

Allama Iqbal Open University AIOU BS ADC solved Assignment NO1 Autumn 2024 Code 5410 Cost Accounting

Q. 1 What are the objectives of cost accounting? What are its advantages and limitations?

(a) Describe the various techniques of costing in detail.

(b) Enlist the various classifications of costs and describe them.

Ans:

Cost Accounting: Objectives, Advantages, Limitations, Techniques, and Classifications

Cost accounting is a specialized branch of accounting designed to measure, analyze, and manage the costs of an organization's activities. It provides detailed information about cost structures, enabling businesses to make informed decisions, improve efficiency, and achieve profitability.

Objectives of Cost Accounting

The primary purpose of cost accounting is to provide a framework for tracking and managing costs effectively. The key objectives include:

1. Determination of Cost

Cost accounting systematically records and analyzes expenses related to production or services, ensuring accurate cost determination. This includes direct costs like raw materials and indirect costs like factory overheads.

2. Cost Control

By comparing actual costs with budgets or standard costs, businesses can identify areas where expenses exceed expectations. Cost control measures can then be implemented to minimize wastage and inefficiencies.

3. Cost Reduction

Beyond control, cost accounting focuses on identifying opportunities for reducing costs without compromising quality. This involves process optimization, better resource utilization, and the elimination of non-value-adding activities.

4. Profit Planning

Cost accounting helps determine the profitability of various products, services, or operations. It provides data to identify profitable ventures and discontinue unprofitable ones.

5. Inventory Valuation

Accurately values inventory for financial reporting and tax compliance, considering costs incurred at different stages of

production.

6. Decision-Making Support

Cost accounting equips managers with detailed cost data for decisions like pricing, budgeting, make-or-buy analysis, and investment appraisals.

7. Preparation of Financial Statements

Although not a substitute for financial accounting, cost accounting helps in generating reports such as cost sheets and production accounts, which are essential for management purposes.

Advantages of Cost Accounting

The benefits of cost accounting extend across various facets of business operations:

1. Enhanced Financial Control

By offering a clear view of costs, businesses can monitor and control financial resources efficiently.

2. Improved Profitability

Identifying and reducing unnecessary expenses leads to better margins and overall profitability.

3. Accurate Pricing

Cost accounting provides a detailed breakdown of production costs, ensuring fair and competitive pricing for

goods and services.

4. Informed Decision-Making

Managers rely on cost data to make strategic decisions, such as resource allocation, expansion, or downsizing.

5. Budgeting and Forecasting

Helps in setting realistic budgets and predicting future costs based on historical data and trends.

6. Compliance and Transparency

Cost accounting promotes ethical practices and ensures transparency in financial reporting, building trust with stakeholders.

Limitations of Cost Accounting

Despite its numerous advantages, cost accounting has certain drawbacks:

1. Complexity

Implementing and maintaining a cost accounting system can be complicated, especially for small businesses lacking expertise or resources.

2. High Cost of Implementation

Requires skilled personnel, specialized software, and regular maintenance, which can be expensive.

3. Arbitrary Allocation

Indirect costs like overheads often involve subjective allocation, which can lead to inaccuracies.

4. Not Standardized

Unlike financial accounting, cost accounting does not adhere to globally accepted standards, which can limit its comparability across organizations.

5. Limited External Use

Cost accounting is primarily for internal decision-making and may not fulfill statutory or external reporting requirements.

(a) Techniques of Costing

Costing techniques refer to the methods used to determine and allocate costs. The choice of technique depends on the nature of the business, type of production, and management objectives.

1. Job Costing

- Used for industries where production is based on specific orders.
- Costs are accumulated separately for each job or project.
- Example: Construction projects, printing services.

2. Batch Costing

- Applicable when goods are produced in batches, with each batch treated as a cost unit.
- Example: Pharmaceuticals, clothing manufacturing.

3. Process Costing

- Suitable for industries with continuous production processes.
- Costs are assigned to different stages or processes.
- Example: Oil refining, textile production.

