

**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) Process of Cost allocation under Activity Based Costing is:
- Cost of Activities—Activities—Cost Driver – Cost allocated to cost objects
 - Cost Driver — Cost of Activities— Cost allocated to cost objects – Activities
 - Activities— Cost of Activities—Cost Driver – Cost allocated to cost objects
 - Activities—Cost Driver – Cost allocated to cost objects — Cost of Activities
- (iii) Plant depreciation is an example of which activity-level group?
- Unit-level activity
 - Facility-level activity
 - Batch-level activity
 - Product-level activity
- (iv) A decrease in sales price
- does not affect the break-even point
 - lowers the fixed cost
 - Increases the break-even point
 - lowers the break-even point
- (v) What will be the margin of safety if sales is ₹3,00,000 and B.E.P is ₹ 4,50,000?
- ₹1,00,000
 - ₹1,50,000
 - Amount of sales < B.E.P, therefore no margin of safety
 - None of the above
- (vi) The costing method where fixed factory overheads are added to inventory, is called:
- Activity-based costing
 - Absorption costing

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- c. Marginal costing
d. All of the above
- (vii) Product A generates a contribution to sales ratio of 40%. Fixed cost directly attributable to Product A amounted to ₹60,000. The sales revenue required to achieve a profit of ₹15,000 is:
- a. ₹ 2,00,000
b. ₹ 1,85,000
c. ₹1,87,500
d. ₹ 2,10,000
- (viii) 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
- (ix) 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
- (x) If standard cost > actual, then it is:
- a. Not favourable
b. Favourable
c. Neither favourable nor not favourable
d. None of the above.
- (xi) What is the labour rate variance if standard hours for 100 units of output are 400 @ ₹ 2 per hour and actual hours taken are 380 @ ₹ 2.25 per hour?
- a. ₹120 (A)
b. ₹100 (A)
c. ₹95 (A)

**INTERMEDIATE EXAMINATION****SET 1****MODEL QUESTION PAPER****TERM – JUNE 2024****PAPER – 12****SYLLABUS-2022****MANAGEMENT ACCOUNTING**

d. ₹ 25 (F)

- (xii) A budgeting process which demands each manager to justify his entire budget in detail from beginning is:
- Functional budget
 - Master budget
 - Zero base budgeting
 - None of the above

- (xiii) The following ratios have been calculated for a company:

Gross profit margin	42%
Operating profit margin	28%
Gearing (debt/equity)	40%
Asset turnover	65%

What is the return on capital employed for the company?

- 27.3%
 - 18.2%
 - 11.2%
 - 16.8%
- (xiv) Which of the following is responsibility center?
- Expense center
 - Profit center
 - Investment center
 - All of the above.
- (xv) The minimum expected opportunity loss (EOL) is
- Equal to EVPI
 - Minimum regret
 - Equal to EMV
 - Both (A) and (B)

SECTION-B

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

[5x14=70]

2. (a) Describe the functions of a Management Accountant in Modern Business World. [7]
- (b) A manufacturing company has three accounts clerks responsible for processing purchase invoices of suppliers. Each clerk is paid a salary of ₹1,50,000 per annum and is capable of processing 5,000 purchase invoices per year. In addition to the salary, the company spends ₹45,000 per year for printing of forms, postage etc.



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(assuming that 15,000 purchase invoices are processed).

During the year, 12,500 purchase invoices were processed. You are required to:

1. Calculate the activity rate for the purchase order activity. Break the activity rate into fixed and variable components.
2. Calculate the total activity availability and break this into activity usage and unused activity.
3. Calculate the total cost of resources supplied and break this into activity usage and unused activity. [7]

3. Susma Products Co. Ltd. manufactured and sold in a year 15,000 units of a particular product fetching a sales value of ₹15 lakhs. After charging direct material @ 30% on sales value, direct labour 20% on sales value, variable overheads ₹10 per unit, the company earned profit of ₹ 16 $\frac{2}{3}$ per unit during the year. The existing equipment can produce a maximum of 20,000 units per annum. In case, the demand exceeds the maximum output, new equipment will be required which will cost ₹10 lakhs and it will have a life span of 10 years, with no residual value.

A prospective customer is willing to place an order on the company for 10,000 units per year regularly at 90% of the present selling price, which will be, if accepted, over and above the existing market for 15,000 units.

