and these provisions are applicable only to appointment of auditors (financial). The Act does not provide for rotation in case of appointment of cost auditors and the same is not applicable to a cost auditor. It may, however, be noted that though there is no statutory provision for rotation of cost auditors, individual companies may do so as a part of their policy, as is the practice with Public Sector Undertakings.

(iii) Whether figures are to be provided for Rupees per Unit or Amount in Rupees in the Product and Service Profitability Statement [CRA-3, Part D, Para 1]? [2]

Answer:

Amount in Rupees are required to be provided under this Para. The number of products or services will be equal to the number of products and services covered under cost audit and for which Abridged Cost Statement has been provided.

(d)(i) State the nature and purpose of Cost Auditing Standard on Cost Audit Documentation – 102. [5]

Answer:
The purpose of Cost Auditing Standard on Cost Audit Documentation 102 is to provide guidance to the members in preparation of Audit Documentation in the context of the audit of cost statements, records and other related documents.

Nature and Purpose of Cost Audit Documentation
Cost Audit documentation that meets the requirement of this Cost Auditing Standard and the specific documentation requirements of other relevant Cost Auditing Standards provides:
(a) Evidence of the cost auditor's basis for a conclusion about the achievement of the overall objectives of the cost auditor; and
(b) Evidence that the cost audit was planned and performed in accordance with Cost Auditing Standards and applicable legal and regulatory requirements.

Cost Audit documentation serves a number of additional purposes, including the following:
(a) Assisting the audit team to plan and perform the cost audit.
(b) Assisting members of the audit team responsible for supervision to direct and supervise the cost audit work, and to discharge their review responsibilities.
(c) Enabling the audit team to be accountable for its work.
(d) Retaining a record of matters of continuing significance to future cost audits.
(e) Enabling the conduct of quality control reviews in accordance with the Guidance Manual for Audit Quality issued by Quality Review Board (QRB).
(f) Enabling the conduct of external inspections in accordance with applicable legal, regulatory or other requirements.

(ii) A manufacturing unit produces two products 'A' and 'B'. The following information is furnished:

Particulars	Product A	Product B
Units produced (Qty)	**20,000**	**15,000**
Units Sold (Qty)	**15,000**	**12,000**
Machine Hours utilised	**10,000**	**5,000**
Design charges	**15,000**	**18,000**
Software development charges	**24,000**	**36,000**

Royalty paid on sales ₹ 81,000 [@ ₹3 per unit sold, for both the products]; Royalty paid on units produced ₹35,000 [@₹1 per unit purchased, for both the products], Hire charges of equipment used in manufacturing process of Product 'A' only ₹ 5,000, Compute the Direct Expenses. [5]

Solution: **Computation of Direct Expenses**

	Particulars	Product A	Product B
	Royalty paid on Sales	45,000	36,000
Add	Royalty paid on units produced	20,000	15,000
Add	Hire charges of equipment used in manufacturing process of Product X only	5,000	----
Add	Design Charges	15,000	18,000
Add	Software development charges related to production	24,000	36,000
	Direct Expenses	**1,09,000**	**1,05,000**

Note:

(a) Royalty on production and royalty on sales are allocated on the basis of units produced and units sold respectively. These are directly identifiable and traceable to the number of units produced and units sold. Hence, this is not an apportionment.

(b) No adjustments are made related to units held, i.e. closing stock.

(iii) Prepared Cost Sheet with the help of CAS 22 Manufacturing Cost for an engineering company which produces standard components in batches of 1000 pieces each. A batch passes through three processes viz. Foundary, Machining & Assembly.

The material used for a batch number 101 were: Foundry 1300 tonnes @ ₹ 50 per tonne of which 50 tonnes were send back to stores.

