CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATIONS

A2.2: STRATEGIC PERFORMANCE MANAGEMENT

DATE: THURSDAY, 26 AUGUST 2021

MODEL ANSWER AND MARKING GUIDE

SECTION A

MARKING GUIDE

QUESTION ONE: Evaluate the current system of costing

Romano Company (RC)	**Marks**
a) **Calculations (0.5 marks per calculation, 9 marks maximum)**	9
Difference between current costing vs ABC	1
Advise to management	
Significant underpricing	2
Assess the impact the increase could have	1
ABC recommendation	1
Maximum marks	**14**
b) Assessing profitability (0.5 marks for each, maximum of 5)	5
Most profitable client	1
Maximum marks	**6**
c) i. **Advise on client fee strategy using minimax regret**	
Calculation of each client fee (0.5 marks, maximum 10)	10
Client fee that maximizes the maximum regret	1
Maximum marks	**11**
ii. **Management advice on best client fee strategy**	
Expected variable cost	1
Client fee at Frw 36,000	1
Client fee at Frw 40,000	1
Client fee at Frw 44,000	1
Client fee that maximizes contribution	1
Maximum marks	**5**
d) i. **Transfer pricing system**	
Explanation – aim of transfer pricing system	1
Evaluate – electrical components (1 mark each, max 3)	3
Evaluate – housing components (1 mark each, max 3)	3
Conclusion	1
Maximum marks	**8**
ii. **Impact of changing suggested transfer price**	
Calculations on both divisions (0.5 marks, maximum 5)	5
Conclusion	1
Maximum marks	**6**
Total marks	**50**

Detailed answer

a) Evaluate the current system of costing against Activity-Based Costing (ABC) for Romano laptops in regard to the order 2122 in the year ending 31st March 2021. Advise management on what course of action to take.

Evaluation of the current system of Costing

Cost per cost driver unit

	Total cost activity in Frw "000"	No. of driver units	Cost per driver unit Frw
Customer service	77,350	899,600	86
Purchasing and receiving	24,510	21,400	1,145
Inventory management	14,670	618,800	24
Administration of production	25,370	**71,400	355

Cost per unit for Order 2122 16 units

	Driver units	Costs allocated to order in Frw	Cost per unit Frw
Customer service	1,104	94,944	5,933
Purchasing and receiving	64	73,280	4,581
Inventory management	512	12,288	759
Administration of production	48	17,040	1,066

Comparison

W1 1,104*86=94,944

W2 64*1,145=73,280

W3 512*24=12,288

W4 48*355=17,040

W5 16 *3=48

Cost	Current method standard cost Frw	ABC cost per unit Frw
Direct cost (446470/23)	19,600	19600
Overhead allocated [141,900,000/(23800*3)]*3	5,962	
Customer service		5,933
Purchasing and receiving		4,581
Inventory management		759
Administration of production		1,066
Total cost	25,562	31,939
Markup (45%)	11503	14372

Price	**37,065**	**46,311**

Difference = 46,311 – 37,065 = 9,246 Frw - which is an increase of 25%

The difference in current pricing shows that there is currently a significant underpricing of the order. ABC has identified the major components of overheads rather than applying a blanket base of labour hours. The management should review the areas of activities and see how they can be more efficient. The management need to consider whether the order such as this should be repriced.

However, before increasing the price the company management need to assess the impact that the increase in price will have on the customers and RL's competitors, though it appears unlikely that customers will accept an increase of 25%.

A change to an ABC system may be warranted as an ABC system would provide valuable extra costing data particularly on product cost and prices that could assist in profitability.

Assess the profitability of the finance director's clients and advice on the most profitable client.