Irrespective of the fact whether or not the new order materializes, the cost increases with immediate effect are:

1. 10% in the Direct Materials.
2. 25% in the Direct Labour.
3. ₹50,000 in Fixed Overheads per year.

If the order of additional 10,000 units is accepted, the fixed overhead will increase by another ₹50,000 by way of increased administration expenses.

You are required to determine whether the company should accept the new business at the stipulated price or decline the new offer and make a concerted sales drive to sell the present unused capacity at the present selling price. The sales drive will cost ₹ 60,000 per year.

Ignore the financial charges on the cost of the equipment and assume there is no opening and closing inventories. Variable costs will increase in direct proportion to the output. [14]

4. (a) REAXON LTD. a manufacturing company provides you the following details for the year 2023:

Sales (16,000 units)	₹16,00,000
Less Expenses (including ₹ 8,00,000 Fixed Expenses)	₹17,60,000
Net loss	₹ 1,60,000

The manager believes that an increase of ₹4,00,000 in advertising outlays will

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increase sales substantially. His plan was approved by the chairman of the board.

Required:

- (i) Calculate P/V Ratio and Break Even Sales.
- (ii) Calculate what additional sales will be required to offset that increase in advertisement outlays.
- (iii) Determine what should be selling price per unit if the breakeven point is brought down to 20,000 units? [7]

- (b) XYZ Co. purchases 40,000 glass cases per annum from an outside supplier at ₹ 5 each. The production manager feels that these should be manufactured and not purchased. A machine costing ₹ 1,00,000 (no salvage value) will be required to manufacture the item within the factory. The machine has an annual capacity of 60,000 units and life of 5 years. The costs required for manufacture of each glass case is as follows:

Direct Materials ₹ 2.00

Direct Labour ₹ 1.00

Variable overheads 100% of Labour Cost

You are required to solve and decide:

- (i) should the company continue to purchase the glass cases from outside supplier or should it make them in the factory?
- (ii) should the company accept an order to supply 10000 glass cases to the market at a selling price of ₹ 4.50 per unit? [7]

5. Z Limited manufactures a standard product. The standard mix of it is:

Material X: 60% at ₹15 per kg.

Material Y: 40% at ₹10 per kg.

Normal loss in output is 20 percent of input due to shortage of material Y. The actual results for May, 2023 were:

Material X: 210 kg at ₹16 per kg.

Material Y: 190 kg at ₹10.50 per kg.

Actual output: 330 kg.

You are required to calculate:

- (i) Material Cost Variance
- (ii) Material Price Variance
- (iii) Material Usage Variance
- (iv) Material Mix Variance
- (v) Material Yield Variance. [14]

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6. (a) The following information is extracted from the records of Aljhon Ltd. a manufacturing company using standard costing system for the month ending October, 2023:

	Budget	Actual
Fixed Overhead	10,000	12,000
Production(units)	2,000	2,100
Standard Time per Unit (hours)	10	—
Actual Hours Worked	—	21,000

Required to calculate the following Fixed Overhead Variances:

- (i) Fixed Overhead Cost Variance
- (ii) Fixed Overhead Expenditure Variance
- (iii) Fixed Overhead Volume Variance. [7]

- (b) With the following data for a 60% activity, prepare a budget for production at 80% and 100 % capacity Production at 60% capacity 300 units.

Materials: ₹ 100 per unit

Labour: ₹ 40 per unit

Expenses: ₹ 10 per unit

Factory expenses: ₹ 40,000 (40% fixed)

Administrative expenses: ₹ 30,000 (60% fixed). [7]

7. (a) An investment centre has net assets of ₹8,00,000, and made profits before interest of ₹1,60,000. The notional cost of capital is 12%. This is the company's target return.

An opportunity has arisen to invest in a new project costing ₹1,00,000.

The project would have a four-year life, and would make profits of ₹15,000 each year.

Required to compute:

- (A) What would be the ROI with and without the investment? (Base your calculations on opening book values). Determine would the investment centre manager wish to undertake the investment if performance is judged on ROI.
- (B) What would be the average annual RI with and without the investment? (Base your calculations on opening book values). Determine would the investment centre manager wish to undertake the investment if performance is judged on RI? [7]

- (b) Describe the four perspectives of the Balanced Scorecard. [7]

8. (a) B Ltd. has a new wonder product, the V, of which it expects great things. At the moment the company has two courses of action open to it, to test market the product or abandon it.

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If the company test markets it, the cost will be ₹ 1,00,000 and the market response could be positive or negative with probabilities of 0.60 and 0.40.