Other details

Process	**Direct Labour**	**Overheads**
Foundry	**200 Hrs @ ₹ 10**	**₹ 15 per Labour Hour**
Machining	**100 Hrs @ ₹ 5**	**₹ 20 per Labour Hour**
Assembly	**100 Hrs @ ₹ 15**	**₹ 10 per Labour Hour**

A comparison of actual costs with estimated cost discloses that material and overheads have exceeded the estimates by 20% whereas the estimated labour cost is 10% more than the actual. **[5]**

Solution:

Cost Sheet for the Batch number 101 Standard batch size 1000 pieces

Particulars	**Amount (₹)**
Direct material issued 1250 × 50	62,500
Direct labour spent	

Foundry – 200 × 10	2,000
Machining – 100 × 5	500
Assembly – 100 × 15	1,500
Prime Cost	**66,500**
Factory Overhead applied	
Foundry – 200 × 15	3,000
Machining – 100 × 20	2,000
Assembly – 100 × 10	1,000
Factory Cost	**72,500**
Cost per unit (Factory Cost/ 1,000)	72.5

(e)(i) What are the matters that are relevant in formulating audit strategy and drawing up the audit plan? [4]

Answer:

As per Cost Auditing Standard – 101, matters that are relevant in formulating the overall audit strategy and drawing up the audit plan include, in addition to those mentioned earlier, the following:

(a) The cost reporting framework generally prescribed, under the Companies Act and Rules prescribed thereunder, as well as under any other law as applicable, on the basis of which the cost information to be audited has been prepared, including need for reconciliation with financial reporting framework.

(b) Industry regulators' requirement as to how costs will be handled.

(c) Unique features of an industry that influence audit requirements such as definition of product in the newspaper industry.

(d) Reliance that can be placed on the work of financial auditors, other cost auditors appointed by the entity and internal auditors. such as their attendance in annual stocktaking

(e) State of IT (Information Technology) implementation, whether the entity is using an ERP (Enterprise Resource Planning) system or internally developed systems and the reliance that can be placed on them.

(f) Statutory timelines for cost reporting, which can be modified by the management for early completion.

(g) Timelines for Board/ audit committee meetings, which can set the time limits for completion of audit work.

(h) Resources required and available in terms of manpower, equipment and others and the assignment of these to specific parts of the work.

(ii) What are the factors need to be considered by Cost Auditor while formulating the Overall audit strategy? [3]

Answer:

These relevant factors include:

(a) results of preliminary activities;
(b) knowledge from previous audits and other engagements with the auditee;
(c) knowledge of business;
(d) nature and scope of the audit;
(e) statutory deadlines and reporting format;
(f) relevant factors determining the direction of the audit efforts;
(g) nature, timing and extent of resources required for the audit.

(iii) How would you treat the forex component of imported packing material as per CAS 9? [2]

Answer:

The forex component of imported packing material cost shall be converted at the rate on the date of the transaction. Any subsequent change in the exchange rate till payment or otherwise shall not form part of the packing material cost.

(iv) How would you treat overtime premium as per CAS 7 related to Employee Cost? [2]

Answer:

Overtime premium shall be assigned directly to the cost object or treated as overheads depending on the economic feasibility and specific circumstances requiring such overtime.

(v) How would you assign administrative overheads as per CAS 11? [2]

Answer:

Assignment of administrative overheads to the cost objects shall be based on either of the following two principles:

(i) *Cause and Effect* – Cause is the process or operation or activity and effect is the incurrence of cost.

(ii) *Benefits received*– Overheads are to be apportioned to various cost objects in proportion to the benefits received by them.

The costs of shared services should be assigned to user activities on the basis of actual usage. General management costs should be assigned on rational basis.

(vi) How would you determine the cost of utilities generated for inter company transfers as per CAS 8? [2]

Answer:

Cost of Utilities generated for the inter company transfers shall comprise direct material cost, direct employee cost, direct expenses, factory overheads, distribution cost and share of administrative overheads.

(2) Answer any two questions [10×2=20]

(a)(i) What is the role of Management with regard to Internal Control? [5]

Answer:

The responsibility of Management with regard to Internal Control can be summarized as under -

i. Creation of system: Management is responsible for maintaining an adequate accounting system incorporating various Internal Controls to the extent appropriate to the size and nature of the business. The Management is vested with the responsibility of carrying on the business, safeguarding its assets and recording the transactions in the books of account and other records.

ii. Review of System: The system installed should be reviewed by the Management to ascertain whether -

   (a) The prescribed Management policies are being properly interpreted by the employees and are faithfully implemented,
   (b) The prescribed procedures need a revision due to changed circumstances or whether they have become obsolete or cumbersome, and
   (c) Effective corrective measures are taken promptly when the system appears to break down.

iii. Internal Audit: It is desirable that the Management also installs an Internal Audit System as an independent function to check, amongst other things, the actual operation of the Internal Control System and report any deviations or non-compliances.

