



MODEL QUESTION PAPER
INTERMEDIATE
PAPER – 12
MANAGEMENT ACCOUNTING

SET 1
TERM – DEC 2023
SYLLABUS-2022

Time Allowed: 3 Hours

Full Marks: 100

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

SECTION – A (Compulsory)

1. Choose the correct option:

[15 x 2 = 30]

- (i) _____ is the study of managerial aspects of financial accounting
- Cost accounting
 - Financial accounting
 - Management accounting
 - Business accounting
- (ii) X Company uses activity-based costing for Product B and Product D. The total estimated overhead cost for the parts administration activity pool was ₹5,50,000 and the expected activity was 2000 part types. If Product D requires 1200 part types, the amount of overhead allocated to product D for parts administration would be:
- ₹2,75,000
 - ₹3,00,000
 - ₹3,30,000
 - ₹3,45,000
- (iii) Cost attribution to cost units on the basis of benefit received from indirect activities, such as ordering, setting-up, assuring quality is known as:
- Allocation
 - Activity-based costing
 - Always better control
 - Absorption
- (iv) What is Margin of Safety if Sales is 20,000 units and B.E.P is 15,000 units?
- 15000 units
 - 5000 units
 - 10000 units
 - 20000 units
- (v) Fixed cost per unit decrease when
- Production volume increases
 - Production volume decreases
 - Variable costs per unit decreases
 - Prime costs per unit decreases



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- (vi) The break-even point of a manufacturing company is ₹1,60,000. Fixed cost is ₹48,000. Variable cost is ₹12 per unit. The PV ratio will be:
- 20%
 - 40%
 - 30%
 - 25%
- (vii) A radio manufacturer finds that it costs ₹6.25 per unit to make component M-140 and the same is available in the market at ₹5.75 each. Continuous supply is also fully assured. The break-down cost per unit as follows: Materials ₹2.75, Labour ₹1.75 other variable expenses ₹0.50, Depreciation and other fixed cost ₹1.25. What would be your decision, if the supplier offered the component at ₹4.85 per unit?
- Make
 - Buy
 - Sell
 - None of the above
- (viii) Which one of the following is not considered as a method of Transfer Pricing?
- A Negotiated Transfer Pricing
 - B Market Price Based Transfer Pricing
 - C Fixed Cost Based Transfer Pricing
 - D Opportunity Cost Based Transfer Pricing
- (ix) Standard quantity of material for one unit of output is 10 kgs @ ₹8 per kg. Actual output during a given period is 800 units. The standards quantity of raw material
- 8,000 kgs
 - 6,400 Kgs
 - 64,000 Kgs
 - None of these
- (x) Standard price of material per kg is ₹20, standard usage per unit of production is 5 kg. Actual usage of production 100 units is 520 kgs, all of which was purchase at the rate of ₹ 22 per kg. Material cost variance is
- ₹ 2,440 (A)
 - ₹ 1,440 (A)
 - ₹ 1,440 (F)
 - ₹ 2,300 (F)
- (xi) Given Production at 60% activity, 600 units, Material ₹50 per unit, Labour ₹ 20 per unit, Direct expenses ₹5 per unit, Factory overheads ₹20,000 (60% variable) and Administration expenses ₹15,000 (60% fixed). What will be the total cost per unit for production at 80% capacity?



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- a. ₹ 1,01,000
- b. ₹ 126.25
- c. ₹ 122
- d. ₹ 1,22,000

(xii) _____ is prepared for single level of activity and single set of business conditions.

- a. Fixed budget
- b. Flexible budget
- c. Both a and b
- d. None of the above

(xiii) If the time taken to produce the first unit of a product is 4000 hrs, what will be the total time taken to produce the 5th to 8th unit of the product, when a 90% learning curve applies?

- a. 10,500 hours
- b. 12,968 hours
- c. 9,560 hours
- d. 10,368 hours

(xiv) In responsibility cost accounting the costs in focus are _____.

- a. Controllable costs
- b. Uncontrollable costs
- c. Both A and B
- d. None of the above

(xv) ABC stocks a weekly lifestyle magazine. The owner buys the magazines for ₹0.30 each and sells them at the retail price of ₹0.50 each.

At the end of the week unsold magazines are obsolete and have no value. The estimated probability distribution for weekly demand is shown below.

Weekly demand in units	Probability
20	0.20
30	0.55
40	0.25
	1.00

What is the expected value of demand?

- a. 30
- b. 20
- c. 25
- d. None of the above



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SECTION-B

(Answer any 5 questions out of 7 questions given. Each question carries 14 marks.)

