CERTIFIED PUBLIC ACCOUNTANT
FOUNDATION LEVEL 2 EXAMINATIONS
F2.1: MANAGEMENT ACCOUNTING
DATE: WEDNESDEY 26, NOVEMBER 2025

F2.1 NOVEMBER 2025 MARKING GUIDE AND MODEL ANSWERS

QUESTION ONE/Marking Guide

	Marks
a) Preparation of cash budget	
Accounting for cash received from sales in cash inflows	0.5
Accounting for disposal of motor vehicles in cash inflows	0.5
Accounting for dividends in cash inflows	0.5
Correct totals of cash inflows	1
Accounting for purchases in cash outflows	0.5
Accounting for rent in cash outflows	0.5
Accounting for salaries in cash outflows	0.5
Accounting for sales commission in cash outflows	1
Correct totals of cash outflows	1
Correct computation of surplus / deficit	1
Correct accounting for opening balances	1
Correct accounting for closing balances	1
Cash received from sales working (1 mark for cash and 1 mark for credit)	2
Cash received from dividends	1
Cash paid for purchases (1 mark for credit and 1 mark for cash purchases)	2
Right format followed for the entire cash budget	1
b) Reasons for budgeting	
1 mark awarded for every point or reason well explained (1 mark * 5)	5
Total	**20**

Model Answer

a) Prepare cash budget for REL for the five months ended 31st December 2023.

REL Cash Budget for Five Months Ending 31st December 2023

	August	September	October	November	December	Total
Cash inflow	FRW	FRW	FRW	FRW	FRW	FRW
Sales W1	20,175,000	20,900,000	21,700,000	22,475,000	22,950,000	108,200,000
Disposal of motor vehicles	6,600,000		4,800,000	7,200,000		18,600,000
Dividends received W2	-	6,500,000	-	-	-	6,500,000
Total cash inflow	26,775,000	27,400,000	26,500,000	29,675,000	22,950,000	133,300,000
Cash Outflows						
Purchases W3	16,480,000	17,320,000	17,980,000	19,220,000	19,840,000	90,840,000
Rent	3,000,000	3,000,000	3,500,000	3,500,000	3,500,000	16,500,000
Salaries	3,200,000	3,200,000	3,200,000	3,200,000	3,400,000	16,200,000
Sales commission (5%* Sales W1)	1,035,000	1,075,000	1,115,000	1,150,000	1,140,000	5,515,000
Total cash outflow	23,715,000	24,595,000	25,795,000	27,070,000	27,880,000	129,055,000
Surplus / (Deficit)	3,060,000	2,805,000	705,000	2,605,000	-4,930,000	4,245,000
Add: Opening cash balance	5,200,000	8,260,000	11,065,000	11,770,000	14,375,000	
Closing cash balance	**8,260,000**	**11,065,000**	**11,770,000**	**14,375,000**	**9,445,000**	

Working 1: Cash received from sales

	July	August	September	October	November	December
Sales	20,000,000	20,700,000	21,500,000	22,300,000	23,000,000	22,800,000
Cash sales (25%)	5,000,000	5,175,000	5,375,000	5,575,000	5,750,000	5,700,000
Credit sales (One month) (75%)	-	15,000,000	15,525,000	16,125,000	16,725,000	17,250,000
Cash received from sales	5,000,000	20,175,000	20,900,000	21,700,000	22,475,000	22,950,000
Sales commission (5%)	1,000,000	1,035,000	1,075,000	1,115,000	1,150,000	1,140,000

Working 2: Cash received from dividends

Number of shares bought	100,000
Dividends per share	65
Dividends received	100,000 *65=6,500,000