(ii) Outline the internal control aspects in relation to fixed assets. [5]

Answer:

(a) Authorisation for Capital Expenditure: Expenditure for purchase or in-house construction of fixed asset should be authorised by responsible officials. It should be evidenced by way of Board Resolution, Budget Sanction, Notes in the Asset File, etc.

(b) Accounting for Assets: Fixed Assets purchased should be properly accounted for by making suitable entries in the Fixed Assets Register and also the General Ledger. While recording cost, revenue-capital distinction should be observed.

(c) Ownership Rights: Documents evidencing the ownership e.g. Title deeds of properties, RC Book for vehicles etc. should be in the custody of responsible officials. A tracking register may be used in case of deposit of ownership documents with Bankers / Lenders.

(d) Asset Registers: Arrangements should be made for maintaining Plant and Property Registers. They should be frequently agreed with the relevant accounts and physically verified. Care should be taken to distinguish between Fixed Assets and Current Assets (e.g. A Company engaged in manufacturing and selling vehicles, may have vehicles as part of Fixed and Current Assets).

(e) Physical Verification: Arrangements should be made to ensure that Fixed Assets are properly maintained and applied in the service of the Company (e.g. by periodic physical checks as to their location, operation and condition).

(f) Asset Transfers: Where Fixed Assets are transferred between branches or members of the same group, guidelines should be laid down in respect of pricing, depreciation and accounting.

(g) Sale, Scrapping of Assets: Sale, scrapping or transfer of Fixed Assets should be properly authorised and evidenced. Receipts from such disposals should be controlled and properly dealt with in the accounts.

(h) Safeguarding: Adequate insurance cover should be made available for all relevant Fixed Assets.

(i) Depreciation: The accounting policy of the Company should specify the method and rate of depreciation. It should be properly authorised and evidenced. Responsible persons should carry out the calculation of depreciation and asset values.

(b)(i) What are the internal control aspects relating to Investments? [5]

Answer:

(a) Dealings in Investments: Responsible persons should authorise purchases and sales of investments. These are to be evidenced by proper documents. Those responsible for authorisation should not be in-charge of cash or the custody of documents of title.

(b) Investment Register: A detailed investment register should be maintained and all dealings in investments should be immediately recorded therein. This register should be periodically agreed with the investment control account. Documents of title should be physically verified.

(c) Accounting for accretions: Arrangements should be made for checking contract notes against authorised purchase or sales instructions to ensure that charges are correctly calculated. Share transfer formalities should be initiated to ensure that share certificates are duly received or delivered. Bonuses, Rights, Capital Repayments and Dividends or Interests received should be properly accounted for.

(d) Custody: Property documents, share certificates and other documents of title should be under the authority and control of atleast two responsible persons, with the object of protecting them against loss and irregularities. Access to or withdrawals of such documents should be permitted only on the authority of such persons acting jointly.

(ii) Explain the objectives of Operational Audit. [5]

Answer:

The general objectives of Operational Audit are -

i. Appraisal of Controls:
   (a) Internal Controls provide the essential tools / measures to ensure proper performance in each functional or organizational area for accomplishing the desired organizational objective.
   (b) The purpose of operational Audit is to determine whether the controls are - (i) adequate, and (ii) effective in accomplishing Management's objectives or plans or operations.
   (c) The Operational Auditor reviews internal controls and reports to ascertain whether they bring the performance, qualitatively and quantitatively, to the notice of the Management, also within the organisation's policies and plans are being carried out.

ii. Evaluation of Performance: In the area of performance appraisal, the Operational Auditor is basically concerned with -

