

**Time Allowed: 3 Hours****Full Marks: 100**

The figures in the margin on the right side indicate full marks.

SECTION – A**1. Multiple Choice Questions:****[15 x 2 = 30]**

- (i) Management accounting deals with _____ data.
A. Qualitative
B. Quantitative
C. Both qualitative and quantitative
D. Non-financial
- (ii) According to the Chartered Institute of Management Accountants (CIMA), cost attribution to cost units on the basis of benefits received from indirect activities e.g. ordering, setting up, and assuring quality is known as:
A. Absorption costing
B. Marginal costing
C. Activity-based costing
D. Job costing

- (iii) The following information relate to ABC

Activity level	60%	80%
Variable costs (₹)	12,000	16,000
Fixed costs (₹)	20,000	22,000

- The differential cost for 20% capacity is _____.
A. ₹4,000
B. ₹2,000
C. ₹6,000
D. ₹5,000
- (iv) The break-even point is the point at which:
A. There is no profit, no loss;
B. Contribution margin is equal to total fixed cost;
C. Total revenue is equal to total cost;
D. All of the above.
- (v) A decrease in sales price _____.
A. does not affect the break-even point
B. lowers the fixed cost
C. Increases the break-even point
D. lowers the break-even point
- (vi) What will be sales in rupees for desired profit if fixed cost is ₹30,000, desired profit is ₹15,000 and P/V ratio is 30%?
A. ₹1,50,000

**MANAGEMENT ACCOUNTING**

- B. ₹1,00,000
C. ₹2,00,000
D. None of the above

(vii) Variable cost is also referred to as in the marginal costing technique:

- A. Total cost
B. Product cost
C. Period cost
D. None of the above

(viii) The sales and profit of a firm for the year 2021 are ₹1,50,000 and ₹20,000 and for the year 2022 are ₹1,70,000 and ₹ 25,000 respectively. The P/V Ratio of the firm is _____.

- A. 15%
B. 20%
C. 25%
D. 30%

(ix) A company manufactures and sells three types of product namely A, B and C. Total sales per month is ₹ 80,000 in which the share of these three products are 50%, 30% and 20% respectively. The variable cost of these products is 60%, 50% and 40% respectively. The combined P/V Ratio will be:

- A. 49%
B. 48%
C. 47%
D. 50%

(x) M Group has two divisions, Division P and Division Q. Division P manufactures an item that is transferred to Division Q. The item has no external market and 6,000 units produced are transferred internally each year. The costs of each division are as follows?

	Division P	Division Q
Variable Cost	₹100 per unit	120 per unit
Fixed cost each year	₹1,20,000	90,000

Head Office management decided that a transfer price should be set that provides a profit of ₹30,000 to Division P. What should be the transfer price per unit?

- A. ₹145
B. ₹125
C. ₹120
D. ₹135

(xi) Standard costing is a tool, which replaces the bottleneck of the _____ costing.

- A. Present
B. Future
C. Historical
D. None of the above

(xii) During the month of December actual direct labour cost amounted to ₹39,550, the standard direct labour rate was ₹10 per hour and the direct labour rate variance amounted to ₹450 favourable. The actual direct labour hours worked was:

- A. 3,955 hours
B. 4,000 hours
C. 3,910 hours
D. 4,500 hours

**MANAGEMENT ACCOUNTING**

- (xiii) A factory produces two types of articles Y and Z. Article Y takes 8 hours to make and Z takes 16 hours. In a month (25 days x 8 hours) 600 units of X and 400 units of Z are produced. Given budgeted hours 8000 per month and men employed are 50. Determine Activity ratio, Capacity ratio and efficiency ratio.
- A. 112%, 140%, 140%
B. 140%, 112%, 140%
C. 140%, 140%, 112%
D. None of the above
- (xiv) According to Kaplan & Norton, which of the balanced scorecard perspectives serves as the focus of the other perspectives?
- A. Financial.
B. Customer.
C. Internal business processes.
D. Learning & growth.
- (xv) If a decision maker is risk averse, then the best strategy to select is the one that yields the _____.
- A. Highest expected payoff.
B. Lowest coefficient of variation.
C. Highest expected utility.
D. Lowest standard deviation

SECTION – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks.)