Working 3: Cash paid for purchases

	July	August	September	October	November	December
Purchases	16,000,000	17,200,000	17,500,000	18,700,000	20,000,000	19,600,000
Cash purchases (40%)	6,400,000	6,880,000	7,000,000	7,480,000	8,000,000	7,840,000
Credit purchase (one month) 60%	-	9,600,000	10,320,000	10,500,000	11,220,000	12,000,000
Cash paid for purchases	6,400,000	16,480,000	17,320,000	17,980,000	19,220,000	19,840,000

b) Explain any five reasons that may make Rebero Enterprise Limited to prepare a budget

- Ensure the achievement of the organisation's objectives: Objectives are set for the organisation as a whole, and for individual departments and operations within the organisation. Quantified expressions of these objectives are then drawn up as targets to be achieved within the timescale of the budget plan.
- Compel planning: This is probably the most important feature of a budgetary planning and control system. Planning forces management to look ahead, to set out detailed plans for achieving the targets for each department, operation and (ideally) each manager and to anticipate problems. It thus prevents management from relying on ad hoc or un coordinated planning which may be detrimental to the performance of the organisation. It also helps managers to foresee potential threats or opportunities, so that they may take action now to avoid or minimize the effect of the threats and to take full advantage of the opportunities.
- Communicate ideas and plans: A formal system is necessary to ensure that each person affected by the plans is aware of what they are supposed to be doing. Communication might be one-way, with managers giving orders to subordinates, or there might be a two-way dialogue and exchange of ideas.
- Co-ordinate activities: The activities of different departments or sub-units of the organisation need to be coordinated to ensure maximum integration of effort towards common goals. This concept of co-ordination implies, for example, that the purchasing department should base its budget on production requirements and that the production budget should in turn be based on sales expectations. Although straightforward in concept, co-ordination is remarkably difficult to achieve, and there is often 'sub-

optimality' and conflict between departmental plans in the budget so that the efforts of each department are not fully integrated into a combined plan to achieve the company's best targets.

- Provide a framework for responsibility accounting: Budgetary planning and control systems require that managers of budget centres are made responsible for the achievement of budget targets for the operations under their personal control
- Establish a system of control: A budget is a yardstick against which actual performance is monitored and assessed. Control over actual performance is provided by the comparisons of actual results against the budget plan. Departures from budget can then be investigated and the reasons for the departures can be divided into controllable and uncontrollable factors.
- Motivate employees to improve their performance: The interest and commitment of employees can be retained via a system of feedback of actual results, which lets them know how well or badly they are performing. The identification of controllable reasons for departures from budget with managers responsible provides an incentive for improving future performance.
- Provide a framework for authorization: Once the budget has been agreed by the directors and senior managers it acts as an authorisation for each budget holder to incur the costs included in the budget centre's budget. As long as the expenditure is included in the formalised budget the budget holder can carry out day to day operations without needing to seek separate authorisation for each item of expenditure.
- Provide a basis for performance evaluation: As well as providing a yardstick for control by comparison, the monitoring of actual results compared with the budget can provide a basis for evaluating the performance of the budget holder. As a result of this evaluation the manager might be rewarded, perhaps with a financial bonus or promotion. Alternatively, the evaluation process might highlight the need for more investment in staff development and training.

QUESTION TWO

Marking Guide

	Marks
a) Terms used in standard costing	
i) Well explained attainable standard	2
ii) Well explained ideal standard	2
b)Variance	
i) Total Material mix variance	
Mango fruit (Correct formula for MMV)	1
Mango fruit (Correct computation of variance)	1
Orange fruit (Correct formula for MMV)	1
Orange fruit (Correct computation of variance)	1
ii)Total Material yield variance	
Mango fruit (Correct formula for MYV)	1
Mango fruit (Correct computation of variance)	1
Orange fruit (Correct formula for MYV)	1
Orange fruit (Correct computation of variance)	1

c)Variance	
i) Total sales mix contribution variance	
Vanilla (Correct formula for sales mix contribution)	1
Vanilla (Correct computation of variance)	1
Strawberry (Correct formula for sales mix contribution)	1
Strawberry (Correct computation of variance)	1
ii) **Total sales quantity contribution variance**	
Vanilla (Correct formula for sales Quantity contribution)	1
Vanilla (Correct computation of variance)	1
Strawberry (Correct formula for sales Quantity contribution)	1
Strawberry (Correct computation of variance)	1
Total	**20**