(a) Analysing the technical efficiency of the operations,
(b) Accumulating information and evidence to measure the effectiveness, efficiency and economy of operations, and
(c) Comparing actual performance with applicable standards, procedures, rules, policies and plans.
(d) Performance Evaluation is generally based on - (i) Productivity, (ii) Personnel, (iii) Workload, (iv) Cost, & (v) Quality.

iii. Appraisal of Management objectives and plans:
(a) Every Activity in an organization is the product of basic plans and objectives set by the Management. Hence, Management policies, plans and objectives should be evaluated properly.
(b) The aim of operational Auditing is to appraise operations and controls and adherence to prescribed and laid-down policies and not to go into the question of appropriateness of plans and objectives. But, the Operational Auditor may look into aspects like -
- Clarity of objectives,
- Proper communication of objectives to the personnel responsible for implementation,
- Feedback from personnel, i.e. whether they have understood the objectives in the same sense as meant by the Management, and
- Apparent conflict in the objectives and its effect on operations.

iv. Appraisal of Organisation Structure:
(a) Organisational structure, an essential element of internal control design, provides the line of relationships and delegation of authority and tasks.
(b) The Operational Auditor should consider the following in evaluating the organisation structure -
- Conformity with Management objectives,
- Proper match between responsibility and authority,
- Clear definition of Scalar Line of Authority from top to bottom, and
- Possibility of defective delegation, overlapping or duplication of work.

(c) Give brief notes on -

(i) Operational Audit of Research and Development Activities.

(ii) Operational Audit of Marketing Function. **[2×5=10]**

Answer:

(i) Operational Audit of Research and Development Activities

Need for R and D Activities

The rapid strides in technological progress and increasing danger of obsolescence today prompt every company, regardless of size, to discover and utilise the concepts and procedures to survive. The following guidelines will help to gauge whether research will keep the organization abreast of the technological changes and face the market with confidence:

(i) A budget should be set for research and development and a definite sum should be set aside every year for this purpose.

(ii) The extent of research and development necessary to keep the company young should be decided.
(iii) The research concepts should be broad in spectrum and be within the capabilities of the organisation.
(iv) The research projects should be selected on the basis of decisions taken as a team rather than being on one man's decisions.
(v) A definite goal should be set.
(vi) A pilot scheme should be set and tested before a full scale commitment is made.

Evaluation of R and D Activities
In evaluating the R and D activities of the management the following factors should be considered:
(i) There should be a duly approved budget for R and D activity based on a detailed report of each project.
(ii) The actual expenditure incurred on each project should be collected in a systematic manner and be compared with the budget authorization. Similarly, physical progress should be monitored.
(iii) There should be a system of authorization of various R and D projects within the scope of the budget.
(iv) There should be control on material requisition and consumption.
(v) The recruitment of R and D personnel should be based on merit and competence.
(vi) As and when a project is completed and found to be successful, suitable decisions for commercialization should be takers.
(vii) As soon as a project is found to have failed, further expenditure on it should be stopped forthwith.
(viii) All R and D projects should be well coordinated and be within the overall objectives of the company.
(ix) The laboratory and library should be well-equipped. A team of experts should decide on the additions to equipment and library.
(x) Investigation into the causes of failure of projects made immediately after the failure will lead to the organization taking corrective steps for the future.

(ii) Operational Audit of Marketing Function

Scope of Marketing Function
The concept of the marketing function embraces the following activities, each of which will form a separate field for management audit investigation:
(i) Sales analysis, market research and product design activities are used for discovering the customers needs.
(ii) Sales promotion, sales training and selling activities are used for getting in touch with customers, both potential and regular, to secure orders.
(iii) Customer service is provided to help the customer to derive the benefit for which they purchase the products.
(iv) Trade and industry research and allied studies, to understand the economic trends, customer patterns and competitor's actions/ activities.
(v) Sales management to effectively utilise the marketing resources.

The various marketing activities can be further analysed into:
(i) Strategic or planning activities involving sales analysis, sales forecasting, market research

etc.

(ii) Tactical or creative activities such as advertising, sales promotion, sales management, customer services, etc.