2. (a) Management Accounting serves as a tool to management – discuss. [7]
- (b) M Ltd. was absorbing overheads on the basis of direct labour hours. A newly appointed CMA has suggested that the company should introduced ABC system and has identified cost drivers and cost pools as follows:

Activity Cost Pool	Cost Driver	Associated Cost (₹)
Stores Receiving	Purchase Requisitions	2,96,000
Inspection	Number of Production Runs	8,94,000
Dispatch	Orders Executed	2,10,000
Machine set-up	Number of set-up	12,00,000

The following information is also supplied:

	Product A	Product B	Product C
No. of Set-up	360	390	450
No. of Orders Executed	180	270	300
No. of Production Runs	50	1,050	1,200
No. of Purchase Requisitions	300	450	500

Calculate activity based production cost of all the three products.

[7]

**MANAGEMENT ACCOUNTING**

3. Division A is a profit centre that produces three products X, Y and Z and each product has an external market.

The relevant data is as:

	X	Y	Z
External market price per unit (₹)	48	46	40
Variable cost of production (division A) (₹)	33	24	28
Labour hours per unit (division A)	3	4	2
Maximum external sales units	800	500	300

Up to 300 units of Y can be transferred to an internal division B.

Division B has also the option of purchasing externally at a price of ₹45 per unit.

Calculate the transfer price for Y the total labour hours available in division A is:

- (a) 3800 hours
(b) 5600 hours [14]

4. (a) From the following information calculate: [7]

- (1) P/V Ratio
(2) Break-Even Point
(3) If the selling price is reduced to ₹ 80, calculate New Break-Even Point:

	₹
Total sales	5,00,000
Selling price per unit	100
Variable cost per unit	60
Fixed cost	1,20,000

- (b) Y Company has just been incorporated and plan to produce a product that will sell for ₹10 per unit. Preliminary market surveys show that demand will be around 10,000 units per year.

The company has the choice of buying one of the two machines 'A' would have fixed costs of ₹30,000 per year and would yield a profit of ₹30,000 per year on the sale of 10,000 units. Machine 'B' would have fixed costs ₹18,000 per year and would yield a profit of ₹22,000 per year on the sale of 10,000 units. Variable costs behave linearly for both machines. [7]

Required to calculate:

- (i) Break-even sales for each machine
(ii) Sales level where both machines are equally profitable
(iii) Range of sales where one machine is more profitable than the other.
5. Prepare Cash Budget for M/s Alpha Manufacturing Co. on the basis of the following information for the first six months of 2022. [14]
- (i) Costs and prices remain unchanged.
(ii) Cash Sales are 25% of the total sales and 75% credit sales.
(iii) 60% of credit sales are collected in the month after sales, 30% in the second month and 10% in the third, no bad debts are anticipated.
(iv) Sales forecasts are as follows:

October 2021	₹ 12,00,000	November 2021	₹14,00,000
December 2021	₹16,00,000	January 2022	₹6,00,000
February 2022	₹8,00,000	March 2022	₹8,00,000

**MODEL QUESTION PAPER****SET - 2****INTERMEDIATE****TERM – DECEMBER 2023****PAPER – 12****SYLLABUS 2022****MANAGEMENT ACCOUNTING**

- | | | | | |
|--|------------|------------|-----------|------------|
| | April 2022 | ₹12,00,000 | May 2022 | ₹10,00,000 |
| | June 2022 | ₹ 8,00,000 | July 2022 | ₹12,00,000 |
- (v) Gross profit margin 20%
- (vi) Anticipated Purchases:
- | | | | | |
|--|--------------|-----------|---------------|-----------|
| | January 2022 | ₹6,40,000 | February 2022 | ₹6,40,000 |
| | March 2022 | ₹9,60,000 | April 2022 | ₹8,00,000 |
| | May 2022 | ₹6,40,000 | June 2022 | ₹9,60,000 |
- (vii) Wages and Salaries to be paid:
- | | | | | |
|--|--------------|-----------|---------------|-----------|
| | January 2022 | ₹1,20,000 | February 2022 | ₹1,60,000 |
| | March 2022 | ₹2,00,000 | April 2022 | ₹2,00,000 |
| | May 2022 | ₹1,60,000 | June 2022 | ₹1,40,000 |
- (viii) Interest on ₹ 20,00,000 @ 6% on debentures is due by end of March and June.
- (ix) Excise deposit due in April ₹2,00,000
- (x) Capital expenditure on Plant and Machinery planned for June ₹1,20,000
- (xi) Company has a cash balance of ₹4,00,000 at 31.12.2021
- (xii) Company can borrow on monthly basis.
- (xiii) Rent is ₹8,000 per month.
6. (a) The standard mix of product M5 is as follows: [7]
- | | | |
|-----|----------|--------------|
| LBS | MATERIAL | PRICE PER LB |
| 50 | A | 5.00 |
| 20 | B | 4.00 |
| 30 | C | 10.00 |
- Standard loss is 10% of input. There is no scrap value. Actual production for month was LB.7240 of M5 from 80 mixes. Purchases and consumption is as follows:
- | | | |
|------|----------|-------|
| LBs | Material | Price |
| 4160 | A | 5.5 |
| 1680 | B | 3.75 |
| 2560 | C | 9.5 |
- Calculate variances.
- (b) A Glass Manufacturing Company requires you to calculate and present the budget for the next year from the following information:

Sales: Toughened glass	₹3,00,000
Bent toughened glass	₹5,00,000
Direct Material cost	60% of sales
Direct Wages	20 workers @ ₹150 p.m.

Factory Overheads:

Indirect Labour: Works Manager	₹ 500 per month
Foreman	₹ 400 per month
Stores and spares	2½% on sales
Depreciation on machinery	₹ 12,000
Light and power	₹ 5,600
Repairs and maintenance	₹ 8,000

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Other sundries 10% on direct wages

Administration, selling and distribution expenses ₹14,000 per year.

[7]

7. (a) H Ltd's current financial year's income statement reports its net income as ₹15,00,000. H's marginal tax rate is 40% and its interest expense for the year was ₹15,00,000. The company has ₹1,00,00,000 of invested capital, of which 60% is debt. [7]

In addition, H Ltd. tries to maintain a Weighted Average Cost of Capital (WACC) of 12.6%.

- (i) Compute the operating income or EBIT earned by H Ltd. in the current year.
(ii) What is H Ltd's Economic Value Added (EVA) for the current year?

- (b) The learning curve as a management accounting has now become or going to become an accepted tool in industry, for its applications are almost unlimited. When it is used correctly, it can lead to increase business and higher profits; when used without proper knowledge, it can lead to lost business and bankruptcy. State precisely:

- (i) Your understanding of the learning curve: [7]
(ii) Illustrate the use of learning curve for calculating the expected average unit cost of making, (a) 4 machines (b) 8 machines using the data below:

Data:

Direct Labour need to make first machine	= 1000 hrs.
Learning curve	= 90%
Direct Labour cost	= ₹15 per hour.
Direct materials cost	= ₹1,50,000
Fixed cost for either size orders	= ₹60,000.

8. (a) The following information is available for a Company: [7]

Sales Volume (units)	Probability (%)
10,000	10
12,000	15
14,000	25
16,000	30
18,000	20

Projected sales and costs are as under:

Sales Price per unit: ₹6;

Variable Cost per unit: ₹3.50;

Fixed Costs: ₹34,000

Compute:

- (i) Probability that the Company will at least Break-even
(ii) Probability that the Profit will be at least ₹10,000.

- (b) List the characteristics of responsibility reporting. [7]

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SECTION – A (Compulsory)**1. Choose the correct alternative:****[15 x 2 = 30]**

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- (ii) According to the Chartered Institute of Management Accountants (CIMA), cost attribution to cost units on the basis of benefits received from indirect activities e.g. ordering, setting up, and assuring quality is known as:
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- (iii) The following information relate to ABC

Activity level	60%	80%
Variable costs (₹)	12,000	16,000
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The differential cost for 20% capacity is _____.

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 - B. ₹2,000
 - C. ₹6,000
 - D. ₹5,000
- (iv) The break-even point is the point at which:
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- A. does not affect the break-even point
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MANAGEMENT ACCOUNTING

- (vi) What will be sales in rupees for desired profit if fixed cost is ₹30,000, desired profit is ₹15,000 and P/V ratio is 30%?
- A. ₹1,50,000
B. ₹1,00,000
C. ₹2,00,000
D. None of the above
- (vii) Variable cost is also referred to as in the marginal costing technique:
- A. Total cost
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- (viii) The sales and profit of a firm for the year 2021 are ₹1,50,000 and ₹20,000 and for the year 2022 are ₹1,70,000 and ₹ 25,000 respectively. The P/V Ratio of the firm is _____.
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- A. Highest expected payoff.
B. Lowest coefficient of variation.
C. Highest expected utility.
D. Lowest standard deviation

Answer:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)
C	C	C	A	C	A	B	C	C	B	C	B	C	A	C



MANAGEMENT ACCOUNTING

SECTION – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks.)