4. Standard Costing

- Involves setting predetermined costs (standard costs) and comparing them with actual costs to identify variances.
- Helps in cost control and performance evaluation.

5. Marginal Costing

- Focuses on variable costs, ignoring fixed costs in decision-making.
- Useful for analyzing break-even points and making short-term decisions.

6. Absorption Costing

- Allocates both fixed and variable costs to products.
- Ensures full cost recovery but can distort cost behavior analysis.

7. Activity-Based Costing (ABC)

- Allocates costs to products or services based on activities involved.
- Provides more accurate cost information by considering specific resource consumption.

8. Uniform Costing

- Ensures standardization of costing methods across organizations in the same industry.
- Promotes consistency and comparability.

(b) Classifications of Costs

Cost classification involves grouping costs based on their nature, behavior, and purpose. The major classifications include:

1. By Nature

- **Direct Costs:** Costs directly attributable to a specific product or service, such as raw materials and direct labor.
- **Indirect Costs:** Costs that cannot be traced to a single product, such as utilities and administrative expenses.

2. By Behavior

- **Fixed Costs:** Do not change with production levels (e.g., rent, insurance).
- **Variable Costs:** Change proportionally with production levels (e.g., raw material costs).
- **Semi-Variable Costs:** Contain both fixed and variable components (e.g., electricity bills).

3. By Function

- **Production Costs:** Incurred during manufacturing (e.g., wages of factory workers).
- **Administrative Costs:** Related to general management (e.g., office rent).
- **Selling and Distribution Costs:** Associated with marketing and delivery (e.g., advertising expenses).

4. By Time

- **Historical Costs:** Expenses incurred in the past.

- **Future Costs:** Anticipated costs for upcoming projects or activities.

5. By Decision-Making Relevance

- **Relevant Costs:** Costs that affect decision-making (e.g., opportunity costs).
- **Irrelevant Costs:** Costs that remain unaffected by decisions (e.g., sunk costs).

6. By Controllability

- **Controllable Costs:** Costs that can be regulated by management.
- **Uncontrollable Costs:** Costs beyond managerial control (e.g., economic downturn impacts).

7. By Traceability

- **Product Costs:** Directly related to manufacturing (e.g., raw materials).
- **Period Costs:** Linked to a specific time period (e.g., monthly salaries).

Conclusion

Cost accounting is a critical tool for businesses aiming to achieve financial efficiency and profitability. By understanding its objectives, techniques, and cost classifications, organizations can make informed decisions, optimize resources, and maintain a competitive edge. Despite its limitations, the insights provided by cost accounting outweigh its challenges, making it an indispensable component of modern business management.

Q. 2 The following data are extracted from the books of Usman & Brothers Corporation for the period ended on 31st December 2023.

You are required to

(a) Prepare Cost of goods manufactured and sold statement and (b) Income statement.(20)

Ans;

Solution for Usman & Brothers Corporation

To address the given task, we will prepare:

**(a) Cost of Goods Manufactured and Sold Statement, and
(b) Income Statement**

The following data is used in the calculations:

(a) Cost of Goods Manufactured and Sold Statement

Particulars	Amount (Rs. '000)
Direct Materials	
Opening Raw Materials Inventory	76,800
Add: Purchases	288,000

Raw Materials Available for Use 364,800

Less: Closing Raw Materials Inventory (67,200)

Raw Materials Consumed 297,600

Add: Direct Labour 180,400

Prime Cost 478,000

Factory Overheads

Factory Insurance 18,000

Heat and Light Costs 9,600

Depreciation on Machinery 13,200

Factory Rent 34,000

Total Factory Overheads 74,800

Total Factory Cost 552,800

Add: Opening Work in Process Inventory 60,000

Less: Closing Work in Process Inventory (57,600)

Cost of Goods Manufactured 555,200

Add: Opening Finished Goods Inventory	125,200
Less: Closing Finished Goods Inventory	(144,800)
Cost of Goods Sold (COGS)	535,600