[5 x 14 = 70]

2. (a) Describe the differences between Management Accounting and Financial Accounting. [7]
- (b) Your Cost Controller is not happy about the existing system of charging overheads to its Products, A and B. You have been newly appointed as a Management Accountant of the company and you are asked to implement the ABC Costing for allocation of overheads to the Products. You have identified the following activities, budgeted costs, and activity consumption cost drivers as follows:

Activity	Budgeted Cost	Activity Consumption Cost Driver
Engineering	1,25,000	Engineering hours
Setups	3,00,000	Number of setups
Machine operation	15,00,000	Machine hours
Packing	75,000	Number of packing orders
Total	₹ 20,00,000	

You have also gathered the following operating data pertaining to each of its products:

	Product A	Product B	Total
Engineering hour	5,000	7,500	12,500
Number of setups	200	100	300
Machine hours	50,000	1,00,000	1,50,000
Number of packing orders	5,000	10,000	15,000

You are now required to provide with necessary calculations and relevant information, in the form of a report to the Cost Controller about the allocation of overheads costs to the products. [7]

3. A review, made by the top management of Sweet and Struggle Ltd. which makes only one product, of the result of two first quarters of the year revealed the following:
- | | |
|-------------------------------------|----------------|
| Sales in units | 10,000 |
| Loss | ₹ 10,000 |
| Fixed Cost (for the year ₹1,20,000) | 30,000 Quarter |
| Variable cost per unit | ₹ 8 |

The finance Manager who feels perturbed suggests that the company should at least break-even in the second quarter with a drive for increased sales. Towards this the company should introduce a better packing which will increase the cost by ₹ 0.50 per unit.

**MANAGEMENT ACCOUNTING**

The Sales Manager has an alternate proposal. For the second quarter additional sales promotion expenses can be increased to the extent of ₹ 5,000 and a profit; of ₹ 5,000 can be aimed at for the period with increased sales.

The production manager feels otherwise. To improve the demand the selling price per unit has to be reduced by 3%. As a result the sales volume can be increased to attain a profit level of ₹ 4,000 for the quarter.

The Managing Director asks for as a cost Accountant to evaluate these three proposals and calculate the additional units required to reach their respective targets help him to make a decision. [14]

4. (a) S Ltd. furnishes you the following information relating to the half year ended 30th June, 2022.

Fixed expenses	₹ 45,000
Sales value	₹ 1,50,000
Profit	₹ 30,000

During the second half the year the company has projected a loss of ₹10,000.

Calculate:

- The B.E.P and M/S for six months ending 30th June, 2022.
- Expected sales volume for the second half of the year assuming that the P/V Ratio and Fixed expenses remain constant in the second half year also.
- The B.E.P and M/S for the whole year for 2022. [7]

- (b) XYZ Ltd which has a system of assessment of Divisional Performance on the basis of residual income has two Divisions, Alfa and Beta. Alfa has annual capacity to manufacture 15,00,000 numbers of a special component that it sells to outside customers, but has idle capacity. The budgeted residual income of Beta is ₹ 1,20,00,000 while that of Alfa is ₹ 1,00,00,000. Other relevant details extracted from the budget of Alfa for the current years were as follows:

Particulars

Sale (outside customers)	12,00,000 units @ ₹ 180 per unit
Variable cost per unit	₹ 160
Divisional fixed cost	₹ 80,00,000
Capital employed	₹ 7,50,00,000
Cost of Capital	12%

Beta has just received a special order for which it requires components similar to the ones made by Alfa. Fully aware of the idle capacity of Alfa, beta has asked Alfa to quote for manufacture and supply of 3,00,000 numbers of the components with a slight modification during final processing. Alfa and Beta agree that this will involve an extra variable cost of ₹ 5 per unit.

Advice the transfer price which Alfa should quote to Beta to achieve its budgeted residual income. [7]

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5. ABC Ltd adopts a standard costing system. The standard output for a period is 20,000 units and the standard cost and profit per unit is as under:

	₹
Direct Material (3 units @ ₹1.50)	4.50
Direct Labour (3 Hrs. @ ₹1.00)	3.00
Direct Expenses	0.50
Factory Overheads : Variable	0.25
Fixed	0.30
Administration Overheads	0.30
TOTAL COST	8.85
PROFIT	1.15
SELLING PRICE (FIXED BY GOVERNMENT)	10.00

The actual production and sales for a period was 14,400 units. There has been no price revision by the Government during the period.

The following are the variances worked out at the end of the period.

		Favourable (₹)	Adverse (₹)
Direct Material			
	Price		4,250
	Usage	1,050	
Direct labour			
	Rate		4,000
	Efficiency	3,200	
Factory Overheads			
	Variable Expenditure –	400	
	Fixed – Expenditure	400	
	Fixed – Volume		1,680
Administration Overheads			
	Expenditure		400
	Volume		1,680

You are required to:

Ascertain the details of actual costs and prepare a Profit and Loss Statement for the period showing the actual Profit/Loss. Show the workings clearly.