The analyses of sales should be made on the following basis with comparative data relating to the previous period to assess the sales potential of the company:

(i) Product mix analysis giving information relating to product mix on customer class/ group wise or territory wise.
(ii) Sales by territory or customer class wise.
(iii) Profit or contribution earned salesman wise, territory wise, customer group wise, and product group wise.
(iv) Variances from sales forecast and analysed by product mix, territory and salesmen.

Besides the above data, the sales staff should be provided with such information as product specification and uses, discounts which they can offer, inventory position, etc. to enable them to increase the sales. The management auditor should see that the above information is used to the maximum advantage of the company.

Sales forecast is an important activity which should be looked into by the management auditor because it forms the basis for production planning, purchasing and inventory control. Every forecast includes certain assumptions which should be stated explicitly. The management auditor should understand the assumptions underlying the forecasts and test them for validity and relevance. There are several methods of forecasting sales like, for example, trend analysis, correlation analysis, etc., and the management auditor should see that the company is able to make use of the computers for properly assessing the sales forecasts.

A review of the marketing plans in use may reveal that the company has lost economies due to failure to manage marketing and sales effort on an integrated basis. If the company has a marketing plan, it has to be seen whether its implementation has been controlled and review of the performance is made periodically.

Market research consists of information on customers, sales prospects, competitor's activities, product specifications and sales activities. The management auditor examining the market research activities should see that the company is able to achieve cost effectiveness.

Trade journals, companies' annual reports, circulars from trade associations etc. provide information about products, competition, sales potential, etc. The management auditor should see how far these documents are used by the company to their best advantage.

Companies spend huge sums of money on advertising and sales promotion. It is necessary to evaluate how effective are these programmes. The management auditor's investigation in this direction will be somewhat as under:

(i) Who are the final consumers?
(ii) What are the segments in markets to which the products are catered?
(iii) What is the relation between the budget allocation and sales achieved?
(iv) Is the advertising directed towards that class of customers for whom the product is intended?
(v) What priorities are assigned for sales promotion?
(vi) Does the advertisement appeal to the customers?
(vii) Is the budget allocation to the different channels of advertisement adequate and commensurate with the benefits?

Based on the above information, the management auditor is expected to evaluate the effectiveness of the advertisement programme.

The sales management is responsible for managing the sales and marketing activities. The skill with which the resources are used by the sales management is important. In reviewing the performance of the sales department the management auditor should ensure that the sales management uses the systems concept and computer technology to solve the problems. Moreover, the programme for recruitment and training of salesmen will bring about an increase in turnover. The management auditor should evaluate the performance of each salesman and the sales department as a whole in terms of the actual achievement of sales as compared to the budget and past performance. A customer service cell is introduced to attend to the complaints received from the customers. Although the management auditor may not be able to quantify the services rendered by this section, a scrutiny of the complaints will give him an idea of the nature of the complains say, about the product quality, product life, packaging problems, defects, etc. and efforts can then be directed to see whether corrective action is taken to improve the product performance and marketability of the goods to ensure enhanced sales.

(3) Answer any two questions [10×2=20]

(a) (i) State the application of Management accounting Tools. [7]

Answer:

The performance measurement involves collection of information, analysing the same by establishing the interrelations between them, interpreting the results and then arriving at meaningful conclusion. The collection of information depends upon various sources of data and other reports for various systems used by the organisation.

The data input is generally made in the accounting system used by the company e.g. the ERP systems. Most of the ERP systems facilitate input and capturing of even the non-financial data which can be then processed to produce desired reports. There is a lot of information to be accessed from outside of the ERP system. The cost auditor should identify such sources within and outside of the organisation and use information drawn from the same.

The management accounting tools could be used to analyse the performance with different purposes. The cost auditor should verify the tools and techniques used by the company and comment on appropriateness and adequacy thereof. The cost auditor could recommend more appropriate management accounting tool.