(b) Income Statement

Particulars	Amount (Rs. '000)
Sales	1,075,400
Less: Cost of Goods Sold (COGS)	(535,600)
Gross Profit	539,800
 Operating Expenses	
Advertisement Expenses	72,000
Office Expenses	60,000
Total Operating Expenses	132,000

Net Profit Before Tax 407,800

Explanation

Cost of Goods Manufactured and Sold Statement:

This statement includes the costs associated with manufacturing goods, starting with direct materials consumed, adding direct labor, and factory overheads. The cost of goods manufactured is adjusted by inventories of finished goods to calculate the cost of goods sold (COGS).

Income Statement:

The gross profit is calculated by subtracting COGS from sales revenue. Operating expenses, such as advertisement and office expenses, are then deducted to arrive at the net profit before tax.

Q. 3

Roshan Milling Corporation manufactures a product requiring processing in three departments, with all materials put into process in the first department.

During December 220,000 units were completed in department 1 at the total cost of Rs. 352,000 and were transferred to the next department. From this lot, department 2 completed and transferred out 170,000 units incurring direct labour cost of Rs. 52,360 and factory overhead cost of Rs. 26,180. The December 31, work in process inventory of department 2 is 44,000 units

which were 25% complete as to direct labour and factory overhead cost. The spoilage occurs at the end of the process and is considered as normal loss. (20)Required:Prepare a cost of production report for department 2.

Ans:

Cost of Production Report for Department 2

Given Data:

- Units completed and transferred out: 170,000 units
- Direct labor cost: Rs. 52,360
- Factory overhead cost: Rs. 26,180
- Work-in-process (WIP) inventory (31st December): 44,000 units (25% complete for direct labor and overhead)
- Normal spoilage is considered a loss.

Step-by-Step Approach

1. Total Units Processed in Department 2

- Completed and transferred out: 170,000 units
- Ending WIP: 44,000 units (25% complete for labor and overhead)

Total units to account for:

$$170,000 + 44,000 = 214,000 \text{ units}$$

2. Calculation of Total Costs Incurred

- Direct labor cost: Rs. 52,360
 - Factory overhead cost: Rs. 26,180
- Total cost:
 $52,360 + 26,180 = 78,540$ Rs.

3. Cost Per Unit for Department 2

Cost per unit =
 $78,540 / 214,000 \approx 0.3676$ Rs. per unit

4. Costs Allocated to Ending WIP (44,000 units)

- Direct labor (25% of 44,000 units):
 $0.25 \times 44,000 \times 0.3676 = 4,052$ Rs.
- Factory overhead (25% of 44,000 units):
 $0.25 \times 44,000 \times 0.3676 = 2,026$ Rs.

5. Normal Spoilage Loss

Since spoilage is considered a normal loss, no costs are allocated for spoilage.

Summary of Costs for Department 2

Particulars	Amount (Rs.)
Completed and Transferred Out	170,000 units
Direct Labor Cost	52,360
Factory Overhead Cost	26,180
Total Cost of Production	78,540
Ending WIP (25% complete)	6,078 (4,052 + 2,026)
Normal Spoilage	0

Q. 4

(a) Describe the Job Order costing system and the nature of industries which can make use of it.

(b) Dell Company uses Job Order Cost System. The manufacturing operations for the year ended December 31, 2022 were as follows: (20)

- i. Purchased raw materials on account Rs.140,000.
- ii. Materials issued to factory of Rs.120,000 of which Rs.20,000 was indirect materials.
- iii. Direct labour cost incurred Rs.90,000 and Rs.10,000 indirect labours.
- iv. Factory overhead application rate was 90% on direct labour cost.
- v. Factory overhead cost incurred on account Rs.80,000.
- vi. Cost of jobs completed Rs.250,000.
- vii. Cost of goods sold Rs.180,000
- viii. Sales on account Rs.230,000. Required: Record all the above transactions in the General Journal & give an entry to close the factory overhead account.