Reconcile the Actual Profit with Standard Profit.

[14]



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6. (a) The cost accountant of a Co. was given the following information regarding the OHs for Feb, 2022:

- a. Overhead cost variance ₹ 1,400 (A)
- b. Overheads volume variance ₹1,000 (A)
- a. Budgeted hours for Feb, 2022: 1,200 Hours
- b. Budgeted OH for Feb, 2022: ₹ 6,000
- c. Actual rate of recovery of OH ₹ 8 per hour

You are required to assist him in computing the following for Feb, 2022

- i. OH expenditure variance
- ii. Actual OH incurred
- iii. Actual hours for actual production
- iv. OH capacity variance
- v. OH efficiency variance
- vi. Standard hours for actual production

(b) Draw up a flexible budget for overhead expenses on the basis of the following data and determine the overhead rates at 70%, 80% and 90% [7]

Plant Capacity	At 80% capacity ₹
VARIABLE OVERHEADS:	
Indirect labour	12,000
Stores including spares	4,000
SEMI VARIABLE:	
Power (30% - Fixed: 70% -Variable)	20,000
Repairs (60%- Fixed : 40% -Variable)	2,000
Fixed Overheads	
Depreciation	11,000
Insurance	3,000
Salaries	10,000
Total overheads	62,000
Estimated Direct Labour Hours	1,24,000

7.(a) Consider the following:

	Division A	Division B
Operating assets	₹ 50,00,000	₹ 1,25,00,000
Operating income	₹ 10,00,000	₹ 22,50,000
ROI	20%	18%

- (i) Identify which is the more successful division in terms of ROI?
- (ii) Using 16 percent as the minimum required rate of return compute the residual income for each division. Which division is more successful under this rate? [7]

(b) A firm received an order to make and supply eight units of standard product which involves intricate labour operations. The first unit was made in 10 hours. It is understood that this



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type of operations is subject to 80% learning rate. The workers are getting a wages rate of ₹ 12 per hour. [7]

- (i) Compute the total time and labour cost required to execute the above order.
- (ii) If a repeat order of 24 units is also received from the same customer, compute the labour cost necessary for the second order?

8. (a) Describe the meaning of uncertainty in decision making. [7]

(b) Explain the relation between decentralization and responsibility accounting. [7]

**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) _____ is the study of managerial aspects of financial accounting
- Cost accounting
 - Financial accounting
 - Management accounting
 - Business accounting
- (ii) X Company uses activity-based costing for Product B and Product D. The total estimated overhead cost for the parts administration activity pool was ₹5,50,000 and the expected activity was 2000 part types. If Product D requires 1200 part types, the amount of overhead allocated to product D for parts administration would be:
- ₹2,75,000
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- (iv) What is Margin of Safety if Sales is 20,000 units and B.E.P is 15,000 units?
- 15000 units
 - 5000 units
 - 10000 units
 - 20000 units
- (v) Fixed cost per unit decrease when
- Production volume increases
 - Production volume decreases
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- (vi) The break-even point of a manufacturing company is ₹1,60,000. Fixed cost is ₹48,000. Variable cost is ₹12 per unit. The PV ratio will be:
- 20%
 - 40%
 - 30%
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- Make
 - Buy
 - Sell
 - None of the above
- (viii) Which one of the following is not considered as a method of Transfer Pricing?
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 - 64,000 Kgs
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- (x) Standard price of material per kg is ₹20, standard usage per unit of production is 5 kg. Actual usage of production 100 units is 520 kgs, all of which was purchase at the rate of ₹ 22 per kg. Material cost variance is
- ₹ 2,440 (A)
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- (xi) Given Production at 60% activity, 600 units, Material ₹50 per unit, Labour ₹ 20 per unit, Direct expenses ₹5 per unit, Factory overheads ₹20,000 (60% variable) and Administration expenses ₹15,000 (60% fixed). What will be the total cost per unit for production at 80% capacity?
- ₹ 1,01,000
 - ₹ 126.25
 - ₹ 122

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d. ₹ 1,22,000

(xii) _____ is prepared for single level of activity and single set of business conditions.

- a. Fixed budget
- b. Flexible budget
- c. Both a and b
- d. None of the above

(xiii) If the time taken to produce the first unit of a product is 4000 hrs, what will be the total time taken to produce the 5th to 8th unit of the product, when a 90% learning curve applies?

