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 any four Questions [15×4=60]

(a)(i) What are the principles of measuring 'overheads' as per CAS 3? [5]

Answer:

Principles of measuring 'overheads' are as follows:

(I) Overheads representing procurement of resources shall be determined at invoice or agreed price including duties and taxes, and other expenditure directly attributable thereto net of discounts (other than cash discounts), taxes and duties refundable or to be credited.

(II) Overheads other than those referred to in (i) shall be determined on the basis of cost incurred in connection therewith.
For example, machinery spare fabricated internally or a repair job carried out internally will include cost incurred on material, employees and expenses.

(III) Any abnormal cost where it is material and quantifiable shall not form part of the overheads.

(IV) Finance costs incurred in connection with procured or self generated resources shall not form part of overheads.

(V) Overheads shall not include imputed cost.

(VI) Overhead variances attributable to normal reasons shall be treated as part of overheads. Overhead variances attributable to abnormal reasons shall be excluded from overheads.

(VII) Any subsidy / Grant / Incentive or amount of similar nature received / receivable with respect to overheads shall be reduced for ascertainment of the cost of the cost object to which such amounts are related.

(VIII) Fines, penalties, damages and similar levies paid to statutory authorities or other third parties shall not form part of the overheads.

(IX) Credits / recoveries relating to the overheads, material and quantifiable, shall be deducted from the total overhead to arrive at the net overheads. Where the recovery exceeds the total overheads, the balance recovery shall be treated as other income.

(X) Any change in the cost accounting principles applied for the measurement of the overheads shall be made only if, it is required by law or for compliance with the requirements of a cost accounting standard, or a change would result in a more appropriate preparation or presentation of cost statements of an entity.

(ii) As a cost auditor of the company, what are the areas required to be check with regards to IT environment and controls? [5]

Answer:

The cost auditor should assess the following with regard to IT environment and controls.

(a) Reliance on systems or programs that are inaccurately processing data, processing inaccurate data, or both.

(b) Unauthorized access to data that may result in destruction of data or improper changes to data, including the recording of unauthorized or non-existent transactions, or inaccurate recording of transactions. Particular risks may arise where multiple users access a common database.

(c) The possibility of IT personnel gaining access to privileges beyond those necessary to perform their assigned duties thereby breaking down segregation of duties.

(d) Unauthorized changes to data in master files.

(e) Unauthorized changes to systems or programs.

(f) Failure to make necessary changes to systems or programs.

(g) Inappropriate manual interventions.

(h) Potential loss of data or inability to access data as required.

(iii) A company is engaged in construction of residential housing, offices, industrial units, Roads, Bridges, Marine facilities etc. having sites in India and abroad. The company also has Joint venture projects in India and abroad. Whether Companies (Cost Records and Audit) Rules 2014 would be applicable to the company? [5]

Answer:

All companies engaged in construction business either as contractors or as sub-contractors, who meet with the threshold limits laid down in the Companies (Cost Records and Audit) Rules, 2014 and undertake jobs with the use of own materials [whether self-manufactured/produced or procured from outside] shall be required to maintain cost records and get cost audit conducted as per the provisions of the Companies (Cost Records and Audit) Rules, 2014.

The provisions of the Companies (Cost Records and Audit) Rules, 2014 would also apply for construction activities undertaken under BOT/BOOT mode, or the projects undertaken as EPC contractor or the projects undertaken abroad by a company incorporated in India.

The Companies (Cost Records and Audit) Rules, 2014, do not make any distinction between the Contractor and Sub-Contractor and accordingly all such companies will be included within the ambit of the Rules.

(b)(i) What are the factors need to be considered by the auditor of the company while formulating the audit strategy? [7]

Answer:

In formulating the Overall audit strategy, the Cost Auditor shall consider all relevant factors.

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.

In addition to above, the auditor should also consider the following factors:

(a) The cost reporting framework generally prescribed, under the Companies Act and Rules prescribed there under, 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) A company has units in SEZ and in non-SEZ areas. The Companies (Cost Records and Audit) Rules, 2014 has exempted companies operating in special economic zones from cost audit. What would be applicability of the Companies (Cost Records and Audit) Rules, 2014 on such a company in respect of maintenance of cost accounting records and cost audit? [5]

Answer:

Rule 3 of the Companies (Cost Records and Audit) Rules 2014 is specific and it has mandated maintenance of cost accounting records on all products/activities listed under Table-A and Table-B subject to threshold limits. No exemption is available to any company from maintenance of cost accounting records once it meets the threshold limits. Hence, the above company would be required to maintain cost accounting records for all its units including the one located in the special economic zone.