2. (a) Management Accounting serves as a tool to management – discuss. [7]
- (b) M Ltd. was absorbing overheads on the basis of direct labour hours. A newly appointed CMA has suggested that the company should introduced ABC system and has identified cost drivers and cost pools as follows:

Activity Cost Pool	Cost Driver	Associated Cost (₹)
Stores Receiving	Purchase Requisitions	2,96,000
Inspection	Number of Production Runs	8,94,000
Dispatch	Orders Executed	2,10,000
Machine set-up	Number of set-up	12,00,000

The following information is also supplied:

	Product A	Product B	Product C
No. of Set-up	360	390	450
No. of Orders Executed	180	270	300
No. of Production Runs	50	1,050	1,200
No. of Purchase Requisitions	300	450	500

Calculate activity based production cost of all the three products. [7]

Answer:

- (a) Strategies are long term plans which help organisations to realise its goal. Strategy is defined as a general direction set for the company and its various components to achieve a desired state in the future. A company's strategy specifies how the organisation matches its own capabilities with the opportunities in the marketplace. Basically businesses follow one of two broad strategies. Some companies follow a cost leadership strategy. These companies, for long term sustenance, choose to provide quality products or services at low prices and by cautiously managing their costs. Other companies follow a product differentiation strategy. These companies offer differentiated or unique products or services that appeal to their customers. The products are often priced higher than the products or services of their competitors.

Managers are faced with various challenges. One such is to decide between the two strategies discussed above. The crucial issue is that this has long term impact on profitability and growth of the company. Management accountants work closely with managers in various departments to formulate strategies by providing information about the sources of competitive advantage, such as:

- the company's cost, productivity, or efficiency advantage relative to competitors or
- the superior prices the company can charge relative to the costs of adding features that make its products or services distinctive.

Strategic cost management describes cost management that specifically focuses on strategic issues. Management accounting information helps managers formulate strategy by answering the following questions:

- A) Who are the most important customers, and how can the company deliver value to the customers?
- B) What substitute products exist in the marketplace, and how do they differ from products of the company in terms of features, price, cost, and quality?
- C) What is most critical capability of the company which may be technology, production, or marketing?



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- D) How can we leverage it for new strategic initiatives?
E) Will adequate cash be available to fund the strategy, or will additional funds need to be raised?

The best-designed strategies and the best-developed capabilities are useless unless they are effectively executed which depends primarily on the information generated and provided by the management accountant. This linkage between successful implementation of strategy and the accounting information generated by management accounting is the subject matter of strategic cost management.

(b) Selection and computation of Cost Driver Rates:

- Stores Receiving – No. of Purchase Requisitions = $2,96,000 \div 1250 = 236.8$
- Inspection Cost - No. of Production runs = $8,94,000 \div 2300 = 388.6956$
- Dispatch Cost – No. of orders executed = $2,10,000 \div 750 = 280$
- Machine Setup Costs - No. of setups = $\frac{12,00,000}{1200} = 1000$

Computation of Production Cost of Three products

	A	B	C	Total
Stores Receiving	71,040	1,06,560	1,18,400	2,96,000
Inspection	19,435	4,08,130	4,66,435	8,94,000
Dispatch	50,400	75,600	84,000	2,10,000
Machine Setup	3,60,000	3,90,000	4,50,000	12,00,000
	5,00,875	9,80,290	11,18,835	26,00,000

3. Division A is a profit centre that produces three products X, Y and Z and each product has an external market.

The relevant data is as:

	X	Y	Z
External market price per unit (₹)	48	46	40
Variable cost of production (division A) (₹)	33	24	28
Labour hours per unit (division A)	3	4	2
Maximum external sales units	800	500	300

Up to 300 units of Y can be transferred to an internal division B.

Division B has also the option of purchasing externally at a price of ₹45 per unit.