If the response is positive the company could either abandon the product or market it full scale.

If it markets the V in full scale, the outcome might be low, medium or high demand, and the respective net gains/ (losses) would be (200), 200 or 1,000 in units of ₹1,000 (the result could range from a net loss of ₹ 2,00,000 to a gain of ₹10,00,000). These outcomes have probabilities of 0.20, 0.50 and 0.30 respectively.

If the result of the test marketing is negative and the company goes ahead and markets the product, estimated losses would be ₹ 6,00,000.

If, at any point, the company abandons the product, there would be a net gain of ₹ 50,000 from the sale of scrap. All the financial values have been discounted to the present.

Required:

Prepare and draw a decision tree and also include figures for cost, loss or profit on the appropriate branches of the tree. [7]

- (b) Explain briefly the concept of Revenue Center. [7]



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SECTION – A (Compulsory)

1. Choose the correct option: [15 x 2 = 30]
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- (ii) Process of Cost allocation under Activity Based Costing is:
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- c. Amount of sales < B.E.P, therefore no margin of safety
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- (x) If standard cost > actual, then it is:
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- b. Favourable
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(xii) A budgeting process which demands each manager to justify his entire budget in detail from beginning is:

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(xv) The minimum expected opportunity loss (EOL) is

- a. Equal to EVPI
- b. Minimum regret
- c. Equal to EMV
- d. Both (A) and (B)

**Answer:**

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

SECTION-B

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

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2. (a) Describe the functions of a Management Accountant in Modern Business World. [7]
- (b) A manufacturing company has three accounts clerks responsible for processing purchase invoices of suppliers. Each clerk is paid a salary of ₹1,50,000 per annum and is capable of processing 5,000 purchase invoices per year. In addition to the salary, the company spends ₹45,000 per year for printing of forms, postage etc. (assuming that 15,000 purchase invoices are processed).
- During the year, 12,500 purchase invoices were processed. You are required to:
1. Calculate the activity rate for the purchase order activity. Break the activity rate into fixed and variable components.
 2. Calculate the total activity availability and break this into activity usage and unused activity.
 3. Calculate the total cost of resources supplied and break this into activity usage and unused activity. [7]

Answer:

- 2.(a) The functions of a management accountant can be categorized as below:
1. Planning and Accounting - Management accountants prepare an accounting system covering costs, sales forecasts, profit planning, production planning, and allocation of resources. It should also include capital budgeting, short-term and long-term financial planning. They also prepare the procedures necessary to implement the plan effectively.
 2. Controlling - Management accountants assist in the control of an organisation's performance through the use of standard costing, budget control, accounting ratios, funds flow statements, cost-cutting initiatives, and assessing capital expenditure proposals and returns on investment.
 3. Reporting - Management accountants assist the top management in finding out the root cause of an unfavourable operation or event by identifying the real

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reasons for the adverse events as well as the responsible parties and comprehensively reporting them.

4. Coordinating - Management accountants improve an organisation's efficiency and profits by providing various coordination tools such as budgeting, financial reporting, financial analysis and interpretation, and so on. These tools aid management by comparing cost and financial records, preparing financial budgets and establishing standard costs, and analyzing cost deviations to enable management by exception.
5. Communication - Management accountants create a wide range of reports to communicate results to the superiors. Through published financial statements and returns, they also inform the outside world about their company's success.
6. Financial evaluation and Interpretation - Management accountants analyze the data and present it to the management in a non-technical approach, together with their comments and ideas, so that the shareholders and senior management can understand it and make informed decisions.
7. Tax Administration - Management accountants are in charge of tax policies and processes. They make the reports that are required by various authorities. Further, they ensure that quarterly tax payments are made in advance, as required by the relevant Act, to prevent the payment of penal interest on late tax payments.
8. Evaluation of external effects - There may be changes in government policy and existing laws. These amendments and policy changes can affect business goals. Management accountants assess the extent of any impact of these external factors on the business and report it to the stakeholder to take necessary precautionary measures.
9. Economic appraisal - When the government makes regular announcements about the country's economic situation, management accountants is entrusted with making the economic study and determine the influence of current economic conditions on the company's operations. They compile a report containing their observations and present it to high management.
10. Asset Protection - Management accountants separate fixed asset registers for each type and provide internal checks and controls to protect the company's assets. They also create the rules and regulations for each type of fixed asset and get insurance coverage for all types of fixed assets.

