CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATIONS

A2.2: STRATEGIC PERFORMANCE MANAGEMENT

DATE: THURSDAY, 01 DECEMBER 2022

MARKING GUIDE AND MODEL ANSWER

SECTION A

QUESTION ONE

SQ	MARKING GUIDE	Marks
	Part A	
i	Per unit requirement Award 0.5 Marks to each product	1
	Total demand Award 0.5 Marks to each product	1
	Total material requirement Award 0.5 Marks to each product	1
	Material shortage	1
	Optimum production plan Award 0.5 Marks to each product	1
	Profit	2
Maximum		**7**
ii	Defining Variables	0.5
	Define and formulate the objective function	0.5
	Formulate the constraints	3
	Draw a graph identifying the feasible region	2
	Optimum production plan Award 1 Mark to each point at the feasible area	4
	Conclusion	1
Maximum		**11**
iii	Shadow price explanations	**2**
	Part B	
i	Determination of variable cost per unit Award 1 Mark to each variable cost	3
	Determination of fixed cost Award 1 Mark to each fixed cost	3
	Contribution to sales ratio	1
	Break-even point	2
Maximum		**9**
ii	Expected monthly profit after tax Award 1 Mark to each elemet of BEP	1
	Expected monthly profit before tax	1
	Expected contribution each month	1
	Break-even point	1
Maximum		**4**
iii	Sales as per revised plan	1
	Variable costs	1
	Fixed costs	2
	Profit/Loss	2
Maximum		**6**
	Part C	

SQ	MARKING GUIDE	Marks
i	Material Costs-Chair bases Award 1 mark for calculation and 0.5 Marks for explanations	1.5
	Material Costs-Chair foots Award 1 mark for calculation and 0.5 Marks for explanations	1.5
	Material Costs-Armrests Award 1 mark for calculation and 0.5 Marks for explanations	1.5
	Material Costs-chair adjustable steel sheet Award 0.5 marks for calculation and 0.5 Marks for explanations	1
	Labor Cost 0.5 for carpent and 0.5 for designer costs 0.5 Marks for explanations	1.5
	Overheads Award 0.5 marks for calculation and 0.5 Marks for explanations	1
	Cost per unit	1
Maximum		**9**
ii	Implications of the minimum price	**2**
Total Marks		**50**

Model Answer

Rwamagana Garment Company (RGC) Ltd

i) Step1: The shortage of material (Fabrics) in quarter one will be 12,000 meters as calculated below

Details	Trouser	Skirt	Total requirement	Available materials	Surplus /(Deficit)
Materials					
Per unit requirement	2 meters	1.5 meters			
Total demand of products	18,000	(20,000+24,000) =44,000			
Total material requirements	36,000	66,000	102,000	90,000	(12,000)

As it is clear the company has direct material as a limiting factor.

Step2: To get the optimum production plan, we should first calculate the contribution per unit of limiting factor

Details	Trouser	Skirt
Contribution per unit	3,200	1,200
Per unit limiting factor-Meters	2	1.5
Contribution per unit of limiting factor (FRW/M)	1,600	800
Ranking	1st	2nd

As it is clear in the above table, the trouser should be given priority as it has the high contribution per unit of limiting factor

Step3: Optimum Production plan will be producing 36,000 units of both trousers and skirts considering the limiting factor.

Item	Units to be produced	Direct material per unit (Meters)	Total units Required (Meters)	Available materials	Balance
Trouser	18,000	2	36,000	90,000	54,000
Skirt	(54,000/1.5) 36,000	1.5	54,000	54,000	0

Profit resulting from the optimum production

Description	**Trouser**	**Skirt**	**Total**
	FRW	**FRW**	**FRW**
Level of Activity	**18,000**	**20,000+16,000**	**54,000**
Selling Price	180,000,000	232,000,000	412,000,000
Costs			
Material Costs (Fabrics FRW 2,000 per meter)	72,000,000	108,000,000	180,000,000
Labor Costs-FRW 800 per labor hour	21,600,000	57,600,000	79,200,000
Other variable costs	28,800,000	43,200,000	72,000,000
Total Variable Costs	**122,400,000**	**208,800,000**	**331,200,000**
Contribution	**57,600,000**	**23,200,000**	**80,800,000**
Fixed Costs			
Manufacturing			43,200,000
Marketing and distribution			21,600,000
Total fixed costs			**64,800,000**
Profit			**16,000,000**

ii) For the RGC Ltd, advise on which optimum level of production to be produced in quarter two and which related maximum contribution and profit (to solve this problem linear programming should be used)