The following table shows various management accounting tools that are used to serve different objectives:

Purpose	Management Accounting Tool
Control	Budgetary control, standard costing, variance analysis
Cost computation	Full(absorption) Costing, Job, batch, process or contract costing Activity based costing, Time Driven ABC
Cost reduction	Total Quality management, Quality costing, Kaizen costing, Lean manufacturing, Value Analysis and Value Engineering, Six Sigma
Pricing and decision making	Target costing, Life cycle costing, Throughput accounting, Variable or marginal costing
Total performance management	Balanced Scorecard, Performance Prism, Performance pyramid, Business Objects, Business Intelligence

The cost auditor should be acquainted with the intricacies of these and such other tools and what it takes to successfully implement and use them. The success of Performance Appraisal Report would depend upon not how many performance measure are considered, but upon how they are evaluated and assessed with the help of various management accounting tools.

(ii) A chemical manufacturing unit uses ingredient A as the basic material. The cost of the material is ₹ 20 per kg and the Input-Output ratio is 120%. Due to a sudden shortage in the market the material becomes non-available and the unit is considering the use of one of the following substitutes available:

Materials	Input - Output Ratio	₹/ per Kg
B1	135%	26
B2	115%	30

You are required to recommend which of the above substitutes is to be used. [3]

Solution:

Cost of Raw Material = $\frac{\text{Input}}{\text{Output}}$ x Rate per Unit

Cost of Material of: (Per Kg)

$$A = \frac{120}{100} \times 20 = ₹24.00$$

$$B = \frac{135}{100} \times 26 = ₹35.10$$

$$C = \frac{115}{100} \times 30 = ₹34.50$$

Material B2 is cheaper to be used in the final product. It is cheaper than B1 by ₹0.60 (₹35.10 - ₹34.50)

(b) A firm can produce three different products from the same raw material using the same production facilities. The requisite labour is available in plenty at ₹8 per hour for all products. The supply of raw material, which is imported at ₹8 per kg., is limited to 10,400 kgs. for the budget period. The variable overheads are ₹5.60 per hour. The fixed overheads are ₹50,000. The selling commission is 10% on sales.

(i) From the following information, you are required to suggest the most suitable sales mix, which will maximize the firm's profit. Also determine the profit that will be earned at that level:

Product	Market demand (units)	Selling price per unit (₹)	Labour hours required per unit	Raw material required per unit (kgs.)
X	8,000	30	1	0.7
Y	6,000	40	2	0.4
Z	5,000	50	1.5	1.5

(ii) Assume, in above situation, if additional 4,500 kgs. of raw material is made available for production, should the firm go in for further production, if it will result in additional fixed

overheads of ₹20,000 and 25 per cent increase in the rates per hour for labour and variable overheads. [10]

Solution:

Working Notes

(I) Calculation of Direct Material Consumption (per unit)

Product	Kgs. per unit	₹ per kg.	Amount (₹)
X	0.7	8	5.60
Y	0.4	8	3.20
Z	1.5	8	12.00

(II) Calculation of Variable Overhead Per Unit

Product	Hours	Rate per hour (₹)	Amount (₹)
X	1	5.60	5.60
Y	2	5.60	11.20
Z	1.5	5.60	8.40

(III) Statement of Contribution per unit and Ranking based on Contribution per kg. of Raw Material (₹)

Particulars		Products		
		X	Y	Z
Selling price	(a)	30.00	40.00	50.00
Direct material		5.60	3.20	12.00
Direct labour		8.00	16.00	12.00
Variable overhead		5.60	11.20	8.40
Selling commission		3.00	4.00	5.00
Total variable cost	(b)	22.20	34.40	37.40
(i) Contribution	(a)-(b)	7.80	5.60	12.60
(ii) Raw material requirement per unit (kgs.)		0.70	0.40	1.50
Contribution per kg. of raw material	(i)/(ii)	11.14	14.00	8.40
Ranking		II	I	III

Since, the raw material supply is restricted to 10,400 kgs., it is to be allocated to each product based on its ranking and market demand as follows:

Product	Units	Raw material requirement per unit (kgs.)	Total Raw material requirement (kgs.)
Y	6,000	0.40	2,400
X	8,000	0.70	5,600
Z	1,600	1.50	2,400*
			10,400