2.(b)

1. Activity Rate = $[(3 \times ₹1,50,000) + ₹45,000] \div 15,000 = ₹33$ per invoice
Fixed Activity Rate = $₹4,50,000 \div 15,000 = ₹30$ per invoice
Variable Activity Rate = $₹45,000 \div 15,000 = ₹3$ per invoice.
2. Activity availability = Activity usage + Unused Activity
15,000 invoices = 12,500 invoices + 2,500 invoices
3. Cost of resources supplied = Cost of activity used + Cost of unused activity
or, $₹4,50,000 + (₹3 \times 12,500) = (₹33 \times 12,500) + (₹30 \times 2,500)$
or, $₹4,87,500 = ₹4,12,500 + ₹75,000$.



3. Susma Products Co. Ltd. manufactured and sold in a year 15,000 units of a particular product fetching a sales value of ₹15 lakhs. After charging direct material @ 30% on sales value, direct labour 20% on sales value, variable overheads ₹10 per unit, the company earned profit of ₹ 16 $\frac{2}{3}$ per unit during the year. The existing equipment can produce a maximum of 20,000 units per annum. In case, the demand exceeds the maximum output, new equipment will be required which will cost ₹10 lakhs and it will have a life span of 10 years, with no residual value.

A prospective customer is willing to place an order on the company for 10,000 units per year regularly at 90% of the present selling price, which will be, if accepted, over and above the existing market for 15,000 units.

Irrespective of the fact whether or not the new order materializes, the cost increases with immediate effect are:

1. 10% in the Direct Materials.
2. 25% in the Direct Labour.
3. ₹50,000 in Fixed Overheads per year.

If the order of additional 10,000 units is accepted, the fixed overhead will increase by another ₹50,000 by way of increased administration expenses.

You are required to determine whether the company should accept the new business at the stipulated price or decline the new offer and make a concerted sales drive to sell the present unused capacity at the present selling price. The sales drive will cost ₹ 60,000 per year.

Ignore the financial charges on the cost of the equipment and assume there is no opening and closing inventories. Variable costs will increase in direct proportion to the output.

[14]

Answer:

Present Selling price = ₹ 15,00,000/15,000 units = ₹ 100 per unit

Present Cost Structure:	₹
Direct materials (30% of sales value)	4,50,000
Direct labour (20% of sales value)	3,00,000
Variable overheads (₹10 per unit)	1,50,000
	9,00,000
Contribution (₹ 15,00,000 - ₹9,00,000)	6,00,000
Profit (₹ 16 $\frac{2}{3}$ per unit)	2,50,000
Fixed Overheads	3,50,000

**INTERMEDIATE EXAMINATION****SET 1****MODEL ANSWERS****TERM – JUNE 2024****PAPER – 12****SYLLABUS-2022****MANAGEMENT ACCOUNTING**

Comparative statement of the proposals (Revised cost basis)

Particulars	Present capacity	Maximum Capacity	Present plus 10,000 units
Units	15,000	20,000	25,000
Sales value (₹)	15,00,000	20,00,000	15,00,00 (+) 9,00,000
			= 24,00,000
Direct materials (33% on sales value)(₹)	4,95,000	6,60,000	4,95,000
(10/15 × ₹4,95,000)			(+) 3,30,000
Direct labour (25% on sales value) (₹)	3,75,000	5,00,000	3,75,000
(10/15 × 3,75,000)			(+) 2,50,000
Variable overhead (₹10 per unit)	1,50,000	2,00,000	2,50,000
Fixed overhead	3,50,000	3,50,000	3,50,000
	(+) 50,000	(+)50,000	(+)50,000
Sales drive Costs	-	60,000	-
Depreciation on new Equipment	-	-	1,00,000
Total costs	14,20,000	18,20,000	22,00,000
Profit	80,000	1,80,000	2,00,000

It will be advisable for the company not to accept the offer. The Company should instead to sell 20,000 units @₹100 per unit, since the acceptance of the offer will reduce the amount of profit.

4. (a) Reaxon Ltd. a manufacturing company provides you the following details for the year 2023:

Sales (16,000 units)	₹16,00,000
Less Expenses (including ₹ 8,00,000 Fixed Expenses)	₹17,60,000
Net loss	₹ 1,60,000

The manager believes that an increase of ₹4,00,000 in advertising outlays will increase sales substantially. His plan was approved by the chairman of the board.