- a. 10,500 hours
- b. 12,968 hours
- c. 9,560 hours
- d. 10,368 hours

(xiv) In responsibility cost accounting the costs in focus are _____.

- a. Controllable costs
- b. Uncontrollable costs
- c. Both A and B
- d. None of the above

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At the end of the week unsold magazines are obsolete and have no value. The estimated probability distribution for weekly demand is shown below.

Weekly demand in units	Probability
20	0.20
30	0.55
40	0.25
1.00	

What is the expected value of demand?

- a. 30
- b. 20
- c. 25
- d. None of the above

Answer:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)
c	c	b	b	a	c	b	c	a	b	b	a	d	a	a



SECTION-B

(Answer any 5 questions out of 7 questions given. Each question carries 14 marks.)

2. (a) Describe the differences between Management Accounting and Financial Accounting. [7]
- (b) Your Cost Controller is not happy about the existing system of charging overheads to its Products, A and B. You have been newly appointed as a Management Accountant of the company and you are asked to implement the ABC Costing for allocation of overheads to the Products. You have identified the following activities, budgeted costs, and activity consumption cost drivers as follows:

Activity	Budgeted Cost ₹	Activity Consumption Cost Driver
Engineering	1,25,000	Engineering hours
Setups	3,00,000	Number of setups
Machine operation	15,00,000	Machine hours
Packing	75,000	Number of packing orders
Total	20,00,000	

You have also gathered the following operating data pertaining to each of its products:

	Product A	Product B	Total
Engineering hour	5,000	7,500	12,500
Number of setups	200	100	300
Machine hours	50,000	1,00,000	1,50,000
Number of packing orders	5,000	10,000	15,000

You are now required to provide with necessary calculations and relevant information, in the form of a report to the Cost Controller about the allocation of overheads costs to the products.

[7]

Answer:

- (a) Differences between Management Accounting and Financial Accounting:

Basis for Comparison	Financial Accounting	Management Accounting
Purpose	Financial Accounting classifies, analyses, records, and summarizes the financial transactions of a particular period of the company.	Management accounting helps management make effective decisions about the business.



INTERMEDIATE EXAMINATION

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MODEL ANSWERS

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Application	Financial accounting is prepared to reflect true and fair picture of financial affairs.	Management accounting helps management to take meaningful steps and strategize.
Scope	The scope is pervasive, but not as much as the management accounting.	The scope is much broader.
Information type	Quantitative.	Quantitative and qualitative.
Inter dependence	It is not dependent on management accounting.	Management accounting is basically decision making accounting and depends on information created by Financial Accounting as well as Cost Accounting.
Statutory requirement	It is legally mandatory to prepare financial accounts of all companies. (for example in the Indian Context Companies Act 2013, relevant rules of Accounting standards furnishes the statutory requirements)	Management accounting has no statutory requirement.
Format	Financial accounting has specific formats for presenting and recording information.	There's no set format for presenting information in management accounting.
Users	Mainly for potential investors as well as all stakeholders.	Only for management.
Verifiable	The information presented is verifiable.	The information presented is predictive and not immediately verifiable.

(b) Basic Calculation and Working:

Activity Consumption Cost Driver	Budgeted Cost (₹)	Budgeted Activity Consumption	Activity Consumption Rate (₹)
Engineering hours	1,25,000	12,500	10 per hour
Number of setups	3,00,000	300	1,000 per setup
Machine hours	15,00,000	1,50,000	10 per hour
Number of packing Orders	75,000	15,000	5 per order

Factory overhead costs are assigned to both products by these calculations:

Product A (5,000 units)

Activity Consumption	Activity Consumption Rate (₹)	Activity Consumption for Total Overheads	Cost ₹	Overheads per unit ₹
Engineering hours	10	5,000	50,000	10
Number of Setups	1,000	200	2,00,000	40
Machine hours	10	50,000	5,00,000	100
Number of packing orders	5	5,000	25,000	5

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Overhead cost per unit				155
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Product B (20,000 units)

Activity Consumption Cost Driver	Activity Consumption Rate ₹	Activity Consumption	Total Overheads ₹	Overheads per unit ₹
Engineering hours	10	7,500	75,000	3.75
Number of Setups	1,000	100	1,00,000	5.00
Machine hours	10	1,00,000	10,00,000	50.00
Number of packing orders	5	10,000	50,000	2.50
Overhead cost per unit				61.25

The report should cover the above calculations and necessary explanations, about the selection of Cost Drivers and calculation of Cost Driver rates, for the allocations of overheads to the Products A and B.