Calculate the transfer price for Y the total labour hours available in division A is:

- (a) 3800 hours
(b) 5600 hours

[14]

Answer:

	X (₹)	Y (₹)	Z (₹)
Selling Price	48	46	40
Variable Cost	33	24	28
Contribution	15	22	12
Contribution per Hr	5 (15/3)	5.5 (22/4)	6 (12/2)
	III	II	I

**INTERMEDIATE EXAMINATION****SET - 2****MODEL ANSWERS****TERM – DECEMBER 2023****PAPER – 12****SYLLABUS 2022****MANAGEMENT ACCOUNTING**

Computation of Transfer Price at 3800 hrs.

(₹)

Variable cost per unit of Y	24
Add: Opportunity Cost	
As there is no idle capacity for division A. It has to sacrifice 1200 hrs production of any product i.e. production X because contribution per hr is less	
Total contribution = 1200 X 5 = 6000	
Contribution/Unit = 6000/300 = 20	20
	44

Computation of Transfer Price at 5600 hrs available

(₹)

Variable cost per unit	24
Add: Opportunity cost	
Out of the 1200 hrs required to transfer product Y, 600 Hrs are available and another 600 hrs they have to give up the production of X.	
Total Contribution = 600 X 5 = 3000	
Contribution/Unit = 3000 / 300 = 10	10
Transfer Price	34

4. (a) From the following information calculate:

[7]

- (1) P/V Ratio
- (2) Break-Even Point
- (3) If the selling price is reduced to ₹ 80, calculate New Break-Even Point:

	₹
Total sales	5,00,000
Selling price per unit	100
Variable cost per unit	60
Fixed cost	1,20,000

- (b) Y Company has just been incorporated and plan to produce a product that will sell for ₹10 per unit. Preliminary market surveys show that demand will be around 10,000 units per year. The company has the choice of buying one of the two machines 'A' would have fixed costs of ₹30,000 per year and would yield a profit of ₹30,000 per year on the sale of 10,000 units. Machine 'B' would have fixed costs ₹18,000 per year and would yield a profit of ₹22,000 per year on the sale of 10,000 units. Variable costs behave linearly for both machines.

Required to calculate:

- (i) Break-even sales for each machine
- (ii) Sales level where both machines are equally profitable
- (iii) Range of sales where one machine is more profitable than the other.

[7]

Answer:

- (a) (1) P/V Ratio = Contribution ÷ Sales × 100

Contribution = Sales - Variable Cost

Total Sales = ₹ 5,00,000

Selling price per unit = ₹ 100



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Sales in units = 5,000 units

Contribution = ₹ 2,00,000

P/V Ratio = 40%

(2) Break-Even Point in sales = Fixed Cost ÷ P/V Ratio = ₹ 3,00,000

(3) If the Selling price is reduced to ₹ 80:

Sales = ₹ 4,00,000

P/V Ratio = $(80 - 60) \div 80 = 25\%$, Contribution per unit = $80 - 60 = ₹ 20$

Break-Even Point (in units) = $1,20,000 \div 20 = 6,000$ units

Break-Even Point in Sales = $1,20,000 \div 25\% = ₹ 4,80,000$

(b) Computation of Break Even of each machine and other required information:

	A (₹)	B (₹)
Selling price	10	10
Units	10,000	10,000
Sales	1,00,000	1,00,000
Fixed Cost	30,000	18,000
Contribution (F+P)	60,000	40,000
Contribution/Unit	6	4
Variable Cost per unit	4	6
(i) Break Even Units	$\frac{30000}{6} = 5000$ units (or) ₹ 50,000	$\frac{18000}{4} = 4500$ units (or) ₹ 45,000

(ii) Sales level where both machine are equally profitable

$$= \frac{\text{Differences in Fixed Cost}}{\text{Differences in V.C per Unit}} = \frac{30,000 - 18,000}{6 - 4} = 6000 \text{ Units}$$

(iii) For sales level of 6000 and above units, machine A would be more profitable because variable cost/unit is less and on the other hand, if sales level below 6000 units Machine B would be more profitable.

5. Prepare Cash Budget for M/s Alpha Manufacturing Co. on the basis of the following information for the first six months of 2022.