Step1: Defining the variables
Let x be the number of trousers to be produced
Let y be the number of skirts to be produced

Step2: Define and formulate the objective function
The objective of RGC Ltd is to maximize contribution and profit, the objective function will be given by: Max, C=3200x+1200y

Step3: Formulate the constraints

Material requirement per unit:
Trouser: FRW 4,000/FRW 2,000=2 meter per trouser

Skirt: FRW3,000/FRW2,000=1.5 meter per skirt

Labor hour requirement per unit:

Trouser: FRW1,200/FRW 800=1.5 Labor hours
Skirt: FRW 1,600/FRW 800=2 Labor hours
Material constraint: 2x+1.5y<=9,000
Labor hour constraints: 1.5x+2y<=7,500
Production constraint: 2x<=y
Non negativity constraint: x,y>=0

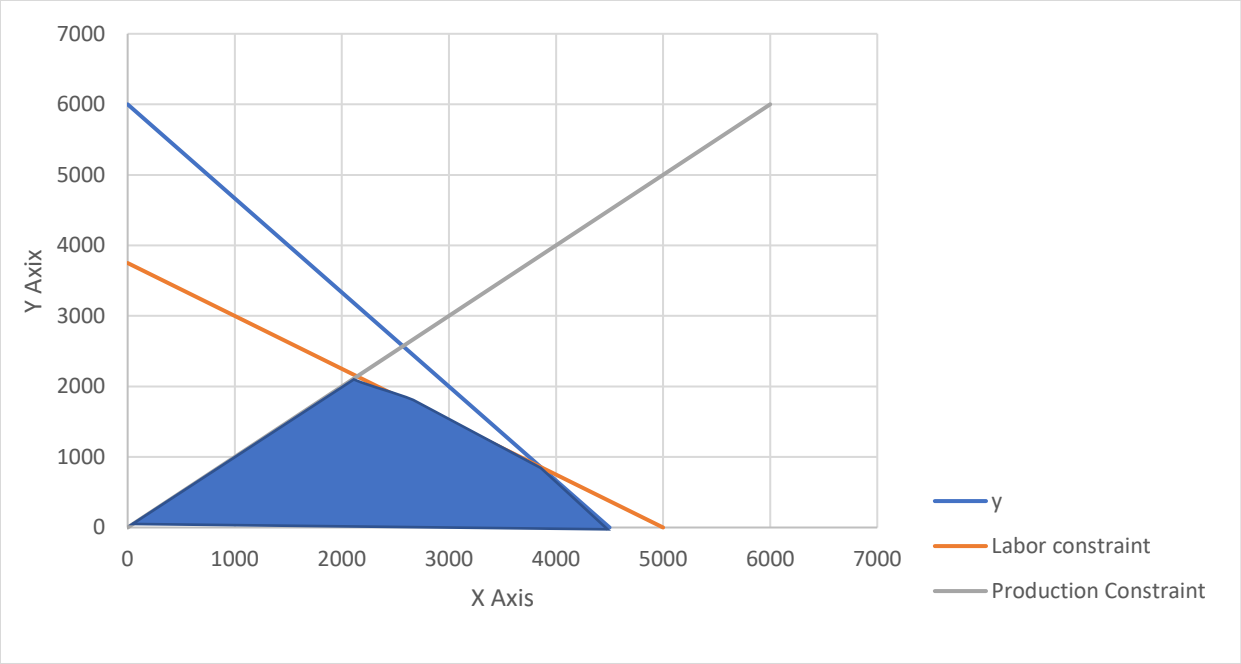
Step4: Draw a graph identifying the feasible region:
Constraints related equations:
Material constraints: 2x+1.5y=9,000
Labor constraint: 1.5x+2y=7,500
Production constraint: 2x=y
Non negativity constraint: x, y=0

To draw the graph at least two points are needed at each constraint equation:
2x+1.5y=9,000

x	0	4,500
y	6,000	0

1.5x+2y=7,500

x	0	5,000
y	3,750	0



The feasible region will be given by the shaded area, the optimum point will be from the point (0,0) or (4500, 0) or the intersection of lines 2x=y and 1.5x+2y=7,500, or the intersection of lines 2x+1.5y=9,000 and 1.5x+2y=7,500

At the point (0,0) RGC Ltd will produce zero units of both trousers and skirts hence making 0 contribution and a loss of FRW 1,200.