3. A review, made by the top management of Sweet and Struggle Ltd. which makes only one product, of the result of two first quarters of the year revealed the following:

Sales in units	10,000
Loss	₹ 10,000
Fixed Cost (for the year ₹1,20,000)	30,000 Quarter
Variable cost per unit	₹ 8

The Finance Manager who feels perturbed suggests that the company should at least break-even in the second quarter with a drive for increased sales. Towards this the company should introduce a better packing which will increase the cost by ₹ 0.50 per unit.

The Sales Manager has an alternate proposal. For the second quarter additional sales promotion expenses can be increased to the extent of ₹ 5,000 and a profit; of ₹ 5,000 can be aimed at for the period with increased sales.

The Production Manager feels otherwise. To improve the demand the selling price per unit has to be reduced by 3%. As a result the sales volume can be increased to attain a profit level of ₹ 4,000 for the quarter.

The Managing Director asks for as a cost Accountant to evaluate these three proposals and calculate the additional units required to reach their respective targets help him to make a decision.

[14]

Answer:

Results of the first quarter: Sales 10,000 units

Particulars	(₹)
Total Variable Cost (10,000x ₹8)	80,000
(+) Fixed Cost	30,000
Total Cost	1,10,000
(+) Loss	(10,000)

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Sales	1,00,000
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Comparative Statement of 3 proposals

Computation of total no. of units and additional units required to retain the target of respective Managers

	Finance Manager	Sales Manager	Production Manager
Selling Price	₹10	₹10	₹10
Variable Cost	₹8.50	₹8	₹8
Contribution	₹1.50	₹02	₹1.70
Fixed Cost	₹30,000	₹35,000	₹30,000
Target	Break Even	Profit of ₹5000	Profit of ₹4000
No. of Units required	$\frac{30,000}{1.5}$	$\frac{30,000 + 5000}{2}$	$\frac{30,000 + 4000}{2}$
Sales (Units) in First Quarter	20,000	20,000	20,000
Additional Sales volume required in Second Quarter as Compared to first Quarter	10,000	10,000	10,000

4. (a) S Ltd. furnishes you the following information relating to the half year ended 30th June, 2022.

Fixed expenses	₹ 45,000
Sales value	₹ 1,50,000
Profit	₹ 30,000

During the second half the year the company has projected a loss of ₹10,000.

Calculate:

- (i) The B.E.P and M/S for six months ending 30th June, 2022.
(ii) Expected sales volume for the second half of the year assuming that the P/V Ratio and Fixed expenses remain constant in the second half year also.

The B.E.P and M/S for the whole year for 2022.

[7]

- (b) XYZ Ltd which has a system of assessment of Divisional Performance on the basis of residual income has two Divisions, Alfa and Beta. Alfa has annual capacity to manufacture 15,00,000 numbers of a special component that it sells to outside customers, but has idle capacity. The budgeted residual income of Beta is ₹1,20,00,000 while that of Alfa is ₹1,00,00,000. Other relevant details extracted from the budget of Alfa for the current years were as follows:

Particulars	
Sale (outside customers)	12,00,000 units @ ₹180 per unit
Variable cost per unit	₹ 160
Divisional fixed cost	₹ 80,00,000
Capital employed	₹ 7,50,00,000
Cost of Capital	12%



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Beta has just received a special order for which it requires components similar to the ones made by Alfa. Fully aware of the idle capacity of Alfa, beta has asked Alfa to quote for manufacture and supply of 3,00,000 numbers of the components with a slight modification during final processing. Alfa and Beta agree that this will involve an extra variable cost of ₹5 per unit.

Advise the transfer price which Alfa should quote to Beta to achieve its budgeted residual income. [7]

Answer:

$$(i) \quad P/V \text{ Ratio} = \frac{\text{Fixed Cost} + \text{Profit}}{\text{Sales}} \times 100$$

$$= \frac{₹45,000 + ₹30,000}{1,50,000} \times 100 = 50\%$$

$$B.E \text{ Sales for half year} = \frac{₹45,000}{0.5} = ₹90,000$$

$$M/S \text{ for half year} = ₹1,50,000 - ₹90,000 = ₹60,000$$

$$(ii) \quad \text{Expected Sales} = \frac{₹45,000 + (-₹10,000)}{5} = 50\%$$

$$0.5S = ₹35,000$$

$$S = \frac{₹35,000}{0.5} = ₹70,000$$

$$B.E \text{ Sales for Whole year} = \frac{₹90,000}{5} = ₹1,80,000$$

$$\text{Margin of safety for whole year} = (₹1,50,000 + ₹70,000) - ₹1,80,000 = ₹40,000$$

(b) (i) Contribution required at Budgeted Residual Income:

Particulars	(₹)
Fixed cost	80,00,000
Profit on ₹7,50,00,000 × 12%	90,00,000
Residual Income	1,00,00,000
Total Contribution required	2,70,00,000