Required:

- Calculate P/V Ratio and Break Even Sales.
- Calculate what additional sales will be required to offset that increase in advertisement outlays.

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- (iii) Determine what should be selling price per unit if the breakeven point is brought down to 20,000 units? [7]

- (b) XYZ Co. purchases 40,000 glass cases per annum from an outside supplier at ₹ 5 each. The production manager feels that these should be manufactured and not purchased. A machine costing ₹ 1,00,000 (no salvage value) will be required to manufacture the item within the factory. The machine has an annual capacity of 60,000 units and life of 5 years. The costs required for manufacture of each glass case is as follows:

Direct Materials ₹ 2.00

Direct Labour ₹ 1.00

Variable overheads 100% of Labour Cost

You are required to solve and decide:

- (i) should the company continue to purchase the glass cases from outside supplier or should it make them in the factory?
(ii) should the company accept an order to supply 10000 glass cases to the market at a selling price of ₹ 4.50 per unit? [7]

Answer:

4.(a)

- (i) Calculation of P/V Ratio and Break Even Sales (BES):

$$P/V \text{ Ratio} = (\text{Sales} - \text{Variable Cost}) / \text{Sales} \times 100$$

$$P/V \text{ Ratio} = (16,00,000 - 9,60,000) / 16,00,000 \times 100$$

$$P/V \text{ Ratio} = 40\%$$

$$\text{BEP (Sales)} = (\text{Fixed Cost}) / (P/V \text{ Ratio})$$

$$= (\text{₹ } 8,00,000 + \text{₹ } 4,00,000) / 40\%$$

$$= \text{₹ } 30,00,000$$

Or,

$$\text{BEP (Sales) Unit} = (\text{₹ } 8,00,000 + \text{₹ } 4,00,000) / (\text{₹ } 100 - \text{₹ } 60)$$

$$= \text{₹ } 12,00,000 / \text{₹ } 40$$

$$= 30,000 \text{ units.}$$

- (ii) Additional Sales Volume = (Proposed Expenditure) / (P/V Ratio)

$$= \text{₹ } 4,00,000 / 40\%$$

$$= \text{₹ } 10,00,000$$

- (iii) Selling price if BEP is 20000 units:

$$\text{BEP} = \text{Fixed cost} / \text{contribution}$$

$$20,000 = 12,00,000 / C,$$

$$\text{or } C = \text{₹ } 12,00,000 / 20,000$$

$$= \text{₹ } 60$$

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$$S-V=C$$

$$\text{Sales} - ₹60 = ₹60$$

$$\text{Sales} = ₹60 + ₹60 = ₹120$$

Or,

$$\text{SP per unit} = \text{VC Per unit} + (\text{Contribution/BEP})$$

$$= ₹60 + (₹12,00,000/20,000)$$

$$= ₹120$$

4.(b)

- (i) Total variable cost of manufacturing one glass case = ₹ 4.00

Additional Fixed cost of manufacture p.a.

$$\text{Depreciation } (1,00,000 \times 1/5) = ₹ 20,000$$

Since the marginal cost of manufacturing the case is less than the supplier's price of ₹ 5, there shall be a saving of ₹ (₹ 5 - 4) or ₹ 1 per case if the Case is manufactured within the factory. Manufacturing will however result in an additional fixed cost of ₹ 20,000 p.a.

$$\text{Total saving} = 40,000 \text{ cases @ ₹ 1} = ₹ 40,000$$

$$\text{Less additional fixed cost (depreciation)} = ₹ 20,000$$

$$\text{Net Savings} = ₹ 20,000$$

Therefore, it is advisable to manufacture the cases in the factory.

- (ii) If the company accepts to sell additional 10,000 units at 4.50, then additional contribution is $10,000 \times 0.50 = ₹ 5,000$. This will add to total profit.

5. Z Limited manufactures a standard product. The standard mix of it is:

Material X: 60% at ₹15 per kg.

Material Y: 40% at ₹10 per kg.