Model Answer

a) Explain the following terms as used in standard costing

(i) Attainable Standard: Standards prepared based on efficient but not perfect operating conditions. Some allowance is made for wastage and inefficiencies. If well set, they provide useful psychological incentive by giving employees a realistic but challenging target of efficiency.

(ii) Ideal Standard: These are standards based on perfect operating conditions. No wastage, no spoilage, no inefficiencies, no idle time, no breakdowns. Variances from ideal standards are useful in pin pointing areas where a close examination may result in large savings in order to maximize efficiency and minimise waste. However, ideal standards are likely to have an unfavourable motivational impact because the reported variances will always be adverse.

b) Calculate the following Variances

(i) Material Mix Variance (MMV): Budgeted Mix for Actual Quantity - Actual Quantity) * Budgeted price per kg

Budgeted Quantity for Actual Production		
Mango	(2 kgs * 1,000 units)	2,000
Orange	(4 kgs * 1,000 units)	4,000
Total BQAP		6,000
Actual Quantity		
Mango		6,500
Orange		7,000
Total AQ		13,500
Budgeted Price per kg		
Mango	300	
Orange	250	

Budgeted Mix for Actual Quantity= (standard Quantity*Total weighted Actual Quantity)/Total Weighted Standard Quantity		
Mango	(2,000 / 6,000) * 13,500	4,500
Orange	(4,000 / 6,000) * 13,500	9,000

MMV = Budgeted Mix for Actual Quantity - Actual Quantity) * Budgeted price per kg		
Mango	(4,500 - 6,500) * 300	600,000 (Adverse)
Orange	(9,000 - 7,000) * 250	500,000 (Favorable)

(ii) Material Yield Variance

MYV = (Budgeted Quantity for Actual Production - Budgeted Mix for Actual Quantity) * Budgeted Price per kg

Mango	(2,000 - 4,500) * 300	750,000 (Adverse)
Orange	(4,000 - 9,000) * 250	1,250,000 (Adverse)

c) Calculate the following Variances

i) Sales Mix Contribution Variance (SMCV)

SMCV = (Budgeted Mix for Actual Quantity - Actual Quantity) * Budgeted Contribution per unit

	Budgeted Quantity	Actual Quantity
Vanilla	600	520
Strawberry	400	440
Total	1,000	960

Budgeted Mix for Actual Quantity

Vanilla	(600 / 1,000) * 520	312
Strawberry	(400 / 1,000) * 440	176

	Calculation	Budgeted selling price per unit	Calculation	Budgeted variable cost per unit	Calculation	Budgeted contribution per unit
Vanilla	(2,100,000 / 600)	3,500	(1,200,000 / 600)	2,000	(3,500 - 2,000)	1,500
Strawberry	(3,200,000 / 400)	8,000	(1,800,000 / 400)	4,500	(8,000 - 4,500)	3,500

Sales Mix Contribution Variance (SMCV)

Vanilla	(312-520) *1,500=	312,000 (Favorable)
Strawberry	(176-440) *3500=	924,000 (Favorable)

ii) Sales Quantity Contribution Variance (SQCV)

Vanilla	(600-312) *1500	432,000 (Adverse)
Strawberry	(400-176) *3500	784,000 (Adverse)