Particulars		(₹)
Contribution derived from existing units	12,00,000 × ₹ 20	2,40,00,000
Contribution required on 3,00,000 units	₹ 2,70,00,000 – ₹ 2,40,00,000	30,00,000
Contribution per unit	₹ 30,00,000 / 3,00,000 units	10
Variable cost per unit (existing)		160
Increase in Variable Cost		5
∴ Transfer price = Variable Cost + Desired Residual Income + Increase in Variable Cost	₹160 + ₹10 + ₹5	175

**INTERMEDIATE EXAMINATION****SET - 1****MODEL ANSWERS****TERM – DECEMBER 2023****PAPER – 12****SYLLABUS 2022****MANAGEMENT ACCOUNTING**

5. ABC Ltd adopts a standard costing system. The standard output for a period is 20,000 units and the standard cost and profit per unit is as under:

	₹
Direct Material (3 units @ ₹1.50)	4.50
Direct Labour (3 Hrs. @ ₹1.00)	3.00
Direct Expenses	0.50
Factory Overheads : Variable	0.25
Fixed	0.30
Administration Overheads	0.30
TOTAL COST	8.85
PROFIT	1.15
SELLING PRICE (FIXED BY GOVERNMENT)	10.00

The actual production and sales for a period was 14,400 units. There has been no price revision by the Government during the period.

The following are the variances worked out at the end of the period.

		Favourable (₹)	Adverse (₹)
Direct Material			
	Price		4,250
	Usage	1,050	
Direct labour			
	Rate		4,000
	Efficiency	3,200	
Factory Overheads			
	Variable – Expenditure	400	
	Fixed – Expenditure	400	
	Fixed – Volume		1,680
Administration Overheads			
	Expenditure		400
	Volume		1,680

You are required to:

Ascertain the details of actual costs and prepare a Profit and Loss Statement for the period showing the actual Profit/Loss. Show the workings clearly.

Reconcile the Actual Profit with Standard Profit.

[14]

**INTERMEDIATE EXAMINATION****SET - 1****MODEL ANSWERS****TERM – DECEMBER 2023****PAPER – 12****SYLLABUS 2022****MANAGEMENT ACCOUNTING****Answer:****Statement showing the Actual Profit and Loss Statement**

Particulars	Amount (₹)	Amount (₹)
Standard Material Cost (14,400 × 4.50)	64,800	
Add: Price Variance	4,250	
Less: Usage Variance	(1,050)	68,000
Standard Labour Cost (14,400 × 3)	43,200	
Add: Rate Variance	4,000	
Less: efficiency Variance	(3,200)	44,000
Direct expenses (14,400 × 0.50)		<u>7,200</u>
Prime Cost		1,19,200
Factory overhead:		
Variable (14,400 × 0.25)	3,600	
Less: expenditure Variance	(400)	3,200
Fixed (14,400 × 0.30)	4,320	
Add: Volume Variance	1,680	
Less: expenditure Variance	(400)	5,600
Administration overhead (14,400 × 0.3)	4,320	
Add: Volume Variance	1,680	
Add: exp. Variance	<u>400</u>	<u>6,400</u>
Total Cost		1,34,400
Profit (B/F)		<u>9,600</u>
Sales		1,44,000

Statement showing Reconciliation of Standard Profit with Actual Profit

Particulars	₹	₹
Standard Profit (14,400 × 1.15)		16,560
Add: Material usage Variance	1,050	
Labour efficiency Variance	3,200	
Variable overhead expenditure Variance	400	
Fixed overhead expenditure Variance	<u>400</u>	<u>5,050</u>
		21,610
Less: Material Price Variance	4,250	
Labour Rate Variance	4,000	
Fixed overhead Volume Variance	1,680	
Administration expenditure Variance	400	
Administration Volume Variance	<u>1,680</u>	<u>12,010</u>

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Actual Profit		9,600
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6. (a) The cost accountant of a Co. was given the following information regarding the OHs for Feb, 2022:

- a. Overhead cost variance ₹1,400 (A)
- b. Overheads volume variance ₹1,000 (A)
- a. Budgeted hours for Feb, 2022: 1,200 Hours
- b. Budgeted OH for Feb, 2022: ₹ 6,000
- c. Actual rate of recovery of OH ₹ 8 per hour

You are required to assist him in computing the following for Feb, 2022

- (i) OH expenditure variance
- (ii) Actual OH incurred
- (iii) Actual hours for actual production
- (iv) OH capacity variance
- (v) OH efficiency variance
- (vi) Standard hours for actual production [7]