Normal loss in output is 20 percent of input due to shortage of material Y. The actual results for May, 2023 were:

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- (ii) Material Price Variance**
- (iii) Material Usage Variance**

**MANAGEMENT ACCOUNTING**

- (iv) **Material Mix Variance**
(v) **Material Yield Variance.**

[14]**Answer:**

Working notes:

1. Total SQ for Actual output = $330 \times 100 \div 80 = 412.50$ kg.
Standard Quantity for X = $412.50 \times 60\% = 247.50$ kg.
Standard Quantity for Y = $412.50 \times 40\% = 165.00$ kg.
2. RSQ = Total Actual quantity $\times$ Standard proportion
Revised Standard Quantity for X = $(210 + 190) = 400 \times 60\% = 240$ kg.
Revised Standard Quantity for Y = $(210 + 190) = 400 \times 40\% = 160$ kg.
3. Standard Yield (SY) by using actual quantity: $400\text{kg} \times 80\% = 320$ kg.

Computation of Material Variances:

- (i) **Material Cost Variance** = $(SQ \times SP) - (AQ \times AP)$
For material X: $(247.5 \times ₹15) - (210 \times ₹16) = ₹3,712.50 - ₹3,360 = ₹352.50$ (F)
For material Y: $(165 \times ₹10) - (190 \times ₹10.50) = ₹1,650 - ₹1,995 = ₹345$ (A)
Total Material Cost Variance = ₹7.50 (F)
- (ii) **Material Price Variance** = $AQ (SP - AP)$
For X: $210 (₹15 - ₹16) = ₹210$ (A)
For Y: $190 (₹10 - ₹10.50) = ₹95$ (A)
Total Material Price Variance = ₹305 (A)
- (iii) **Material Usage Variance** = $SP (SQ - AQ)$
For X: $₹15 (247.50 - 210) = ₹562.50$ (F)
For Y: $₹10 (165 - 190) = ₹250.00$ (A)
Total Material Usage Variance = ₹312.50 (F)
- (iv) **Material Mix Variance** = $SP (RSQ - AQ)$
For X: $₹15 (240 - 210) = ₹450$ (F)
For Y: $₹10 (160 - 190) = ₹300$ (A)
Total Material Mix Variance = ₹150 (F)
- (v) **Material Yield Variance** = Standard Cost per unit (SC) (AY – SY)

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$$= ₹ 16.25 (330 - 320)$$

$$= ₹ 162.50(F)$$

Standard Cost (SC) per unit = ₹ 16.25, calculated as under:

$$X: 247.50 \times ₹15 = ₹3712.50$$

$$Y: 165 \times ₹ 10 = ₹1650.00$$

$$₹5,362.50$$

Total Standard Cost for 330 units of output = ₹ 5362.50

Hence, SC per unit = ₹ 5362.50 ÷ 330 = ₹ 16.25

6. (a) The following information is extracted from the records of Aljhon Ltd. a manufacturing company using standard costing system for the month ending October, 2023:

	Budget	Actual
Fixed Overhead	10,000	12,000
Production(units)	2,000	2,100
Standard Time per Unit (hours)	10	—
Actual Hours Worked	—	21,000

Required to calculate the following Fixed Overhead Variances:

(i) Fixed Overhead Cost Variance

(ii) Fixed Overhead Expenditure Variance

(iii) Fixed Overhead Volume Variance.

[7]

- (b) With the following data for a 60% activity, prepare a budget for production at 80% and 100 % capacity Production at 60% capacity 300 units.

Materials: ₹ 100 per unit

Labour: ₹ 40 per unit

Expenses: ₹ 10 per unit

Factory expenses: ₹ 40,000 (40% fixed)

Administrative expenses: ₹ 30,000 (60% fixed).

[7]

Answer:

6.(a)

For Fixed Overhead Variance:

Actual Fixed Overhead incurred (Given) ₹12,000

Budgeted Fixed Overhead for the period ₹10,000

Standard Fixed overhead for production

= (Standard output for actual time X Standard Fixed Overhead per unit)

= 2,100 unit X (₹ 10,000 ÷ 2,000 unit) ₹10,500

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- (i) Fixed Overhead Variance = Standard F.O. – Actual F.O.
= ₹10,500 – ₹12,000
= ₹1,500 (A)
- (ii) F.O. Expenditure Variance = Budgeted F.O. – Actual F.O.
= ₹10,000 – ₹12,000
= ₹2,000 (A)
- (iii) F.O. Volume Variance = Standard F.O. – Budgeted F.O.
= ₹10,500 – ₹10,000
= ₹500 (F)

6.(b)**Flexible Budget**

Particulars	(₹)		
	60% Capacity	80% Capacity	100% Capacity
	300 units	400 units	500 units
Material (₹ 100 per unit)	30,000	40,000	50,000
Labour (₹ 40 per unit)	12,000	16,000	20,000
Expenses (₹10 per unit)	3,000	4,000	5,000
Variable Factory Expenses (₹80 per unit)	24,000	32,000	40,000
Variable Administrative Expenses (₹40 per unit)	12,000	16,000	20,000
Fixed Factory Expenses (40 % of ₹40,000)	16,000	16,000	16,000
Fixed Administrative Expenses (60% of ₹ 30,000)	18,000	18,000	18,000
Total	1,15,000	1,42,000	1,69,000

7. (a) An investment centre has net assets of ₹8,00,000, and made profits before interest of ₹1,60,000. The notional cost of capital is 12%. This is the company's target return.