	Amina	Bote	Chadia	Total	Monthly cost Frw	cost per cost driver
Hours spent on preparing accounts and providing advice	8	5	2	15	150,000	10,000
Requests for missing information	4	10	6	20	50,000	2,500
Payment reminder sent	2	8	10	20	20,000	1,000
Client meetings held	5	2	3	10	80,000	8,000

Cost per client			
	Amina	Bote	Chadia
Hours spent on preparing accounts and providing advice	80,000	50,000	20,000
Requests for missing information	10,000	25,000	15,000
Payment reminder sent	2,000	8,000	10,000
Client meetings held	40,000	16,000	80,000
Total cost	**132,000**	**99,000**	**125,000**

Profitability

	Amina	Bote	Chadia
	Frw	Frw	Frw
Sales	150,000	150,000	150,000
Total cost	132,000	99,000	125,000
Profit	**18,000**	**51,000**	**25,000**

The most profitable client is Bote. We are therefore advise to charge fees based on the activities so as to increase profitability.

b) i) Advise Romano Health Centre on the client fee strategy to adopt using minimax regret criteria

Determine first the payoff table based on the budget contribution

Contribution = number of client days * contribution per client per day (fee – variable cost)

Number of client days:

Maximum capacity = 50 * 350 = 17,500

High occupancy level = 90%* 17500 = 15,750

Most likely occupancy level = 75%* 17500 = 13,125

Low occupancy level = 60%* 17500 = 10,500

contribution per day

Variable cost	occupancy	36,000	40,000	44,000
19,000	15,750	17,000	21,000	25,000
17,000	13,125	19,000	23,000	27,000
14,000	10,500	22,000	26,000	30,000

Payoff table

		Client Fee per day		
	Variable cost per day	Frw 36,000	Frw 40,000	Frw 44,000
	Frw 19,000	267750000	275625000	262500000
	Frw 17,000	299250000	301875000	283500000
	Frw 14,000	346500000	341250000	315000000

Regret payoff table

	Client Fee per day		
Variable cost per day	Frw 36,000	Frw 40,000	Frw 44,000
Frw 19,000	7,875,000	0	13,125,000
Frw 17,000	2,625,000	0	18,375,000
Frw 14,000	0	5,250,000	31,500,000
Maximum Regret	7,875,000	5,250,000	31,500,000

Choose a client fee of Frw 40,000 because it is the one which minimizes the maximum regret

ii) If RHC objective is to maximize the expected value of contribution, advise management on the best client fee strategy.

Expected variable cost = (0.1*19000) + (0.6*17000) + (0.3*14000) = 16,300 Frw

Variable cost client fee per day

Frw 36,000 Frw 40,000 Frw 44,000

Frw 16,300	310275000	311062500	290850000

In order to maximise expected value of contribution choose to set price at Frw 40,000

c) i) **Evaluate the current system of transfer pricing of RL**

The aim of transfer pricing is to ensure goal congruence between the divisions of the company and the organization as a whole, by ensuring the performance of the division is fairly measured.

A good transfer pricing system should maintain a level of managerial autonomy for the managers of different divisions.

Electrical components

Market based transfer price seems appropriate as there is already an existing market for electrical components.

Adjustments to market price – the assembly division could legitimately argue that the transfer price charged for the electrical components should be lower than the market price since they do not incur transport costs as it is an internal transfer.

If the adjustment is made, the contribution to head office costs from electrical components division falls by Frw 2,690,000 – being the transport cost.

Housing components

Actual production costs – the transfer price of housing components is based on the actual production cost – this seems appropriate because the components are designed specifically for RL's products and so there is no external market for them.

However, because the price set for housing components only covers the actual production cost, the proceeds from the sale of the housing components will not make any contribution towards the allocated head office costs.

Therefore, rather than keeping the transfer price as the cost of the components, the transfer price should include a markup on the actual production cost. This would redistribute the divisional profits between the assembly and components divisions.

Actual vs budget costs – there is no motivation or incentive for component division because it knows it that it will recover its costs – hence budgeted production costs would be a more appropriate basis of transfer pricing.

Revised divisional reports.