- Costs and prices remain unchanged.
- Cash Sales are 25% of the total sales and 75% credit sales.
- 60% of credit sales are collected in the month after sales, 30% in the second month and 10% in the third, no bad debts are anticipated.
- Sales forecasts are as follows:

October 2021	₹ 12,00,000	November 2021	₹ 14,00,000
December 2021	₹ 16,00,000	January 2022	₹ 6,00,000
February 2022	₹ 8,00,000	March 2022	₹ 8,00,000
April 2022	₹ 12,00,000	May 2022	₹ 10,00,000
June 2022	₹ 8,00,000	July 2022	₹ 12,00,000

- Gross profit margin 20%



INTERMEDIATE EXAMINATION

SET - 2

MODEL ANSWERS

TERM – DECEMBER 2023

PAPER – 12

SYLLABUS 2022

MANAGEMENT ACCOUNTING

(vi) Anticipated Purchases:

January 2022	₹6,40,000	February 2022	₹6,40,000
March 2022	₹9,60,000	April 2022	₹8,00,000
May 2022	₹6,40,000	June 2022	₹9,60,000

(vii) Wages and Salaries to be paid:

January 2022	₹1,20,000	February 2022	₹1,60,000
March 2022	₹2,00,000	April 2022	₹2,00,000
May 2022	₹1,60,000	June 2022	₹1,40,000

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(xi) Company has a cash balance of ₹4,00,000 at 31.12.2021

(xii) Company can borrow on monthly basis.

(xiii) Rent is ₹8,000 per month.

[14]

Answer:

	Cash	Credit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Oct	3,00,000	9,00,000	-	5,40,000	2,70,000	90,000	-	-	-	-	-	-	-
Nov	3,50,000	10,50,000	-	-	6,30,000	3,15,000	1,05,000	-	-	-	-	-	-
Dec	4,00,000	12,00,000	-	-	-	7,20,000	3,60,000	1,20,000	-	-	-	-	-
Jan	1,50,000	4,50,000	-	-	-	-	2,70,000	1,35,000	4,50,000	-	-	-	-
Feb	2,00,000	6,00,000	-	-	-	-	-	3,60,000	1,80,000	60,000	-	-	-
Mar	2,00,000	6,00,000	-	-	-	-	-	-	3,60,000	1,80,000	60,000	-	-
April	3,00,000	9,00,000	-	-	-	-	-	-	-	5,40,000	2,70,000	90,000	-
May	2,50,000	7,50,000	-	-	-	-	-	-	-	-	4,50,000	2,25,000	-
June	2,00,000	7,50,000	-	-	-	-	-	-	-	-	-	3,60,000	-

	Jan	Feb	Mar	April	May	June
Opening Balance	4,00,000	9,07,000	10,34,000	6,51,000	3,28,000	5,50,000
Receipts						
Cash sales	1,50,000	2,00,000	2,00,000	3,00,000	2,50,000	2,00,000
Collection from Dr's	11,25,000	7,35,000	6,15,000	5,85,000	7,80,000	7,80,000
Total	16,75,000	18,42,000	18,49,000	15,36,000	13,58,000	15,30,000
Payments						
Purchases	6,40,000	6,40,000	9,60,000	8,00,000	6,40,000	9,60,000
Wages & salaries	1,20,000	1,60,000	2,00,000	2,00,000	1,60,000	1,40,000
Int. on debentures	-	-	1,30,000 (20,00,000*6%*1/4)	-	-	1,30,000 (20,00,000*6%*1/4)
Payment of Exice duty	-	-	-	2,00,000	-	-
Expn on Plant & Mach	-	-	-	-	-	1,20,000
Rent Exp	8,000	8,000	8,000	8,000	8,000	8,000
Total	7,68,000	8,08,000	11,98,000	12,08,000	8,08,000	12,58,000
Closing Bal	9,07,000	10,34,000	6,51,000	3,28,000	5,50,000	2,72,000

6. (a) The standard mix of product M5 is as follows:

LBs	Material	Price Per LB
50	A	5.00
20	B	4.00
30	C	10.00

**INTERMEDIATE EXAMINATION****SET - 2****MODEL ANSWERS****TERM – DECEMBER 2023****PAPER – 12****SYLLABUS 2022****MANAGEMENT ACCOUNTING**

Standard loss is 10% of input. There is no scrap value. Actual production for month was LB.7240 of M5 from 80 mixes. Purchases and consumption is as follows:

LBs	Material	Price
4160	A	5.5
1680	B	3.75
2560	C	9.5

Calculate variances.