An opportunity has arisen to invest in a new project costing ₹1,00,000.

The project would have a four-year life, and would make profits of ₹15,000 each year.

Required to compute:

- (A) What would be the ROI with and without the investment? (Base your calculations on opening book values). Determine would the investment centre manager wish to undertake the investment if performance is judged on ROI.



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(B) What would be the average annual RI with and without the investment? (Base your calculations on opening book values). Determine would the investment centre manager wish to undertake the investment if performance is judged on RI? [7]

(b) Describe the four perspectives of the Balanced Scorecard. [7]

Answer:

7.(a)

(A) ROI		
	Without the investment	With the investment
Profit	₹ 1,60,000	₹ 1,75,000
Capital employed	₹ 8,00,000	₹ 9,00,000
ROI = (Profit/ Capital Employed × 100)	20.0%	19.4%

ROI would be lower; therefore, the centre manager will not want to make the investment. Since his performance will be judged as having deteriorated. However, this result in dysfunctional behaviour since the company's target is only 12%.

(B) RI

	Without the Investment	with the investment
Profit	1,60,000	1,75,000
Less: Notional Interest	96,000	1,08,000
RI	(₹ 8,00,000 × 12%) 64,000	(₹ 9,00,000 × 12%) 67,000

The investment centre manager will want to undertake the investment because it will increase RI. This is the correct decision for the company since RI increases by ₹3,000 as a result of the investment.

7.(b)

The four Perspectives of the Balanced Scorecard:

1. Financial Perspective:

This perspective evaluates the Profitability of the strategy. Because cost reduction relative to competitors, costs and sales growth are key strategic initiatives, the financial perspectives focuses on how much of operating income

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and return on capital results from reducing costs and selling more units.

2. Customers Perspective:

This perspective identifies the targeted market segments and measures the company's success in these segments. To monitor its growth objectives, number of new customers and customer's satisfaction.

3. Internal business process Perspective:

This perspective focuses on internal operations that further the customers' perspective by creating value for customers and further the financial perspective by increasing shareholder value. Chipset determines internal business process improvement targets after benchmarking against its main competitors. The internal business process perspective comprises three sub processes:

- The innovation process:

Creating products, services and processes that will meet the needs of customers, aiming at lowering costs and promote growth by improving the technology of its manufacturing.

- The operations process:

Producing and delivering existing products and services that will meet the needs of customers. The strategic initiatives are (A) improving manufacturing quality reducing delivery time to customers and (B) Meeting specified delivery dates.

- Post sales service providing service and support to the customer after the sale of a product of service. Although customers do not require much post sales service.

4. Learning & Growth Perspectives:

This perspective identifies the capabilities of the organization must excel at to achieve superior internal processes that create value for customers and shareholders.

A Company's learning and growth perspectives emphasize three capabilities:

- Employee Capabilities measured using employee education and skill levels.
- Information system capabilities, measured by percentage of manufacturing processes with real-time feedback and
- Motivation measured by employee satisfaction and percentage of manufacturing and sales employees (line employees) empowered to manage processes.

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8. (a) B Ltd. has a new wonder product, the V, of which it expects great things. At the moment the company has two courses of action open to it, to test market the product or abandon it.

If the company test markets it, the cost will be ₹ 1,00,000 and the market response could be positive or negative with probabilities of 0.60 and 0.40.

If the response is positive the company could either abandon the product or market it full scale.

If it markets the V in full scale, the outcome might be low, medium or high demand, and the respective net gains/ (losses) would be (200), 200 or 1,000 in units of ₹1,000 (the result could range from a net loss of ₹ 2,00,000 to a gain of ₹10,00,000). These outcomes have probabilities of 0.20, 0.50 and 0.30 respectively.

If the result of the test marketing is negative and the company goes ahead and markets the product, estimated losses would be ₹ 6,00,000.