QUESTION THREE

	Marks
a) Total equivalent units' statement	
Correct accounting for opening WIP not completed units	1
Correct accounting for fully worked units	1
Correct accounting for closing WIP completed	1
Correct accounting for abnormal loss	1
Maximum marks awarded for part a	4
b) Cost per unit statement	
Computation of total amount	2
Use of total equivalent units	1
Correct calculation of cost per unit	1
Maximum marks awarded for part b	4
c) Value of output	
Computation of value of opening WIP not completed	1
Computation of value of opening WIP completed	1
Computation of value of fully worked	1
Correct total value of output	1
Maximum marks awarded for part c	4
d) Value of closing work in progress	
1 mark awarded for individual computation of total amounts	1
1 mark awarded for total amount for the three components	1
Maximum marks awarded for part d	2
e) Value of abnormal loss	
1 mark awarded for individual computation of total amounts	1
1 mark awarded for total amount for the three components	1
Maximum marks awarded for part e	2
f) Preparation of process two account	
Accounting for opening WIP	0.5
Accounting for Materials /Labour and Overheads	1
Accounting for normal loss	0.5
Accounting for output / closing WIP / abnormal loss	1
Balancing of Dr and Cr sides	1
Maximum marks awarded for part f	4
Total	**20**

Model Answer

Using the First In First Out (FIFO) method of accounting for process accounts:

(a) Prepare the total equivalent units' statement

	Opening WIP units Not Completed	Fully Worked Units (Output - Op WIP)	Closing WIP Units Completed	Abnormal gain Units	Total Equivalent Units
Materials	880	17,900	3,375	(120)	22,035
Labour	550	17,900	2,700	(72)	21,078
Overheads	440	17,900	1,800	(90)	20,050

(b) Prepare a cost per unit statement (FIFO)

	Total Amount	Total Equivalent Units	Cost per Unit
Materials	2,600,000	22,035	118.00
Labour	2,650,000	21,078	125.73
Overheads	3,500,000	20,050	174.56

(c) Calculate the value of output

Items	Value of Opening Completed	Value of Opening Not Completed	Value of Fully Worked	Total
Materials	700,000	103,840	2,112,200	2,916,040
Labour	600,000	69,151	2,251,567	2,920,718.50
Overheads	500,000	76,806	3,123,624	3,700,430.40
				9,537,188.90

(d) Calculate the value of closing work in progress

	Units	Cost per Unit	Total Amount
Materials	3,375	118.00	398,250
Labour	2,700	125.73	339,471
Overheads	1,800	174.56	314,208
			1,051,929

(e) Calculate the value of abnormal loss or gain

	Units	Cost per Unit	Total Amount
Materials	120	118	14,160
Labour	72	125.73	9,051
Overheads	90	174.56	15,710
			38,921

(f) Prepare the process two account

Particulars	**Units**	**Price/unit**	**Amount**	**Particulars**	**Units**	**Price/unit**	**Amount**
Opening WIP	2,200		1,800,000	Normal LOSS	2,500	120	300,000
Materials	25,000		2,600,000	Output to process 3	20,100		9,156,242
Labour			2,650,000	Closing WIP	4,500		1,051,929
Overheads			3,500,000	Abnormal loss	100		41,829
TOTAL	27,200		10,550,000		27,200		10,550,000

QUESTION FOUR

Marking Guide

	Marks
a) Calculation of cost per unit under traditional method	
Calculation of direct cost per unit	1
Accounting for overheads cost per unit	1
Calculation of cost per unit (direct + overheads)	1
Apportionment of overhead cost using labour hours	1
Maximum marks awarded for part a	4
b) Calculation of cost per unit under activity-based costing	
Calculation of direct cost per unit	1
Accounting for overheads cost per unit	1
Calculation of cost per unit (direct + overheads)	1
Correct allocation of each cost driver to the right cost pool	2
Apportionment of total overheads to individual cost pools using %s provided	1
Apportionment of the overheads to each product (0.5 marks * 4 cost pools)	2
Calculation of overhead cost per unit from total overheads per product	2
Maximum marks awarded for part b	10
c) Steps followed in accounting for ABC	
1 mark awarded for each correct step mentioned (1 mark * 5 steps)	5
1 marks for arrangement of steps in order	1
Maximum marks awarded for part c	6
Total	**20**