In view of the provisions of Rule 4(3)(ii) of the Companies (Cost Records and Audit) Rules 2014 the unit located in the special economic zone would be outside the purview of cost audit and the company would not be required to include particulars of such unit in its cost audit report. The other units of the company located outside the special economic zone would be covered under cost audit subject to the prescribed threshold limits.

(iii) State the factors on which content and form of audit documentation will depend? [3]

Answer:

The content and form of audit documentation will depend on a number of factors such as:

(I) the size and complexity of the operations of the auditee,
(II) the extent of computerization of cost records,
(III) the assessed risks of material misstatement of cost,
(IV) the cost audit methodology and tools used. For example whether automated queries were used to get audit evidence from cost records.

(V) the nature of the audit procedure to be performed.

(c)(i) The particulars relating to the import of Sealing Ring made by B. Gupta & Co. during December, 2014 are given below:

- **Sealing Ring - 2,000 pieces invoiced £ 2.00 C.I.F. Mumbai Port.**
- **Customs duty was paid @ 100% on invoice Value (which has converted to Indian currency by adopting an exchange rate of ₹ 90.20 per £)**
- **Clearing charges - ₹5,000 for the entire consignment, and'**
- **Freight charges - ₹3,400 for transporting the consignment from Mumbai Port to factory premises.**

It was found on inspection that 100 pieces of the above material were broken and, therefore, rejected.

There is no scrap value for the rejected part. No refund for the broken material would be admissible as per the terms of contract. The management decided to treat 60 pieces as normal loss and the rest 40 pieces as abnormal loss. The entire quantity of 900 pieces was issued to production.

Calculate

I. Total cost of material, and

II. Unit cost of material issued to production.

Also state briefly how the value of 100 pieces rejected in inspection will be treated in costs. [4]

Solution:

AB & Co.

I.	**Computation of total cost of materials**	
	Sealing rings (2000 × 2 × 90.20)	₹3,60,800
	Customs duty 100% of Invoice value	₹3,60,800
	Clearing charges at port	₹5,000
	Freight charges - Port to factory	₹3,400
	Total Cost of materials	₹7,30,000
II.	**Unit cost of material**	**Nos.**
	Total quantity received	2,000
	Less : Normal loss	60
		1,940
	Less: Abnormal loss	40
	Total pieces issued to production	1,900
	Total cost of materials	₹7,30,000

This is to be spread over 1,940 units.

Unit cost of material issued to production (₹7,30,000 ÷ 1,940) ₹ 376.2887

Note. The cost of normal loss is to be borne by production during the period and abnormal loss is treated like good units produced for the purpose of valuation.

Cost to be charged to production (1,900 units × ₹ 376.2887)	₹7,14,948
Cost to be charged off to P & L A/c (40 units × ₹ 376.2887)	₹15,052
	₹7,30,000

(ii) How would you assign administrative overheads as per CAS 11? [3]

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.

(iii) "Risk of material misstatement at the assertion level consists of two components" – explain. [8]

Answer:

The risk of material misstatement at the assertion level consists of two components as follows:

- "Inherent risk" is the susceptibility of an assertion to a misstatement that could be material, either individually or when aggregated with other misstatements, assuming that there are no related controls. The risk of such misstatement is greater for some assertions and related cost heads, items of cost and disclosures than for others. For example, complex calculations are more likely to be misstated than simple calculations. Cost heads consisting of amounts derived from cost estimates that are subject to significant measurement uncertainty pose greater risks than do cost heads consisting of relatively routine, factual data.
- External circumstances giving rise to business risks may also influence inherent risk. For example, technological developments might make a cause changes to a manufacturing process rendering the existing classification of variable and fixed costs inappropriate and cause product contribution to be misstated.. In addition to those circumstances that are peculiar to a specific assertion, factors in the entity and its environment that relate to several or all of the classes of cost heads, items of cost, or disclosures may influence the inherent risk related to a specific assertion. These latter factors include, for example, external market constraints may cause normal capacity as an unreliable basis for determining unit costs.
- "Control risk" is the risk that a misstatement that could occur in an assertion and that could be material, either individually or when aggregated with other misstatements, will not be prevented, or detected and corrected, on a timely basis by the entity's internal control. That risk is a function of the effectiveness of the design and operation of internal control in achieving the entity's objectives relevant to preparation of the entity's Cost Statements. Some control risk will always exist because of the inherent limitations of internal control.
- Inherent risk and control risk are the entity's risks; they exist independently of the audit of the Cost Statements. The auditor is required to assess the risk of material misstatement at the assertion level as a basis for further audit procedures, though that assessment is a judgment, rather than a precise measurement of risk. When the auditor's assessment of the risk of material misstatement includes an expectation of the operating effectiveness of controls, the auditor performs tests of controls to support the risk assessment. The CAAS AND GACAAPs do not ordinarily refer to inherent risk and control risk separately, but rather to a combined assessment of the "risk of material misstatement." Although the CAAS AND GACAAPs ordinarily describe a combined assessment of the risk of material misstatement, the auditor may make separate or combined assessments of inherent and control risk depending on preferred audit techniques or methodologies and practical