[7]

- (b) A Glass Manufacturing Company requires you to calculate and present the budget for the next year from the following information:

Sales: Toughened glass	₹3,00,000
Bent toughened glass	₹5,00,000
Direct Material cost	60% of sales
Direct Wages	20 workers @ ₹150 p.m.

Factory Overheads:

Indirect Labour: Works Manager	₹ 500 per month
Foreman	₹ 400 per month
Stores and spares	2½% on sales
Depreciation on machinery	₹ 12,000
Light and power	₹ 5,600
Repairs and maintenance	₹ 8,000

Other sundries 10% on direct wages.

Administration, selling and distribution expenses ₹14,000 per year.

[7]

Answer:

(a)

	Standard Data			Actual Data		
	Quantity	Price	Value	Quantity	Price	Value
A	4200	5	21000	4160	5.50	22880
B	1680	4	6720	1680	3.75	6300
C	2520	10	25200	2560	9.50	24320
	8400		52920	8400		53500
- Loss@ 10%	840		-	1160	-	
	7560		52920	7240		53500

	SQSP (1)	RSQSP (2)	AQSP (3)	AQAP (4)
A	$4022.22 \times 5 = 20111$		$4160 \times 5 = 20800$	
B	$1608.89 \times 4 = 6436$		$1680 \times 4 = 6720$	
C	$2413.33 \times 10 = 24133$		$2560 \times 10 = 25600$	
	50680	52920	53120	53500



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$$SQ \text{ for A} = \frac{4200}{7500} \times 7240$$

$$SQ \text{ for B} = \frac{1680}{7560} \times 7240$$

$$SQ \text{ for C} = \frac{2520}{7560} \times 7240$$

- A) Material yield Variance (1 – 2) = 2240 (A)
- B) Material Mix Variance (2 – 3) = 200 (A)
- C) Material usage Variance (1 – 3) = 2440 (A)
- D) Material Price Variance (3 – 4) = 380 (A)
- E) Material Cost Variance (1 – 4) = 2820 (A)

(b) Budget Showing Profit for Next Year:

Particulars	Amount (₹)	Amount (₹)
Sales: Toughened Glass	3,00,000	
Bent Toughened Glass	5,00,000	8,00,000
Less: Cost:		
Material @ 60%	4,80,000	
Direct Wages (20 × ₹150 × 12)	36,000	5,16,000
Gross Profit		2,84,000
Less: Factory Overheads:		
Indirect Labour: Works Manager's Salary [₹ 500 × 12] = 6,000		
Foreman's Salary [₹ 400 × 12] = 4,800	10,800	
Stores & Spares	20,000	
Depreciation	12,000	
Light & Power	5,600	
Repairs & Maintenance	8,000	
Other Sundries	3,600	
Administration & Selling Expenses	14,000	74,000
Profit		2,10,000

7. (a) H Ltd's current financial year's income statement reports its net income as ₹15,00,000. H's marginal tax rate is 40% and its interest expense for the year was ₹15,00,000. The company has ₹1,00,00,000 of invested capital, of which 60% is debt. In addition, H Ltd. tries to maintain a Weighted Average Cost of Capital (WACC) of 12.6%.
- (i) Compute the operating income or EBIT earned by H Ltd. in the current year.
 - (ii) What is H Ltd's Economic Value Added (EVA) for the current year? [7]
- (b) The learning curve as a management accounting has now become or going to become an accepted tool in industry, for its applications are almost unlimited. When it is used correctly, it can lead to increase business and higher profits; when used without proper knowledge, it can lead to lost business and bankruptcy. State precisely:
- (i) Your understanding of the learning curve:
 - (ii) Illustrate the use of learning curve for calculating the expected average unit cost of making, (a) 4 machines (b) 8 machines using the data below:



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Data:

Direct Labour need to make first machine	= 1000 hrs.
Learning curve	= 90%
Direct Labour cost	= ₹15 per hour.
Direct materials cost	= ₹1,50,000
Fixed cost for either size orders	= ₹60,000.

[7]

Answer:

- (a) (i) Taxable income = Net Income ÷ (1 – Tax Rate) or, Taxable income
= ₹15,00,000 ÷ (1 – 0.40)
= ₹ 25,00,000

$$\begin{aligned}\text{Again, taxable income} &= \text{EBIT} - \text{Interest or, EBIT} \\ &= \text{Taxable Income} + \text{Interest} \\ &= ₹25,00,000 + ₹ 15,00,000 \\ &= ₹40,00,000\end{aligned}$$

- (ii) EVA = EBIT (1 – T) – (WACC × Invested capital)
= ₹40,00,000 (1 – 0.40) – (0.126 × ₹1,00,00,000)
= ₹24,00,000 – ₹12,60,000
= ₹11,40,000.