Model Answer

(a) Calculate the cost per unit using traditional method of accounting using labour hours as the basis of apportionment of overheads

		Alpha		Beta		Omega
Material cost per unit		900		750		1,200
Labour cost per unit	(2.2 * 1,200)	2,640	(2.0 * 1,200)	2,400	(1.5 * 1,200)	1,800
Direct cost per unit		3,540		3,150		3,000
Add: Overhead cost per unit	W1	593		539		404
Total cost per unit		**4,133**		**3,689**		**3,404**

Workings

Overhead Cost per Unit: Traditional Method using Labour Hours

W1	Alpha	Beta	Omega	Total
Output units	1,500	2,200	800	
Labour hours per unit	2.2	2	1.5	
Total labour Hours	3,300	4,400	1,200	8,900
Overhead apportionment				
A = 3,300 / 8,900 * 2,400,000 =	889,888			
B = 4,400 / 8,900 * 2,400,000 =		1,186,517		

O = 1,200 / 8,900 * 2,400,000 =			323,596	
Units	1,500	2,200	800	
Overhead cost per unit	**593**	**539**	**404**	

(b) Calculate the cost per unit using Activity Based Costing (ABC) method of apportionment of overheads

		Alpha		Beta		Omega
Material cost per unit		900		750		1,200
Labour cost per unit	(2.2 * 1,200)	2,640	(2.0 * 1,200)	2,400	(1.5 * 1,200)	1,800
Direct cost per unit		3,540		3,150		3,000
Add: Overhead cost per unit	W2	620		350		875
Total cost per unit		**4,160**		**3,500**		**3,875**

Workings

Cost pool	Cost driver	Amount		Alpha		Beta		Omega
Cost related to set up (20%*2.4M)	No of set ups	480,000	(30/100*480)	144,000	(45/100*480)	216,000	(25/100*480)	120,000
Cost related to material movement (15%*2.4M)	No of material movement	360,000	(40/120*360)	120,000	(60/120*360)	180,000	(20/120*360)	60,000
Cost related to inspection (35%*2.4M)	No of inspection	840,000	(12/30*840)	336,000	(8/30*840)	224,000	(10/30*840)	280,000
Cost related to rent (30%*2.4M0	Square metre	720,000	(550/1200*720)	330,000	250/1200*720)	150,000	(400/1200*720)	240,000
Total overhead cost		2,400,000		930,000		770,000		700,000
Output units				1,500		2,200		800
Overhead cost per unit				620		350		875

(c) Explain the steps followed in accounting for overheads using Activity Based Costing Technique

ABC system operates as follows:

Step 1: Identify an organisation's major activities that support the manufacture of the organisation's products or services.

Step 2: Use cost allocation and apportionment methods to charge overhead costs to each of those activities. The costs that accumulate for each activity cost centre is called a cost pool.

Step 3: Identify the factors which determine the size of the costs of an activity / affect the costs of an activity. These are known as cost drivers

Step 4: For each cost pool / activity cost centre, calculate an absorption rate per unit of cost driver

Step 5: Charge overhead costs to products for each activity, on the basis of their usage of the activity (the number of cost drivers they use). Overheads are charged by absorbing them into product costs at a rate per unit of cost drivers.