considerations. The assessment of the risk of material misstatement may be expressed in quantitative terms, such as in percentages, or in non-quantitative terms. In any case, the need for the auditor to make appropriate risk assessments is more important than the different approaches by which they may be made.

- "Detection risk" is the risk that the cost auditor will not detect a misstatement that exists in an assertion that could be material, either individually or when aggregated with other misstatements. Detection risk is a function of the effectiveness of an audit procedure and of its application by the auditor. Detection risk cannot be reduced to zero because the auditor usually does not examine all of cost heads, items of cost, or disclosure and because of other factors. Such other factors include the possibility that a cost auditor might select an inappropriate audit procedure, misapply an appropriate audit procedure, or misinterpret the audit results. These other factors ordinarily can be addressed through adequate planning, proper assignment of personnel to the engagement team, the application of professional skepticism, and supervision and review of the audit work performed.
- Detection risk relates to the nature, timing, and extent of the auditor's procedures that are determined by the auditor to reduce audit risk to an acceptably low level. For a given level of audit risk, the acceptable level of detection risk bears an inverse relationship to the assessment of the risk of material misstatement at the assertion level. The greater the risk of material misstatement the auditor believes exists, the less the detection risk that can be accepted. Conversely, the less risk of material misstatement the auditor believes exist, the greater the detection risk that can be accepted.

(d)(i) A consignment consisted of two chemicals A and B. The invoices gave the following data:

Chemical A – 8,000 lb. @ ₹ 5.00 per lb	**₹**	**40,000**
Chemical B – 6,400 lb. @ ₹ 6.50 per lb	**₹**	**41,600**
Sales Tax @4%	**₹**	**3,264**
Railway Freight	**₹**	**1,536**
Total Cost	**₹**	**86,400**

A shortage of 400 lb in A and 256 lb. in B was noticed due to breakage. What stock rate you would adopt for pricing issues assuming a provision of 5% towards further deterioration. [6]

Solution:

Chemical – A

8,000 lb. @ ₹ 5.00 per lb.	₹	40,000
Add: Sales Tax (4% on the value)		1,600
		41,600
Add: Railway Freight (in ratio of weight, i.e., 5/9 x 1,536)		853.33
		42,453.33

Gross Weight	8,000 lb.	
Less: Shortage	400 lb.	
	7,600 lb.	
Less: 5% Provision for deterioration	380 lb.	
Net Weight	7,220 lb.	
Rate for pricing Issues	42,453.33/7,220 lb	= ₹ 5.88

Chemical – B

6,400 lb. @ ₹ 6.50 per lb	₹	41,600
Add: Sales Tax and Railway Freight (1,664 + 682.67)		2,346.67
	₹	43,946.67

Gross Weight	6,400 lb.	
Less: Shortage	256 lb.	
	6,144 lb.	
Less: 5% for Deterioration	307.2 lb.	
	5,836.8 lb	
Rate for pricing Issues	43,946.67/5,836.8 lb	= ₹ 7.53

Note: It has been presumed that both shortages due to breakage and deterioration in quantity of raw materials are normal losses.