*Balancing figure= 2,400 kgs./1.5 kgs. = 1,600 units

(IV) Statement of profit (₹)

Contribution			
X	(8,000 x 7.80)	62,400	
Y	(6,000 x 5.60)	33,600	

Z	(1,600 x 12.60)	20,160	1,16,160
Less: Fixed Cost			50,000
Profit			66,160

(ii) If additional 4,500 kgs. of raw material is made available, the production will be as follows:

Product	Units	Raw material requirement (per unit/kg.)	Total Raw material requirement (kgs.)
Y	6,000	0.40	2,400
X	8,000	0.70	5,600
Z	4,600	1.50	6,900*
			14,900

*Balancing figure=6,900 kgs./1.5 kgs. = 4,600 kgs.

Statement of Profit (₹)

Contribution			
X	(8,000 x 7.80)	62,400	
Y	(6,000 x 5.60)	33,600	
Z	(4,600 x 12.60)	57,960	1,53,960
Less: Increase on additional units			
Labour Cost	(3,000 units x 25% x₹12)	9,000	
Variable overhead	(3,000 units x25%x₹8.40)	6,300	15,300
Net contribution			1,38,660
Less: Fixed Cost		50,000	
Add: Increase		20,000	70,000
Profit			68,660

Analysis: By using additional raw material of 4,500 kgs. in production of product Z by another 3,000 units will increase the profit by ₹2,500 (i.e. ₹68,660 - ₹66,160). Hence, production of additional 3,000 units of Z is suggested.

(c)(i) From the following information as extracted from the books of P Ltd, ascertain the amount of Capital Employed in the business:

	₹
Equity Share Capital	**5,00,000**
Preference Share Capital	**3,00,000**
Securities Premium	**40,000**
General Reserve	**1,30,000**
Profit & Loss A/c (Cr.)	**90,000**
Capital Reserve	**30,000**
10% Debentures	**2,00,000**
12% Bank Loan	**1,00,000**
Sundry Creditors	**55,000**
Bills Payable	**25,000**
Preliminary Expenses	**30,000**
Discount on Issue of Shares	**20,000**

[5]

Solution:

Books of P Ltd.
Statement showing ascertainment of capital Employed

	₹	₹
Share Capital:		
Equity Share Capital	5,00,000	
Preference Share Capital	3,00,000	8,00,000
Add: Reserves Surplus:		
Securities Premium	40,000	
General Reserve	1,30,000	
Profit & Loss A/c (Cr)	90,000	
Capital Reserve	30,000	2,90,000
		10,90,000
Less: Miscellaneous Expenditure:		
Preliminary Expenses	30,000	
Discount on Issue Shares	20,000	50,000
Proprietors' Fund		10,40,000
Add: Long –term loans:		
10% Debentures	2,00,000	
12% Bank Loan	1,00,000	3,00,000
Capital Employed		13,40,000

(ii) A company manufactures two products X and Y. Product X requires 8 hours to produce while product Y requires 12 hours. In April, of 22 effective working days of 8 hours a day, 1,200 units of X and 800 units of Y were produced. The Company employs 100 Workers in production department to produce X and Y. The budgeted hours are 1,86,000 for the year. Calculate capacity, Activity and Efficiency Ratio and establish their inter-relationship. [5]

Solution:

When FOH Volume Variance related ratios are to be computed, the working notes are as under:-

(1)	(2)	(3)	(4)	(5)
AO x SR = SH x SR	AFOH	BFOH = BH x SR	SO x SR =AH x R	PFOH = PH x SR
(1,200 x 8)+(800 x 12) =19,200 hours	N.A	1,86,000÷12 =15,500 hours	22 days x 8 hours x100 men =17,600 hrs	N.A in this question

Capacity Ratio = (4) ÷ (3) = 17,600 ÷ 15,500 =113.55%
Efficiency Ratio = (1) ÷ (4) =19,200 ÷ 17,600 =109.09%
Activity or volume Ratio = (1) ÷ (3) =19,200 ÷ 15,500 =123.87%
Relationship: Activity Ratio =Capacity Ratio x Efficiency Ratio=113.55% x 109.09% =123.87%.