QUESTION FIVE

Marking Guide

	Marks
a) Cost, Volume, Profit Analysis Calculations	
i) Contribution to sales ratio	
Computation of variable cost per unit	0.5
Calculation of contribution per unit	0.5
Application of the right formula for C/S ratio	0.5
Correct answer derived	0.5
Maximum marks awarded for part (a) i)	2
ii) Break-even point in units and revenue	
Break-even point in units formula application	1
Right answer for break-even point in units	1
Break-even point in revenue formula application	1
Right answer for break-even point in revenue	1
Maximum marks awarded for part (a) ii)	4
iii) Margin of safety in units and percentage	
Margin of safety in units formula application	1
Right answer for margin of safety in units	1
Margin of safety % formula application	1
Right answer for margin of safety in %	1
Maximum marks awarded for part (a) iii)	4
iv) Sales units to achieve target profit	
Application of the right formula	2
Right answer derived	2
Maximum marks awarded for part (a) iv)	4
b) Limitations of CVP analysis	
2 marks awarded for every limitation well explained (2 marks * 3)	6
Maximum marks awarded for part (b)	6
Total	**20**

Model Answer

(a) Calculate the following

(i) Contribution to sales ratio

Direct labour cost			
Skilled labour	(10 hrs * Frw 10,000)	100,000	
Semi-skilled labour	(12 hrs * Frw 6,000)	72,000	172,000
Direct materials			
Timber	(25 kgs * Frw 3,200)	80,000	
Metal	(30 kgs * Frw 4,500)	135,000	215,000
Variable cost per unit			**387,000**
Fixed cost per annum		42,000,000	
Selling price per chair		850,000	
Output per annum	(14 chairs * 12)	168	chairs

Contribution per unit =	(Selling price per unit - Variable cost per unit)	
	850,000 - 387,000 =	463,000
Selling price per unit =		850,000
Contribution to Sales ratio =	463,000 / 850,000 * 100 =	54.5%

(ii) Break-even point in units and revenue

$$\text{Break} - \text{even Point in Unit} = \frac{\text{FIXED COSTS}}{\text{Contribution per Unit}}$$

Break- even point in units =	42,000,000	
	463,000	91 chairs

Break -even point in revenue =	BEP (units) * Selling price per unit	
	91 * 850,000 =	77,350,000 Frw

(iii) Margin of safety in units and percentage

Margin of safety in units =	(Target sales - Break -even point in Units)		
Target sales in Units	14 chairs * 12 months =	168	
Break - even point =		91	
Margin of safety in units =	168 - 91 =	77	chairs
Margin of safety (%)	Margin of safety * 100	77 chairs * 100	
	Target sales	168	45.8%

(iv) Sales units to achieve target profit

Sales units to achieve target profit =	Fixed cost + Target profit		
	Contribution per unit		
Sales units to achieve target profit =	42,000,000 + 100,000,000		
	463,000	307	Chairs

(b) Explain three limitations of cost volume profit analysis

- It is assumed that sales prices will be constant at all levels of activity. This may not be true, especially at higher volumes of output, where the price may have to be reduced to win the extra sales.
- Production and sales are assumed to be the same, so that the consequences of any increase in inventory levels are ignored.
- Uncertainty in the estimates of fixed costs and unit variable costs is often ignored.
- It is assumed that fixed costs are the same in total and variable costs are the same per unit at all levels of output. The assumption is a great simplification.
- It is always assumed that all units produced will be sold and that there will be stocks held a view that is untrue.
- It is always assumed that technology will remain unchanged but every other day there is a new invention/discovery because of technological changes.

QUESTION SIX

Marking guide	**Marks**
a) Preparation of marginal costing profit statement	
Period 1 sales	0.5