(ii) An advertising agency has received an enquiry for which you are supposed to submit the quotation. Bill of material prepared by the production department for the job states the following requirement of material:

Paper 10 reams @ ₹ 2,500 per ream

Ink and other printing material	**₹ 10,000**
Binding material & other consumables	**₹ 6,000**

Some photography is required for the job. The agency does not have a photographer as an employee. It decides to hire one by paying ₹10,000 to him. Estimated job card prepared by production department specifies that service of following employees will be required for this job:

Artist (₹ 12,000 per month)	**80 hours**
Copywriter (₹ 10,000 per month)	**75 hours**
Client servicing (₹ 9,000 per month)	**30 hours**

The primary packing material will be required to the tune of ₹ 4,000. Production Overheads 40% of direct cost, while the S & D Overheads are likely to be 25% on Production Cost. The agency expects a profit of 20% on the quoted price. The agency works 25 days in a month and 6 hours a day. [6]

Solution:

Quotation for a Printing Job

Items	**Amount ₹**	**Amount ₹**
Direct material required:		
Paper 10 x 2,500	25,000	
Ink & other printing material	10,000	
Binding material & consumables	6,000	
Primary packing material	4,000	45,000
Direct labour spent:		
Artist (12,000/(25 x 6)) x 80	6,400	
Copy writer (10,000/(25 x 6)) x 75	5,000	
Client Servicing (9,000/(25 x 6)) x 30	1,800	13,200
Photographer's charges		10,000
Prime Cost		68,200
Factory Overheads applied @ 40% on Direct Cost		27,280
Production Cost		95,480
S & D overheads applied @ 25% on Production Cost		23,870
Total Cost		119,350
Profit (20% on price i. e. 25% on cost)		29,838
Price to be quoted		1,49,188

(iii) How would you treat repairs and maintenance costs not traceable to a cost object as per CAS 12? [3]

Answer:

Where the repairs and maintenance cost is not directly traceable to cost object, it shall be assigned based on either of the following two principles:
(a) Cause and effect- Cause is the process or operation or activity and effect is the incurrence of cost.
(b) Benefits received-Overheads are to be apportioned to the various cost objects in proportion to the benefits received by them.

(e)(i) The following figures were extracted from the Trial Balance of a company as on 31st December 2014.

Particulars	Debit (₹)	Credit (₹)
<u>Inventories</u>		
Raw Material	2,40,000	
WIP	3,00,000	
FG	1,80,000	
Office Appliances	17,400	
Plant and Machinery	4,60,500	
Buildings	2,00,000	
Sales		7,68,000
Sales Returns	14,000	
Material purchased	3,20,000	
Freight on materials	16,000	
Purchase returns		4,800
Direct labour	1,60,000	
Indirect labour	18,000	
Factory supervision	10,000	
Factory repairs & upkeep	14,000	
Heat, light & power	65,000	
Rates & taxes	6,300	
Misc factory expenses	18,700	
Sales commission	33,600	
Sales travelling	11,000	
Sales Promotion	22,500	
Distribution department salaries & wages	18,000	
Office salaries	8,600	
Interest on borrowed funds	2,000	

Further details are given as follows:

Closing inventories are Material ₹ 2,80,000, WIP ₹ 2,92,000 & FG ₹2,15,000.

Accrued expenses are Direct Labour ₹ 8,000, Indirect Labour ₹ 1,200 & interest ₹ 2,000.

Depreciation should be provided as 5% on Office Appliances, 10% on Machinery and 4% on Buildings.

Heat, light and power are to be distributed in the ratio of 8:1:1 among factory, office and distribution respectively.

Rates & taxes apply as 2/3rd to the factory and 1/3rd to office.

Depreciation on building to be distributed in the ratio of 8:1:1 among factory, office and distribution respectively

Prepare a Cost Sheet statement as per CAS 22 showing all important components. [6]

Solution:

Cost Sheet

Particulars		**Amount (₹)**	**Amount (₹)**
Direct Materials			
Opening stock		2,40,000	
Add: Purchases		3,20,000	
Add: Freight		16,000	
Less: Returns		(4,800)	
Less: Closing Stock		(2,80,000)	2,91,200
Direct Labour		1,60,000	
Add: Accrued		8,000	1,68,000
Prime Cost			**4,59,200**
Factory Overheads:			
Indirect labour		18,000	
Accrued indirect labour		1,200	
Factory supervision		10,000	
Repairs & upkeep		14,000	
Heat, Light & Power		52,000	
Rates & taxes		4,200	
Misc. Factory expenses		18,700	
Depreciation on plant & machinery		46,050	
Depreciation on buildings		6,400	
		1,70,550	
Add: Opening WIP	3,00,000		
Less: Closing WIP	(2,92,000)	8,000	1,78,550
Factory Cost			**6,37,750**
Administration Overheads			
Heat, Light & power		6,500	
Rates & taxes		2,100	
Depreciation on buildings		800	
Depreciation on office appliances		870	
Office salaries		8,600	
		18,870	
Add: Opening FG stock		1,80,000	
Less: Closing FG Stock		(2,15,000)	(16,130)
Cost of Production of saleable units			**6,21,620**
Selling & Distribution overheads			
Heat & light		6,500	
Depreciation on buildings		800	
Sales commission		33,600	
Sales travelling		11,000	
Sales promotion		22,500	
Distribution department expenses		18,000	92,400
Cost of Sales			**7,14,020**