- (b) Draw up a flexible budget for overhead expenses on the basis of the following data and determine the overhead rates at 70%, 80% and 90% [7]

Plant Capacity	At 80% capacity
	₹

VARIABLE OVERHEADS:

Indirect labour	12,000
Stores including spares	4,000

SEMI VARIABLE:

Power (30% - Fixed: 70% -Variable)	20,000
Repairs (60%- Fixed : 40% -Variable)	2,000

Fixed Overheads

Depreciation	11,000
Insurance	3,000
Salaries	10,000
Total overheads	62,000
Estimated Direct Labour Hours	1,24,000

Answer:

- (a)

1	2	3	4
SRSH	SRAH	SRBH	ARAH
5 X 1000	5 X 800	5 X 1200	8 X 800
5000	4000	6000	6400

SRSH – SRBH = Volume Variance

SRSH – 6000 = -1000 (A)

SRSH = 5000

SRSH – ARAH = Cost Variance

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$$5000 - \text{ARAH} = -1400(\text{A})$$

$$\text{ARAH} = 6400$$

- 1) OH Expenditure Variance = $6000 - 6400 = 400(\text{A})$
- 2) Actual Over Incurred ARAH = 6400
- 3) Actual Hrs for Actual production = AH = 800
- 4) OH Capacity Variance = $4000 - 6000 = 2000(\text{A})$
- 5) OH Efficiency Variance = $5000 - 4000 = 1000(\text{F})$
- 6) Std. Hrs for Actual Production = SH = 1000

$$\text{SR} = \frac{\text{Budgeted Fixed OH}}{\text{Budgeted Hours}} = \frac{6000}{1200} = 5$$

- (b) Flexible budget showing OH rate per labour hour

Flexible Budget at Different Capacities and Determination of Overhead Rates

Particulars	70% (₹)	80% (₹)	90% (₹)
(A) Variable overheads:			
Indirect labour	10,500	12,000	13,500
Stores including spares	<u>3,500</u>	<u>4,000</u>	<u>4,500</u>
Total (A)	14,000	16,000	18,000
(B) Semi Variable overheads:			
Power (Working Note)	18,250	20,000	21,750
Repairs (Working Note)	<u>1,900</u>	<u>2,000</u>	<u>2,100</u>
Total (B)	20,150	22,000	23,850
(C) Fixed overheads:			
Depreciation	11,000	11,000	11,000
Insurance	3,000	3,000	3,000
Salaries	<u>10,000</u>	<u>10,000</u>	<u>10,000</u>
Total (C)	24,000	24,000	24,000
Grand Total (A+B+C)	58,150	62,000	65,850
Labour Hours	$1,24,000 \times \frac{70\%}{80\%} = 1,08,500$	1,24,000	$1,24,000 \times \frac{90\%}{80\%} = 1,39,500$
Overhead rate per hour (₹)	$\frac{58,150}{1,08,500} = 0.536$	$\frac{62,000}{1,24,000} = 0.50$	$\frac{65,850}{1,39,500} = 0.472$

Working notes: Semi Variable overheads

	70%	90%
Power:		
Variable (70%)	$14,000 \times \frac{70\%}{80\%} = 12,250$	$14,000 \times \frac{90\%}{80\%} = 15,750$
Fixed (30%)	6,000	6,000
Total	18,250	21,750
Repairs:		
Variable (40%)	$800 \times \frac{70\%}{80\%} = 700$	$800 \times \frac{90\%}{80\%} = 900$
Fixed (60%)	1,200	1,200

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Total	1,900	2,100
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7. (a) Consider the following:

	Division A	Division B
Operating assets	₹ 50,00,000	₹ 1,25,00,000
Operating income	₹ 10,00,000	₹ 22,50,000
ROI	20%	18%

- (i) Identify which is the more successful division in terms of ROI?
(ii) Using 16 percent as the minimum required rate of return compute the residual income for each division. Which division is more successful under this rate? [7]

(b) A firm received an order to make and supply eight units of standard product which involves intricate labour operations. The first unit was made in 10 hours. It is understood that this type of operations is subject to 80% learning rate. The workers are getting a wages rate of ₹ 12 per hour. [7]

- (i) Compute the total time and labour cost required to execute the above order.
(ii) If a repeat order of 24 units is also received from the same customer, compute the labour cost necessary for the second order?

Answer:

- (a) (i) Division A is more successful as since it returns ₹0.20 for each rupee invested (as compare to ₹ 0.18 for Division B).
(ii) The residual income at 16 percent for each division is computed as follows:

	Division A	Division B
Operating income	₹10,00,000	₹ 22,50,000
Minimum required income	₹ 8,00,000 (16% × 50,00,000)	₹20,00,000 (16% × ₹1,25,00,000)
RI	₹ 2,00,000	₹2,50,000

Division B is more successful.