The divisional reports should be adjusted to reflect these points:

i) Costs relating to transport, marketing and bad debts are no longer included in the transfer price of components: Frw 15,570,000 - Frw 2,690,000 = Frw 12,880,000
The transfer price for housing department is based on budgeted cost , with a markup of 25% (69,020,000 – 57,500,000 + 13,020,000 = 76,290,000 + 25% markup = 95,360,000

	Component Division in	**Assembly Division in**
	Frw"000"	**Frw"000"**
Sales : Electrical	12,880	
Housing	95,360	
Subtotal	108,240	157,940
Cost of sales		
Electrical	8,040	12,880
Housing	69,020	95,360
Subtotal	77,060	108,240
Fixed production costs		
Electrical	3,700	
Housing	13,020	
subtotal	16,720	12,680
Allocated head office costs	4,610	20,460
profit	**9,850**	**16,560**

ii) Comment and advise the finance director on the impact of changing the transfer pricing policy for housing components.

The proposal will reduce the revenue of the component division – hence not fair in terms of the performance of the division. Though there will be no change in the overall profits of the company.

The proposed change doesn't seem to be appropriate since the housing components are specifically designed for the company products, which is the competitive edge of the company.

	Component Division	**Assembly Division**
	Frw"000"	**Frw"000"**
Sales : Electrical	15,570	
Housing	69,020	
Subtotal	84,590	157,940
Cost of sales		
Electrical	8,040	15,570
Housing	69,020	69,020
Subtotal	77,060	84,590
Fixed production costs		
Electrical	3,700	
Housing	13,020	
subtotal	16,720	12,680
Allocated head office costs	4,610	20,460
Profit/(loss)	**(13,800)**	**40,210**

SECTION B

QUESTION TWO: Cyiza company

Marking Guide

	Marks
a) Acknowledgment of needed changes for a JIT system	1
Needed changes under purchasing (1 mark each, max 3)	3
Needed changes under production (1 mark each, max 3)	3
Conclusion	1
Maximum marks	**8**
b) Quality control changes	
Report format	0.5
Cost of conformance (0.5 marks each, max 2)	2
Cost of non-conformance (0.5 marks each, max 2)	2
Total cost	0.5
Potential quality cost changes with a move to JIT (1 mark to be awarded on each well explained point)	5
Maximum marks	**10**
c) Assess performance	
Assessing production manager (1 mark, max of 3)	3
Assessing sales manager ((1 mark, max of 3)	3
Conclusion on whether bonus scheme is fair or not	1
Maximum marks	**7**
Total marks	**25**

Detailed Answer

a) Assess the changes which Cyiza will have to make in the areas of purchasing and production in order to supply goods to Emeza on a JIT basis.

Currently, it is clear that Cyiza is not ready to produce to the JIT principles which Emeza is requesting and Cyiza needs to make fundamental changes to its operations to be able to do so.

Purchasing

- JIT production involves reduction of suppliers to minimum and establishing strong relationships with them, based on flexibility, and understanding of each other's needs.
- In adopting JIT principles, the suppliers will effectively be an extension of Cyiza's own business, which currently does not have this level, for example one of the suppliers want to optimize the delivery cost which does not support JIT production.

- Cyiza must also ensure that the raw materials are defect free, which is not happening as it is evidenced that one of its suppliers does not supply quality materials and registers delivery delays too.
- Cyiza will most likely require undertaking official supplier assessment as part of an ongoing reviews to ensure the quality of raw materials for JIT production.

Production

- The manner at which Cyiza produces its goods need to change. Efficiency will not be measured by producing volumes but rather by production per order. The culture of producing as much volume is embedded into the culture of the organization and even the bonus is based on the quantity.
- Cyiza should rethink about the production runs which are long as JIT production requires shorter production runs. The production process should match the rate at which Emeza is demanding the final product.
- The company should also facilitate the operations by eliminating set up and unneeded costs between operations.
- The company must eliminate any defects on final product as the previous belief of 5% rejection rate being acceptable, must be replaced with zero defects philosophy.
- Prevention and appraisal costs may be expected to increase as Cyiza may be expected to establish both goods inwards testing procedures and testing procedures for work in progress.
- Enhancing workers flexibility and developing their skillset in several areas of operations may be the best way to react to this new environment where demand is more unpredictable. The workers should be more flexible in terms of their capabilities and trained much more in identifying defective products to ensure that they do not progress further.
- Changing the layout of the factory to try to ensure that production is as flexible as possible.

b) Evaluate the potential quality cost changes in the light of the proposed move to JIT by preparing Cyiza's cost of quality report as recommended by the CEO.