(ii) What is the procedure for appointment of cost auditor under the Companies Act, 2013? **[4]**

Answer:

The cost auditor is to be appointed by the Board of Directors on the recommendation of the Audit Committee, where the company is required to have an Audit Committee. The cost

auditor proposed to be appointed is required to give a letter of consent to the Board of Directors. The company shall inform the cost auditor concerned of his or its appointment as such and file a notice of such appointment with the Central Government within a period of thirty days of the Board meeting in which such appointment is made or within a period of one hundred and eighty days of the commencement of the financial year, whichever is earlier, through electronic mode, in form CRA-2, along with the fee as specified in Companies (Registration Offices and Fees) Rules, 2014.
Any casual vacancy in the office of a cost auditor, whether due to resignation, death or removal, shall be filled by the Board of Directors within thirty days of occurrence of such vacancy and the company shall inform the Central Government in Form CRA-2 within thirty days of such appointment of 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? [3]

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.

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

(a) JPS & Co., a cost audit firm, appointed as an internal auditor of the company ABC LTD. for the audit of revenue for the financial year 2014-15. How would you verify the same if you, as a cost accountant, are responsible for conduct the audit of the same? [10]

Answer:

AUDIT OF REVENUE

1. **Assertions:** In the context of Revenue (as defined under AS - 9), the Auditor should confirm the management's assertions regarding the following -
   (a) **Occurrence:** That recorded revenue arose from transactions which took place during the relevant period and pertain to the entity.
   (b) **Completeness:** That there is no unrecorded revenue.
   (c) **Measurement:** That revenue is recorded at the proper amounts & is allocated to the

proper period.

(d) **Presentation** & **Disclosure:** That the revenue is disclosed, classified and described as per recognised accounting practices / policies and relevant statutory requirements, if any.

2. **Evaluation of Internal Controls:** The Auditor should examine whether the Internal Control provides for the following -
   (a) Systems and procedures relating to generation of revenue including authority to fix prices, offer discounts and other terms of sales.
   (b) Accounting procedures relating to recognition of revenue.
   (c) Existence of periodic reports on actual performance vis-a-vis budgets.

3. **Examination of Records:**
   (a) Examine whether revenue is recognised as per AS-9 requirements.
   (b) Review / analyse the adequacy & efficacy of cut-off procedures relating to Sales and Sale Returns.
   (c) Examine selected entries in the Sales Journal with reference to the related sale invoices, despatch documents, other supporting documents such as the customer's orders and credit approval notes, and entries in the customer's accounts. Compare the actual prices charged with authorized price lists or with the authorization by the appropriate official of the entity, as appropriate.
   (d) Verify selected despatch documents with reference to related sale invoices and the Sales Journal.
   (e) Scrutinise sample entries in the Sales Return Journal, with reference to the receiving reports in respect of goods returned, Credit Notes and entries in the Customers' Accounts.
   (f) See whether revenue recognition principles have been properly applied in case of - (i) goods sent on approval, and (ii) sales to intermediate parties.
   (g) Where consideration is receivable in instalments and includes an element of interest, examine whether interest element has been excluded from the amount recorded as Sales.
   (h) In respect of Export Sales, see whether AS - 11 requirements are complied with. Also, obtain written representation from the management to the effect that the entity has complied with the legal and regulatory requirements relating to exports.
   (i) Examine related agreements / documents / certificates in respect of revenue arising from services rendered (fees, commission, brokerage etc.) and from Interest, Dividends and Royalties.
   (j) Verify realizations subsequent to the Balance Sheet date, to identify cases of unrecorded revenue.