- (b) The term “learning curve” refers to the idea that efficiency increases the more experience a person has with a given task. As a result, the time required for performing the task decreases as increases occur in the number of times the task has been performed.

Higher costs per unit early in production are part of the start-up costs when a new activity is begun. It is commonly accepted that new products and production processes experience a period of low productivity followed by increasing productivity. However, the rate of productivity improvement declines over time until the improvement stops. The required production time reaches a level where it remains until another change in production occurs.

Learning curve analysis is used in planning, budgeting, and forecasting and also to determine estimated labour costs when bidding on a contract. A company needs to be able to estimate what the long-term costs of production will be.

Statement showing computation of cost of making 4 machines & 8 machines:

No of machines	Average time Hours	Labour cost ₹	Material ₹	Fixed cost ₹	Total ₹
1	1,000	15,000	1,50,000	60,000	2,25,000
2	900	13,500	1,50,000	30,000	1,93,500
4	810	12,150	1,50,000	15,000	1,77,150
8	729	10,935	1,50,000	7,500	1,68,435

Average cost of making 4 machines = ₹1,77,150 Average cost of making 8 machines = ₹1,68,435



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8. (a) The following information is available for a Company:
- | Sales Volume (units) | Probability (%) |
|----------------------|-----------------|
| 10,000 | 10 |
| 12,000 | 15 |
| 14,000 | 25 |
| 16,000 | 30 |
| 18,000 | 20 |
- Projected sales and costs are as under:
Sales Price per unit: ₹6;
Variable Cost per unit: ₹3.50;
Fixed Costs: ₹34,000
- Compute:
- (i) Probability that the Company will at least Break-even
- (ii) Probability that the Profit will be at least ₹10,000. [7]
- (b) List the characteristics of responsibility reporting. [7]

Answer:

- (a) (i) Contribution per unit = ₹ 2.50 (₹ 6 - ₹ 3.50)
BEP (units) = Total Fixed Costs ÷ Contribution per unit = ₹ 34,000 ÷ ₹ 2.50 = 13,600 units.
The probability that at least Break-even = 0.25 + 0.30 + 0.20 = 0.75 = 75%.
- (ii) The Profit will be at least ₹ 10,000:
Then, BEP (units) = ₹ 34,000 + ₹ 10,000 ÷ ₹ 2.50 = 17,600 units.
The required Probability = 20%.
- (b) The characteristics of responsibility reporting:
1. Reports should fit the organization chart, that is, the report should be addressed to the individual responsible for the items covered by it, who, in turn, will be able to control those costs under his jurisdiction. Managers must be educated to use the results of the reporting system.
 2. Report should be prompt and timely. Prompt issuance of a report requires that cost records be organized so that information is available when it is needed.
 3. Reports should be issued with regularity. Promptness and regularity are closely tied up with the mechanical aids used to assemble and issue reports.
 4. Reports should be easy to understand. Often they contain accounting terminology that managers with little or no accounting training find difficult to understand, and vital information may be incorrectly communicated. Therefore, accounting terms should be explained or modified to fit the user. Top management should have some knowledge of the kind of items chargeable to an account as well as the methods used to compute overhead rates, make cost allocations and analyze variances.
 5. Reports should convey sufficient but not excessive details. The amount and nature of the details depend largely on the management level receiving the report. Reports to management should neither be flooded with immaterial facts nor so condensed that management lacks vital information essential to carrying out its responsibilities.
 6. Reports should give comparative figures, i.e., a comparison of actual with budgeted figures or of predetermined standards with actual results and the isolation of variances.
 7. Reports should be analytical. Analysis of underlying papers, such as time tickets, scraps tickets, work orders, and materials requisitions, provide reasons for poor performance which might have

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been due to power failure, machine breakdown, an inefficient operator, poor quality of materials, or many other similar factors.

8. Reports for operating management should, if possible, be stated in physical units as well as in terms of money since monetary information may give a foreman not trained in the language of the accountant a certain amount of difficulty.
9. Reports may tend to highlight departmental efficiencies and inefficiencies, results achieved future goals or targets.