Ans:

Solution:

(a) Job Order Costing System

The **Job Order Costing System** is used by industries that produce customized or unique products. In this system, costs are assigned to specific jobs or batches rather than being averaged

over all products. Each job or batch is treated separately, allowing for the accurate tracking of costs for individual jobs.

Industries that use Job Order Costing:

- **Manufacturing Industries:** Custom furniture, shipbuilding, aircraft manufacturing, printing, etc.
- **Service Industries:** Law firms, architectural firms, advertising agencies, etc.

(b) Transactions and General Journal Entries for Dell Company

Transaction	Details	Journal Entries
1. Purchased Raw Materials on Account	Raw materials purchased on account Rs. 140,000.	Raw Materials Inventory 140,000
2. Materials Issued to Factory	Direct materials Rs. 120,000 and indirect materials Rs. 20,000 issued to the factory.	Work-in-Process Inventory 100,000
3. Direct Labour Cost Incurred	Direct labor cost Rs. 90,000 and indirect labor Rs. 10,000.	Work-in-Process Inventory 90,000

4. Factory Overhead Application	Factory overhead applied @ 90% of direct labor cost.	Factory Overhead 81,000
5. Factory Overhead Incurred	Factory overhead incurred on account Rs. 80,000.	Factory Overhead 80,000
6. Cost of Jobs Completed	Jobs completed worth Rs. 250,000 transferred to Finished Goods.	Finished Goods Inventory 250,000
7. Cost of Goods Sold	Cost of goods sold Rs. 180,000.	Cost of Goods Sold 180,000
8. Sales on Account	Sales worth Rs. 230,000.	Accounts Receivable 230,000

Closing Factory Overhead Account

Calculate the difference between applied and actual overhead.

- **Applied Overhead** = 90% of direct labor = Rs. 81,000
- **Actual Overhead** = Rs. 80,000

Journal Entry:

Factory Overhead 1,000 Overhead Control 1,000
 $\text{Factory Overhead} \quad 1,000 \quad \text{Overhead Control} \quad 1,000$

(To close the factory overhead account with Rs. 1,000 under-applied overhead)

Q. 5

Yale Manufacturing Industries is considering setting up some suitable inventory procurement yardsticks so as to ensure continuous availability of materials but at least costs. The following data of Material "A" was gathered from the records: (20)

A) Monthly requirement of material "A" is 1850 units at cost of Rs. 10 each.

B) Ordering cost is Rs. 200 per order.

C) Carrying cost is 15 % of the average inventory investment. Required:

1) Calculate the Economic Order Quantity

.2) Compute the number of orders needed per year

.3) Frequency of order placement in days.

4)Annual Ordering Cost.

5)Annual Carrying Cost.

6)Annual Inventory Cost.

Ans:

Solution:

Part	Details	Calculation
1. Economic Order Quantity (EOQ)	Calculate using the formula: $EOQ = \sqrt{(2DS / H)}$	$EOQ = \sqrt{(2 \times 22,200 \times 200 / 1.5)} = 2,435$ units
2. Number of Orders Needed Per Year	Calculate using: Number of Orders = D / EOQ	Number of Orders = $22,200 / 2,435 \approx 9$ orders/year

3. Frequency of Order Placement	Calculate: Frequency = 365 days / Number of Orders	Frequency $\approx 365 / 9 \approx 41$ days/order
4. Annual Ordering Cost	Calculate: Ordering Cost = $(D / EOQ) \times S$	Ordering Cost = $(22,200 / 2,435) \times 200 = \text{Rs. } 1,800$
5. Annual Carrying Cost	Calculate: Carrying Cost = $(EOQ / 2) \times H$	Carrying Cost = $(2,435 / 2) \times 1.5 = \text{Rs. } 1,826.25$
6. Total Annual Inventory Cost	Total Inventory Cost = Ordering Cost + Carrying Cost	Total Inventory Cost = $1,800 + 1,826.25 = \text{Rs. } 3,626.25$