4. **Analytical Procedures:** The following Analytical Procedures may be relevant -
   (a) Comparison, product-wise & location-wise, of current year - (i) revenue, and (ii) quantity sold, with previous years' figures.
   (b) Comparison of the ratio of - (i) Gross Margin to Sales, (ii) Sales Returns to Sales, (iii) Trade Discount to Sales, (iv) Excise Duty/Sales Tax/ Export Incentives to Sales, for the current year with the corresponding ratios for previous year.
   (c) Product-wise Reconciliation of quantity sold during the year with Opening Stock, Purchases/ Production and Closing Stock.
   (d) Comparison the amount of Dividend/Interest/Royalty for the current year with the corresponding figures for previous years.
   (e) Comparison the ratio of Income on Investments to Average Investments for the

current year (separately for each major type of investment) with the corresponding figures for previous years.

5. **Other Aspects:**
   (a) **Disclosure:** The Auditor should examine whether various items of revenue have been disclosed properly in the Financial Statements and that any disclosure requirements of the relevant statute in this regard have been complied with.
   (b) **Companies:** In case of Companies, the Auditor should carry out additional procedures in view of CARO Requirements, transactions with Related Parties etc.
   (c) **Documentation:** The Auditor should maintain adequate working papers regarding audit of revenue.

(b) 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.

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?

(c) As an operational auditor of the company, how would you evaluate the performance of a company? [10]

Answer:

Performance evaluation is based primarily on - (1) Productivity, (2) Personnel, (3) Workload, (4) Cost, and (5) Quality. All the above bases are amenable for quantitative expression and analysis. A comparative analysis of the above bases is given below –

(i) Productivity

(A) Quantitative Aspects

The Auditor should look into aspects like -

1. Input-Output Ratios for materials,
2. Production Loss and rejections,
3. Quantitative Ratios in services, e.g. man-hours per customer or man-hours per application processed.

(B) Analytical Aspects

In case of unsatisfactory production performance, the Auditor looks to reasons, e.g. -

1. Poor quality of materials,
2. Non-availability of skilled personnel,
3. Improper machine maintenance,
4. Deficient ancillary services like power supply, etc.
5. Excessive wastages / scrap.

(C) Improvement Aspects

The operational auditor analyses whether methods of work can be improved and better productivity than planned can be achieved.

(ii) Personnel

(A) Quantitative Aspects

The Auditor analyses -

1. Number of Employees,
2. Employee Turnover,
3. Total, regular and overtime hours worked,
4. Ratio of Direct Employees to Indirect Employees.

(B) Analytical Aspects

In case of unsatisfactory results, the Auditor looks to reasons, e.g. -

1. Non-availability of skilled personnel,

2. Over-staffing or under-staffing,
3. Lack of training,
4. Management attitude towards workers and trade unions,
5. Poor working conditions,
6. Lack of Team spirit, etc.

(C) Improvement Aspects

The Operational Auditor also analyses whether improvements can be brought about in aspects affecting personnel e.g. -

1. Revamping personnel policy,
2. Providing fair wages to workers,
3. Mental revolution in Management, etc.

(iii) Workload measurement

(A) Quantitative Aspects

The Auditor analyses -

1. Volume or quantity or work handled and/or performed,
2. Volume of new work,
3. Backlog of work, etc.

(B) Analytical Aspects

The Operational Auditor would analyse factors like -

1. Change in volume of work,
2. Extent of backlog of work,
3. Unrealistic Time Standards set for performance, and
4. Ability of the entity in meeting production deadlines or target dates.

(C) Improvement Aspects

Improvement aspects would involve -

1. Need for working overtime or fresh recruitment, etc.
2. Setting realistic time standards for work, etc.

(iv) Quality of Work

(A) Quantitative Aspects

The Auditor analyses -

1. Number of customers' complaints,
2. Rejections by Quality Control Department,
3. Number of Workers' grievances,
4. Number of errors in invoicing or recording transactions,
5. Quantity of scrap and wastages.

(B) Analytical Aspects

The Operational Auditor analyses factors like -

1. Extent of satisfaction of Customers, Suppliers, Bankers, Workers, etc.
2. Adherence to quality standards set by the entity
3. Reasons for deviations from quality standards e.g. defective materials, untrained workers, unsatisfactory work environment, etc.

(C) Improvement Aspects

The operational Auditor enquires improvement aspects like -

1. Change in work methods,
2. Boosting the workers' morale by adding more technical facilities,
3. Better supervision, and
4. Enforcing stricter control on raw material quality.