If, at any point, the company abandons the product, there would be a net gain of ₹ 50,000 from the sale of scrap. All the financial values have been discounted to the present.

Required:

Prepare and draw a decision tree and also include figures for cost, loss or profit on the appropriate branches of the tree. [7]

- (b) Explain briefly the concept of Revenue Center. [7]

Answer:

8.(a)

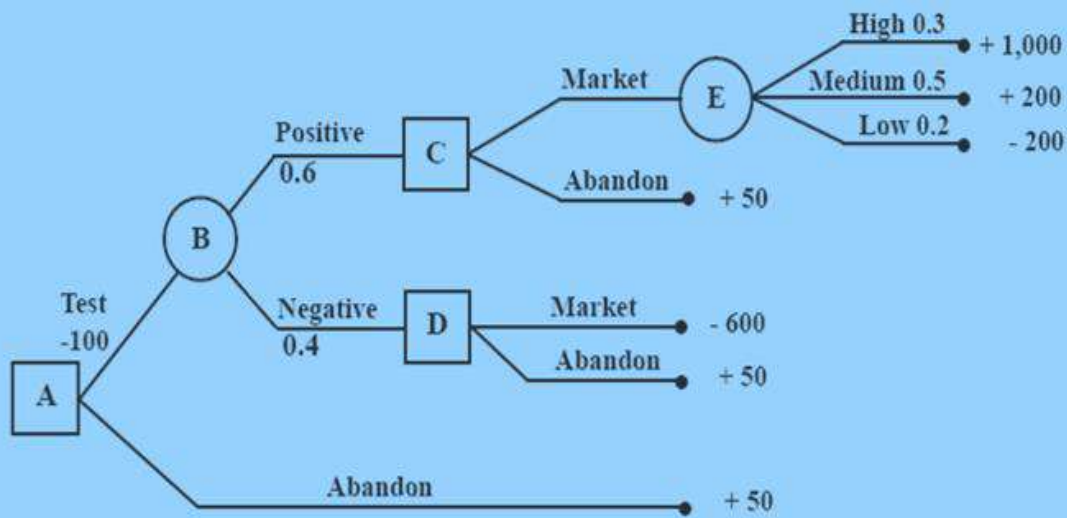
The starting point for the tree is to establish what decision has to be made now. What are the options?

(A) To test market

(B) To abandon

The outcome of the 'abandon' option is known with certainty. There are two possible outcomes of the option to test market, positive response and negative response.

Depending on the outcome of the test marketing, another decision will then be made, to abandon the product or to go ahead.

**8.(b)**

A revenue center is strictly defined as an organizational unit that is responsible for the generation of revenues and has no control over setting selling prices or budgeting costs. For instance, in many retail stores, each sales department is considered an independent unit and managers are evaluated based on their departments' total revenues.

A revenue center is one where the employees located in a specific functional area are solely responsible for attaining preset revenue levels. The sales department is sometimes considered to be a revenue center. In this capacity, employees are essentially encouraged to obtain new sales without regard to the cost of obtaining them. This can be a dangerous way to run a function, unless strict guidelines are set up that control the overall spending limits allowed, the size and type of customer solicited, and the size and type of orders obtained. Otherwise, the sales staff will obtain orders from all kinds of customers, including those with poor credit records or histories of returning goods, not to mention orders that are so small that the cost of processing the order exceeds the profit gained from the sale.

Other counterproductive activities associated with revenue centers are the inordinate use of travel funds to meet with customers, selling products at large discounts from the standard price, offering special promotional guarantees to customers, allowing credits on previously purchased products if the price subsequently declines, and offering to extend payment terms. For all of these reasons, revenue centers are not recommended without the addition of stringent controls to ensure that the sales staff obtains only revenues that will result in adequate levels of profitability.



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In a revenue center, performance evaluations are limited because the manager has control over only one item: revenues. Actual performance in revenue centers (as well as in any other area that has revenue control) should be compared against budgeted performance to determine variances from expectations. Budgeted and actual revenues may differ because of either volume of units sold or price of units sold. To compare budgeted and actual revenues, the price and volume components of revenue must be distinguished from one another. The sales price variance is calculated by multiplying the actual number of units sold by the difference between actual and budgeted sales prices. This variance indicates the portion of the total revenue variance that is related to a change in selling price. The sales volume variance is calculated by multiplying the budgeted sales price by the difference between the actual and budgeted sales volumes.