Period 2 sales	0.5
Variable cost of sales period 1	0.5
Variable cost of sales period 2	0.5
Calculation of variable production cost per unit (W1)	1
Variable selling cost period 1	0.5
Variable selling cost period 2	0.5
Contribution period 1	0.5
Contribution period 2	0.5
Fixed production cost period 1	0.5
Fixed production cost period 2	0.5
Fixed non production cost (selling) period 1	0.5
Fixed non production cost (selling) period 2	0.5
Marginal costing loss period 1	0.5
Marginal costing profit period 2	0.5
Maximum marks awarded for part a 8 marks	8
b) Preparation of absorption costing profit statement	
Period 1 sales	0.5
Period 2 sales	0.5
Cost of sales period 1	1
Cost of sales period 2	1
Calculation of total production cost per unit (W2)	1
Gross profit period 1	0.5
Gross profit period 2	0.5
Non production cost fixed period 1	0.5
Non production cost fixed period 2	0.5
Non production cost variable period 1	0.5
Non production cost variable period 2	0.5
Absorption costing loss period 1	0.5
Absorption costing profit period 2	0.5
Maximum marks awarded for part b 8 marks	8
c) Reconciliation of profits	
Computation of change in inventory period 1	0.5
Computation of change in inventory period 2	0.5
Computation of difference in profits period 1	0.5
Computation of difference in profits period 2	0.5
Balancing of AC and MC profits/ loss period 1	1
Balancing of AC and MC profits/ loss period 2	1
Maximum marks awarded for part c 4 marks	4
Total	**20**

Model Answer

(a) Prepare KML's profit statement for the two periods using marginal costing approach

KML MARGINAL COSTING PROFIT STATEMENT

	Period 1	Period 2

		Frw		Frw
Sales	(7,000 * 30,000)	210,000,000	(8,500 * 30,000)	255,000,000
Variable cost of sales:				
Opening inventory	(0 * 16,800)	0	(1,000 * 16,800)	16,800,000
Add: Production	(8,000 * 16,800)	134,400,000	(8,000 * 16,800)	134,400,000
Less: Closing inventory	(1,000 * 16,800)	(16,800,000)	(500 * 16,800)	(8,400,000)
Variable cost of sales:		117,600,000		142,800,000
Less: Variable selling costs	25%*210000000	52,500,000	25%*255000000	63,750,000
Contribution		39,900,000		48,450,000
Less: Fixed costs				
Production	(8,000 * 2,000)	16,000,000	(8,000 * 2,000)	16,000,000
Non-production (Selling)	(9,600,000 / 2)	4,800,000	(9,600,000 / 2)	4,800,000
Total Fixed cost		20,800,000		20,800,000
Marginal costing Profit		19,100,000		27,650,000

Working

W1, Variable production cost per unit= 7200+8000+1600=16,800

(b) Prepare KML's profit statement for the two periods using absorption costing approach

KML ABSORPTION COSTING PROFIT STATEMENT

	Period 1		Period 2	
		Frw		Frw
Sales	(7,000 * 30,000)	210,000,000	(8,500 * 30,000)	255,000,000
Cost of sales:				
Opening inventory	(0 * 18,800)	0	(1,000 * 18,800)	18,800,000
Add: Production	(8,000 * 18,800)	150,400,000	(8,000 * 18,800)	150,400,000
Less: Closing inventory	(1,000 * 18,800)	18,800,000	(500 * 18,800)	9,400,000
Cost of sales:		131,600,000		159,800,000
Gross profit		78,400,000		95,200,000
Less: Non production costs				
Fixed	(9,600,000 / 2)	4,800,000	(9,600,000 / 2)	4,800,000
Variable	(25%*210,000,000)	52,500,000	(25%*255,000,000)	63,750,000
Total Fixed cost		57,300,000		68,550,000
Absorption costing profit		21,100,000		26,650,000

Working, Variable production cost per unit= 7200+8000+1600+2,000=18,800

(c) Reconcile the marginal costing profit to the absorption costing profit for the two periods

	Period 1		Period 2		
Opening inventory units		-		1,000	
Closing inventory units		1,000		500	
Change in inventory	(0-1000) Increase	1,000	(1000 - 500) Decrease	500	

AC profit higher than MC when there is increase			MC higher when decrease		
MC loss		19,100,000	MC loss		27,650,000
Add: Difference in profit	(1,000 * 2,000) =	2,000,000	Less: Difference	(500 * 2,000)	1,000,000
AC profits / loss		21,100,000			26,650,000