- (b) (i) 80% Learning Curve results are given below:

Production (Units)	Cumulative Average Time (hours)	Total Time (hours)
1	10	10
2	8	16
4	6.4	25.6
8	5.12	40.96
16	4.096	65.54
32	3.2768	104.86

Labour time required for first eight units = 40.96 hours

Labour cost required for 8 units = 40.96 hours × ₹ 12/hr = ₹ 491.52

- (ii) Labour time for 32 units = 104.86 hours
Labour time for first eight units = 40.96 hours
Labour time required for 2nd order for 24 units = 63.90 hours (104.86 - 40.96)

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Labour cost for 24 units = 63.90 hours × ₹12/hr = ₹ 766.80

8. (a) Describe the meaning of uncertainty in decision making. [7]
- (b) Explain the relation between decentralization and responsibility accounting. [7]

Answer:

- (a) In case of certainty, the future is known and the decision maker, thus, need not worry about the happening /not happening of a particular state of nature as the future is cent percent assured. Whereas under condition of uncertainty, the future states of nature are unknown. There is no information available on the happening /not happening of the future state of nature. In decision making under uncertainty, the probability distribution associated with the states is either unknown or cannot be determined. This lack of information has led to the development of special decision criteria.

In simple terms, situations where objectives probabilities cannot be assigned to the states of the nature as no prior information is available gives rise to the condition of decision making under uncertainty.

Uncertainty, in common parlance, is a state of not knowing whether a proposition is true or false. Suppose Mr A went to a casino. There the dealer is about to roll a dice. If the result is a six, Mr A is going to lose ₹100.

What is Mr A's risk? What, is the subjective opinion (subjective probability) that Mr A will lose ₹100?

It may seem to be one chance in six (which is a general answer). But it is not known from previous how many sides the dice have. The information that the die is 10 sided one changes the perspective about probability of throwing a six. This example illustrates how one can be uncertain but not realize it. To clarify, an individual is uncertain of a proposition if she

- does not know it to be true or false or
- is oblivious to the proposition.

Probability is often used as a metric of uncertainty, but its usefulness is limited. At best, probability quantifies perceived uncertainty.

A decision problem, where a decision-maker is aware of various possible states of nature but has insufficient information to assign any probabilities of occurrence to them, is termed as decision-making under uncertainty. A decision under uncertainty is when there are many unknowns and no possibility of knowing what could occur in the future to alter the outcome of a decision.

The decision maker feels the uncertainty about a situation when he can't predict with complete confidence what the outcomes of the actions will be. The decision maker experiences uncertainty about a specific question when he can't give a single answer with complete confidence.

- (b) A responsibility accounting system facilitates decentralization by providing information about the performance, efficiency, and effectiveness of organizational subunits and their managers. Responsibility accounting is the key management control tool in a decentralized organization.

The term 'responsibility accounting' refers to the accounting process that reports how well managers (of responsibility centres) have fulfilled their responsibility. It is a system that measures the plans

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(by budgets) and actions (by actual results) of each responsibility centre. Also known as activity or profitability accounting, it is an information system that personalizes control reports by accumulating and reporting cost and revenue information according to defined responsibility centres within a company. Responsibility accounting systems are tailored to the organizational structure so that revenue and costs are accumulated and reported by centres of responsibility within the organization.

Responsibility accounting is the system for collecting and reporting revenue and cost information by areas of responsibility. It operates on the premise that managers should be held responsible for their performance, the performance of their subordinates, and all activities within their responsibility center. Responsibility accounting, also called profitability accounting and activity accounting

A responsibility accounting system produces responsibility reports that assist each successively higher level of management in evaluating the performances of subordinate managers and their respective organizational units. The reports should be tailored to fit the planning, controlling, and decision-making needs of subordinate managers and should include both monetary and nonmonetary information.

In the past, the major emphasis in organizational planning was on optimizing economic resources to achieve company objectives. However, in recent years the value of human resources has been recognized and become an important consideration in planning. In general, a company is organized along lines of responsibility. The traditional organizational chart, with its pyramid shape, illustrates the lines of responsibility flowing from the CEO down through the vice presidents to middle- and lower-level managers. It indicates, as organizations grow larger, these lines of responsibility become longer and more numerous. The structure becomes cumbersome. Contemporary practice is moving toward a flattened hierarchy. This structure—emphasizing teams—is consistent with decentralization. Organizing divisions as responsibility centers creates the opportunity to control the divisions through the use of responsibility accounting. Revenue center control is achieved by evaluating the efficiency and the effectiveness of divisional managers on the basis of sales revenue.