Cost of quality report

Cost of conformance:	**Frw "000"**	**Frw "000"**
Prevention costs		
Routine maintenance	64	
Total		64
Appraisal costs		
Quality control	280	
Quality audit	16	
Total		296
Costs of non-conformance:		
Internal failure costs		
Rework cost	576	
Machine downtime	304	
Scrap	464	
Total		1,344
External failure costs		

Cost of complaints from Emeza	1,080	
Forgone contribution from lost sales	680	
Product recalls and cost of goods returned	1,440	
Total		3,200
Overall cost		**4,904**

The results of the cost of quality report are a representative of a company undertaking quality control as opposed to quality assurance in that, majority of the costs relate to failure, either of internal or external nature.

Cost of conformance: the company needs to invest more in quality audits and possibly in testing equipment to ensure that the product being produced to be at the right standard through the production process. Final inspection may still be required but not a full-time occupation and supervisors may be more meaningfully deployed elsewhere. This will reduce both internal and external failures.

The significant cost of external failure cost is of concern as in operating JIT, it will require to ensure these costs are as close to zero as possible.

The amount of money attributed to product recalls and cost of goods returned is concerning as its too high and this suggests that defective products are not detected in the current quality control system.

Cost of handling customer complaints is of concern and may be arising out of misunderstandings with the customer and this may be resolved by JIT system which requires closer working relationship, hence reducing such costs.

The company must ensure it provides more training to staff, more preventive machines maintenance, more supplier appraisal so as to encourage a culture of zero defects with no faulty goods moving forward in the production process.

c) Assess the performance of the production manager and the sales manager and indicate whether the current bonus scheme is fair to them.

Production manager

- The production manager instigated the new production approach which fundamentally changed the nature of the business. Before the new system, there were favorable material variances for price and yield and the production manager received a bonus as a result.
- The organic materials are expensive, and this resulted in an adverse material price and mix variances in March.
- The yield variance is favorable but not enough to compensate for adverse variances. This means that the production manager does not receive a bonus under the new scheme.
- Sales have improved significantly so customers appreciate the new output. The production manager does not receive any credit for the favorable sales variances, and this does not seem to be fair.

Sales manager

- The sales variances have moved from adverse to favorable. The new approach has therefore been a success with customers.

- The sales manager is partly responsible for more sales of the new output, but the original idea came from the production manager.
- In conclusion the bonus scheme does not seem to be fair as it does not reward the two managers fairly for their efforts. They are both responsible for improved sales, but it is difficult to fairly allocate responsibility in this situation. Some sharing of responsibility and reward is required.

QUESTION THREE: DUHUZE Group (DG)

Marking Guide	**Marks**
a) Incremental budgeting	
Advantages (1 mark each, maximum of 4)	4
Disadvantages (1 mark each, maximum of 4)	4
Maximum marks	**8**
b) Recalculate budget for division F under rolling budget	
Revenue	1
Cost of sales	1
Gross profit	1
Distribution cost	1
Administration cost	1
Operating profit	1
Assess the use of rolling budgets	
Reduces budgeting uncertainty	1
Near future plans instead of long-term	1
Helps to know Company direction	1
More effective control mechanism	1
Conclusion	1
Maximum marks	**11**
c) Factors to consider for a new MIS	
Staff qualification	1.5
Provision of information to management	1.5
Position in the market	1.5
Environmental concerns	1.5
Legal considerations or any other	1.5
Maximum marks	**6**
Total marks	**25**

Detailed Answer

a) Discuss the suitability of incremental budgeting in DG

Advantages of incremental budgeting are:

- Non time consuming – DG currently uses incremental budgeting which is relatively quick and easy to prepare. This is advantageous to DG given that they have constraint in the Finance Department which is experiencing challenges in implementation of the information system.
- Stable environment – incremental budgets are appropriate for stable environments for which division H and S are experiencing.