(v) Cost

(A) Quantitative Aspects

Basically Cost Aspects are quantitative in nature.

(B) Analytical Aspects

The following aspects should be analysed -

1. Realistic Classification,
2. Proper accounting of Costs,
3. Analysis of Value-Added and Non-Value Added Costs.

(C) Improvement Aspects

Areas of Cost Reduction and Cost Control are analysed, e.g. elimination of non-value added activities, reduction of wastages, developing cost-consciousness etc.

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

(a) The following is the abridged Balance Sheet of Well Batteries Ltd:

	₹ in lacs	
	31.3.2015	**31.3.2014**
Liabilities:		
Share Capital	650	650
Debenture Redemption Reserve	25	30
Capital subsidy from State Government	30	30
Revaluation Reserve	125	140
General Reserve	160	120
Balance in Profit and Loss A/c	48	32
Secured Loans	275	295
Unsecured Loans	123	117
	1,436	1,414
Assets:		
Gross Block	725	680
Accumulated Depreciation	(315)	(290)
Capital WIP	43	37
Investments	365	365
Current Assets:		
Inventories	417	441
Sundry Debtors	182	195
Advances for Capital Equipment	24	17
Other Loans & Advances	144	137
Cash and Bank Balances	21	19
Current Liabilities:		
Sundry Creditors		
For Capital Expenses	(17)	(21)
For others	(185)	(197)
Provision for Taxes	(64)	(71)
Misc. Expenses	96	102
Total	1,436	1,414

Notes:

(i) Fixed Assets include Goodwill and Patents ₹122 lacs (Previous year ₹137 lacs)

(ii) Term loans due for repayment within 12 months are ₹96 lacs (Previous year ₹ 84 lacs)

Calculate & analyse the following for the company as a whole:
(i) Capital Employed for the year ended 31.3.15
(ii) Net worth as on 31.3.14 and 31.3.15
(iii) Debt/ Equity Ratio as on 31.3.2015 **[10]**

Solution:

Capital Employed: (₹ in lakhs)

	31.3.15	31.3.14
Gross Block	725	680
Less: Depreciation	315	290
Net Block	410	390
Less: Goodwill & Patents	122	137
Net Fixed Assets	288	253
Current Assets:		
Inventories	417	441
Sundry Debtors	182	195
Advance for Capital Equipment	24	17
Other Loans & Advances	144	137
Cash and Bank Balances	21	19
(A)	788	809
Current Liabilities		
Term loan due for repayment within 12 months	96	84
Sundry Creditors		
- For Capital	17	21
- For others	185	197
Provision for Taxes	64	71
(B)	362	373
Working capital (A - B)	426	436
Capital Employed (Net Fixed Assets + Working Capital)	714	689

Capital Employed = (714 + 689)/2 = 701.50 lacs.

(ii) Net worth:

	₹ in lacs 31.3.15	₹ in lacs 31.3.14
Share Capital	650	650
General Reserve (including Debenture Redemption Reserve)	185	150
Capital subsidy from State Government	30	30
Balance in P&L A/c	48	32
	913	862
Less: Intangible Assets	122	137
Less: Capital WIP	43	37
Less: Misc. Expenditure	96	102
Net worth	652	586

(iii) Debt- Equity Ratio:

	31.3.15	31.3.14
Debt		
Debt (Secured & Unsecured Loans)	398	412
Less: Due in 12 months	96	84
Long term debt	302	328
Equity		
Share Capital	650	650
General reserve	160	120
Debenture Redemption Reserve	25	30
Balance in Profit and Loss A/c	48	32
Capital subsidy from State Government	30	30
Less: Misc. Expenses	(96)	(102)
	817	760
Debt Equity Ratio	0.37:1	0.43:1

Note:

(i) There is no existing liability towards Debenture-holder of the Company. So, balance in Debenture Redemption Reserve Account is treated as part of Reserve & Surplus.

(ii) As per Accounting Standard 12 "Accounting for Government Grants" under Capital approach – Grant is treated as part of Shareholder's Funds. So, Capital subsidy is taken for the calculation of Capital Employed and for the calculation of Net Worth.