QUESTION SEVEN

Marking Guide

	Marks
a) Cost estimation using high low method	
i)Variable cost per unit	
Use of right formula for variable cost per unit	0.5
Inserting of the right values to the formula and calculation	1.0
Correct answer for variable cost per unit	0.5
ii)Fixed cost	
Use of right formula for fixed cost	0.5
Inserting of the right values to the formula and calculation	1.0
Correct answer for fixed cost	0.5
iii)Total cost	
Formulation of total cost equation	1.0
Application of the formula to generate correct answer	1.0
Maximum marks awarded for part a	6.0
b) Cost estimation using regression analysis	
i)Variable cost per unit	
Correct summation of ∑x, ∑y, ∑xy, ∑x2 (0.5 marks * 4)	2.0
Selection of factory overheads as y and units as x	0.5
Use of right regression formula for variable cost per unit	0.5
Inserting of the right values to the formula and calculation	1.0
Correct answer for variable cost per unit	1.0
Maximum marks awarded for part (b) i)	5.0
ii) Fixed cost	
Use of right formula for fixed cost	1.0
Inserting of the right values to the formula and calculation	1.0
Correct answer for fixed cost	1.0
Maximum marks awarded for part (b) ii)	3.0
iii)Total cost	
Formulation of total cost equation	1.0
Application of the formula to generate correct answer	1.0
Maximum marks awarded for part (b) iii)	2.0
c) Advantages of regression analysis	
2 marks awarded for each advantage clearly explained (2 marks * 2)	4.0
Maximum of 4 marks for part c	4.0
Total	**20**

Model Answer

(a) Using **high low method** of cost estimation

(i) Estimate the variable cost per unit

Variable cost per unit=$\frac{\text{COST@Highest Activity}-\text{cost @Lowest Activity}}{\text{Highest Activity}-\text{Lowest Activity}}$

Variable cost per unit=$\frac{70{,}000-50{,}000}{840-400}$=45.45

(ii) Estimate the fixed cost

Fixed Cost $=$ Total cost $-$ Variable cost

Using Highest below

Fixed Cost $= 70{,}000 - (45.45 * 840) = 31{,}818$

(iii)Calculate the total cost of producing 750 units

By Equation TC$= 45.45X + 31{,}818$

Substitution 750 Units $\rightarrow TC = (45.45 * 750) + 31{,}818$

Total cost = 65,909

(b) Using **regression analysis** method of cost estimation

(i) Estimate the variable cost per unit

Months	X	Y	XY	X^2
1	400	50,000	20,000,000	160,000
2	500	55,000	27,500,000	250,000
3	675	60,000	40,500,000	455,625
4	600	62,000	37,200,000	360,000
5	680	64,000	43,520,000	462,400
6	620	62,800	38,936,000	384,400
7	840	70,000	58,800,000	705,600
8	640	63,500	40,640,000	409,600
9	450	52,500	23,625,000	202,500
10	420	51,000	21,420,000	176,400
Total	**5,825**	**590,800**	**352,141,000**	**3,566,525**

b=$\frac{n\sum xy - \sum x\sum y}{n\sum x2 - (\sum x)2}$

(10*352,141,000) - (5,825 * 590,800)
(10*3,566,525) - $(5,825)^2$

=80,000,000/1,734,625=46.1 per unit

(ii) Estimate the fixed cost

a=$\frac{\sum y - b\sum x}{n}$

a=$\frac{590{,}800-46.1*5{,}825}{10} = 32{,}215$

(iii) Calculate the total cost of producing 800 units

Equation	
Total Cost =	46.1x + 32,215
Total cost of 800 units	
TC =	(46.1 * 800) + 32,215
TC =	69,095

(c) Explain two advantages of using regression analysis as a cost estimation technique

- It gives a definitive line of best fit, taking account of all data
- Linear regression makes efficient use of data and good results can be obtained with relatively small data sets
- The significance / reliability of the relationship between variables can be statistically tested

End of Marking Guide and Model Answers.