The disadvantages/drawbacks include:

- Accepts inefficiencies – the fact that the director of finance has identified that the most promising area of performance improvement lies in better internal control practices suggests that there are inefficiencies in DG's current processes.
- Can encourage spending -managers may feel that they have to spend the full amount of the current year's budget in order to preserve the same level of budget the next year.
- H and S divisions stable markets – the fact that sales growth is unlikely suggest that incremental budgeting could be inappropriate for them.
- Margin Improvements – H and S have limited opportunities to increase revenues , in order to increase their profitability, they need to improve their margins which incremental budget will not help them achieve; this is because they need to reduce costs.
- Rapid growth – F's growth rate means the incremental approach is unlikely to be suitable for it.
- Justifying costs - M division doesn't require to justify costs in the current budgetary approach which other divisions managers are skeptical of the need of marketing division which incremental approach may not change their opinion.

b) Recalculate the budget for division F using rolling budgeting and assess the use of rolling budgeting in division F (

Rolling budget will include actual figures for Q1 of current year and then forecast Q2 - Q4 of the current year along with Q1 of next year - based on Q1 actual and growth of 3% on revenue and variable costs.

Details	Q1 Actual	Q2 forecast	Q3 forecast	Q4 forecast	Q1 forecast
	(Frw 000)	(Frw 000)	(Frw 000)	(Frw 000)	(Frw 000)
Revenue	89,660	92,350	95,120	97,974	100,913
Cost of sales	49,315	50,794	52,318	53,888	55,504
Gross profit	40,345	41,555	42,802	44,086	45,409
Distribution cost	8,070	8,312	8,561	8,818	9,083
Administration cost	21,070	21,070	21,070	21,070	21,070
Operating profit	11,205	12,173	13,171	14,198	15,256

F is growing rapidly, and the rolling budget gives F's managers the scope to increase their variable costs to reflect the growth rather than being constrained by the original budget.

F is able to better sustain its growth and the level of complaints about late deliveries and poor quality should be reduced.

Rolling budget should provide managers with more realistic targets against which to compare actual performance.

Rolling budget provides a more effective control mechanism than an annual budget, which could potentially be disregarded as being out of date

c) Describe the factors that DG should have considered when setting up a new information system to avoid the challenges that the Finance Department is experiencing with the introduction of a new information system.

The following factors should be considered when setting up a management accounting system (which is just one part of an overall MIS).

a) The output required. This is just another way of saying that the management accountant must identify the information needs of managers. If a particular manager finds pie-charts most useful, the system should be able to produce them. If another manager needs to know what time of the day machinery failures occur, this information should be available. Levels of detail and accuracy of output and methods of processing must be determined in each case.
b) When the output is required. If information is needed within the hour the system should be capable of producing it at this speed. If it is only ever needed once a year, at the year end, the system should be designed to produce it on time, no matter how long it takes to be produced.
c) The sources of input information. It is too easy to state that the outputs required should dictate the inputs made. The production manager may require a report detailing the precise operations of his machines, second by second. However, the management accounting system could only acquire this information if suitable production technology had been installed.
d) Staff qualification is also paramount to ascertain on whether DG staff including the Finance Director are conversant with the new Management Information System.