(b) (i) The management of Star Ltd. is worried about their increasing labour turnover in the factory and before analyzing the causes and taking remedial steps, they want to have an idea of the profit foregone as a result of labour turnover in the last year.
Last year sales amounted to ₹83,03,300 and the P/V Ratio was 20%. The total number of actual hours worked by the direct labour force was 4.45 lakhs. As a result of the delays by the personnel department in filling vacancies due to labour turnover, 1,00,000 potentially productive hours were lost. The actual direct labour hours included 30,000 hours attributable to training new recruits, out of which half of the hours were unproductive.

An analysis of costs incurred consequent on labour turnover revealed the following:

Settlement cost due to leaving	**₹73,820**
Recruitment Costs	**₹46,740**
Selection Costs	**₹42,750**
Training Costs	**₹50,490**

Assuming that the potential lost as a consequence of labour turnover could have been sold at prevailing prices. Find out the profit foregone last year on account of labour turnover. [6]

Solution:

Statement of profit foregone due to Labour Turnover (₹)

Contribution foregone	3,86,200
Settlement cost due to leaving	73,820
Recruitment cost	46,740
Selection Costs	42,750
Training Costs	50,490
Total cost of labour turnover	6,00,000

Computation of productive hours (Hours)

Actual hours worked	4,45,000
Less: Unproductive hours (for training)	15,000
Productive hours worked	4,30,000

Sales per productive hours = ₹83,03,300/4,30,000 hrs.
= ₹19.31
Sales foregone due to potential productive hours lost = 1,00,000 hours x ₹19.31
= ₹19,31,000
Contribution foregone on sales lost = Sales foregone x P/V Ratio
= ₹19,31,000 x 20/100
= ₹3,86,200

(ii) From the following figures decide whether it is worthwhile to investigate the variance:

	₹
1. Cost of investigation of variance	**8,400**
2. Cost of correction of out-of-control process	**20,000**
3. Cost of allowing the process to remain out of control	**95,000**
4. Probability of being in control	**0.90**

[4]

Solution:

A. Expected Cost of investigation

(i) Cost of investigation of variance (This will have to be incurred, if this decision is taken)	₹ 8,400
(ii) Total cost of correction of out control situation is ₹ 20,000, but only 10% of this will be incurred, because probability of control is 90%. Therefore, expected cost of correction. (10% of ₹ 20,000)	₹ 2,000
Total	₹10,400

B. Expected Cost of allowing the process to remain out of control
Total cost of allowing the process to remain out of control is ₹95,000. Probability of control is 90%.
∴ Expected cost of allowing the process to remain out of control- ₹95,000 x 10% = 9,500
∴ From above, it is clear that expected cost of investigation is less than expected cost of allowing the process to remain out of control. Therefore, advice to management will be to investigate the variance.

(c)(i) A chemical manufacturing unit uses ingredient 'A' as the basic material. The cost of the material is ₹ 25 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. [5]

Solution:

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

Cost of Material of: (Per Kg)

$A = \frac{120}{100} \times 25 = ₹30.00$

$B_1 = \frac{135}{100} \times 26 = ₹35.10$

$B_2 = \frac{115}{100} \times 30 = ₹34.50$

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

(ii) X Ltd presented the following particulars on 31.3.2015.
You are asked to compute the Inventory Turnover Ratio of each material:

	Material X	Material Y
	₹	₹
Stock (as on 1.4.2014)	**18,000**	**24,000**
Purchases	**60,000**	**1,00,000**
Stock (as on 31.3.2015)	**24,000**	**32,000**

[5]

Solution:

Computation of the Inventory Turnover Ratio

Inventory Turnover Ratio = $\dfrac{\text{Cost of Goods}}{\text{Average Stock}}$

	Material X ₹	Material Y ₹
(a) Cost of Goods Sold		
Opening Stock	18,000	24,000
Add: Purchases	60,000	1,00,000
	78,000	1,24,000
Less: Closing Stock	24,000	32,000
Cost of Goods Sold	54,000	92,000
(b) Average Stock		
Opening Stock	18,000	24,000
Add: Closing Stock	24,000	32,000
	42,000	56,000
∴ Average Stock	$\dfrac{42,000}{2}$	$\dfrac{56,000}{2}$
	= 21,000	= 28,000
∴ Inventory Turnover Ratio = $\dfrac{\text{Cost of Goods Sold}}{\text{Average Stock}}$ =	$\dfrac{54,000}{21,000}$	$\dfrac{92,000}{28,000}$
	= 2.57 times	= 3.29 times