QUESTION FOUR: Mezeneza cakes

Marking Guide

a) Calculations	Marks
Material price variance (Flour; Eggs; Butte; and Sugar)	4
Material mix variance (Flour; Eggs; Butte; and Sugar)	4
Material yield variance	1
Maximum marks	**9**

b) Assessing Production Manager's performance	
Operating variances	2
Planning variances	2
Interpretation	1

Maximum marks	**5**

c) i. Profitability

Profit per day on each unit level (0.5 mark on each output)	1.5
Total profitability per day	1.5
Maximum marks	**3**

ii. Throughput Accounting

Conversion cost per factory hour	2
Throughput ratio (Sweet; Flavored; and Organic)	6
Maximum marks	**8**
Total	**25**

Detailed Answer

a) Critically evaluate the performance of the Production Manager of Mezaneza Cakes for the month of March 2021 based on the original standard cost.

Material price variance = (Std price - actual cost) *actual quantity Frw

Flour:	5700*600 =	3,420,000
	Actual cost	3,705,000
	Material price variance =	285,000 Adv
Eggs:	6600*3,500 =	23,100,000
	Actual cost	28,050,000
	Material price variance =	4,950,000 Adv
Flour:	6600*8,500 =	56,100,000
	Actual cost	59,400,000
	Material price variance =	3,300,000 Adv
Flour:	4578*2,500 =	11,445,000
	Actual cost	13,735,000
	Material price variance =	2,290,000 Adv
Total material variances		10,825,000 Adv

Material mix variances

Total quantity used = 5700 + 6600 + 6600 + 4578 = 23,478 kg

Standard mix of actual use of each ingredient is in equal proportions = 23,478/4 = 5,869.5kg

	actual quantity at actual mix	actual quantity at std mix	variance	std cost per Kg (Frw)	Variance (Frw)
Flour	5,700	5,869.50	-169.5	600	101,700 Fav
Eggs	6,600	5,869.50	730.5	3,500	2,556,750 Adv
Butter	6,600	5,869.50	730.5	8,500	6,209,250 Adv
Sugar	4,578	5,869.50	-1,291.5	2,500	3,228,750 fav
Mix variance					**5,435,550 Adv**

Material price variance

Standard quantity = 0.4 * 60000 = 24000

Std quantity at Std mix of each ingredient = 24000/4 = 6000

Material price variance

	Std quantity at Std mix	**actual quantity at Std mix**	**variance**	**std cost per Kg**	**variance**
Flour	6,000	5,869.50	130.5	600	78,300
Eggs	6,000	5,869.50	130.5	3,500	456,750
Butter	6,000	5,869.50	130.5	8,500	1,109,250
Sugar	6,000	5,869.50	130.5	2,500	326,250
Yield Variance	**24,000**	**23,478**			**1,970,550**

b) Assess the performance of the production manager based on planning and operational variances for the month of March 2021.

Operating variances	Frw
Revised cost of actual production = 60,000*2000=	120,000,000
Actual cost	104,890,000
Operational variance	**15,110,000 Fav**

Planning variances	Frw
Revised cost of actual production = 60,000*2000=	120,000,000
Original standard cost	90,600,000
Operational variance	**15,110,000 Adv**

The planning variance reveals the extent to which original standard was at fault. It is an adverse variance because the original standard was very optimistic, overestimating the expected profits by understating the cost.

c) i) Determine the profitability per day if daily output achieved is 6,000 units of Sweet, 4,500 units of Flavored and 1,200 units of organic.

Profit per day = throughput contribution – conversion cost

= [(Frw 700* 6,000) + (Frw 800* 4,500) + (Frw 2000*1,200)] – Frw 7,200,000 = Frw 3,000,000

ii) Calculate the Throughput accounting ratio for each product and comment on the results

TA ratio = throughput contribution per factory hour/conversion cost per factory hour

Conversion cost per factory hour = Frw7,200,000/8 = Frw 900,000

Product	Throughput contribution per factory	factory Cost hour	TA ratio
Sweet	Frw 700* 1,200 = Frw 840,000	Frw 90,000	0.93
Flavored	Frw 800* 1,500 = Frw1,200,000	Frw 90,000	1.33
Organic	Frw 2000* 600 = Frw1,200,000	Frw 90,000	1.33

End of Model Answers and Marking guide