At the point (4,500 and 0) RGC Ltd will produce 4,500 units of trousers hence making FRW 14,400,000 of contribution (C= (3,200*4,500) + (1,200*0) and a profit of FRW 9,000,000(14,400,000-(1200*4500)).

The intersection of lines 2x=y and 1.5x+2y=7,500 will give the following points

X= 1,364 Units Y=2,728 Units

At this point (1,364 and 2,728) RGC Ltd will produce 1,364 units of trousers and 2,728 units of skirts hence making FRW 7,637,200 of contribution (C= (3200*1364) +(1200*2728) and a profit of FRW 2,728,000 (7,637,200-(1,200*4,092)).

The intersection of lines 2x+1.5y=9,000 and 1.5x+2y=7,500 will give the following points

X= 3,857 Units Y=857 Units

At this point (3,857 and 857) RGC Ltd will produce 3,857 units of trousers and 857 units of skirts hence making FRW 13,370,800 of contribution (C= (3,200*3,857) +(1,200*857) and a profit of FRW 7,714,000(13,370,800-(1,200*4,714)).

Conclusion: Therefore, RGC Ltd should produce 4,500 Units of trousers as they will maximize both contribution and profit of FRW 14,400,000 and FRW 9,000,000 respectively.

iii)Discuss the proposals of the RGC Ltd' s CEO regarding the overtime and part time hourly rate payments

The overtime rate should normally be determined by the rate at which RGC Ltd should pay for the extra additional one unit of limiting factor which is in this case labor hours. To set the right rate at which additional extra workers will be paid hourly, RGC Ltd should determine the shadow price which will be found by adding one extra unit of labor hour on total available hours. The new optimum production, contribution and profit will be calculated which will then be compared with the original optimum production, contribution and profit. The difference between two contributions will then set as the maximum additional hourly rate at which RGC should not go beyond for extra workers.

Rwamagana Best Chalk Company (RBCC) Ltd

i. **Advise the management of RBCC Ltd on the monthly number of chalk boxes to be produced and sales revenues to break even**

For determining the Break-Even Point, it is necessary to separate variable and fixed costs element

from the given costs:

Cost of sales:

Variable cost per unit: Change in Cost of sales/Change in the level of activity
=(FRW165,000,000- FRW131,250,000)/(35,000-25,000) =FRW 3,375/ Box of chalk

Details	Calculations	July	August
		Total FRW	**Total FRW**
Total cost of sales		131,250,000	165,000,000
Total Variable costs	3,375*25,000 3,375*35000	84,375,000	118,125,000
Total fixed costs (Cost of sales)		46,875,000	46,875,000

Selling and distribution costs:

Variable cost per unit: Change in selling and distribution costs/Change in the level of activity
=(FRW129,375,000- FRW121,857,000)/(35,000-25,000) =FRW 750/ Box of chalk

Details	Calculations	July	August
		Total FRW	**Total FRW**
Total selling and distribution		121,875,000	129,375,000
Total Variable costs	750*25,000 750*35000	18,750,000	26,250,000
Total fixed costs (Selling and Distribution)		103,125,000	103,125,000

Other administrative costs

Variable cost per unit: Change in other administration costs /Change in the level of activity
=(FRW9,210,000- FRW8,650,000)/(FRW35,000-FRW25,000) =FRW 56/ Box of chalk

Details	Calculations	July	August
		Total FRW	**Total FRW**
Total selling and distribution		8,650,000	9,210,000
Total Variable costs	56*25,000 56*35,000	1,400,000	1,960,000
Total fixed costs(Cost of sales)		7,250,000	7,250,000

Therefore, the total variable costs per unit will be given by:

Details	FRW
Variable costs of sales	3,375
Variable selling and distribution costs	750
Variable Other administrative costs	56
Total Variable cost per unit	**4,181**

Selling price per unit = FRW 225,000,000/25,000 or FRW 315,000,000/35,000 = FRW 9,000 per box

C/S ratio (Contribution to sales ratio): (FRW 9,000- FRW 4,181)/ FRW 9,000=4,819/9,000

The total Fixed costs per unit will be given by:

Details	FRW
Fixed costs of sales	46,875,000
Fixed selling and distribution costs	103,125,000
Fixed Other administrative costs	7,250,000
Total	**157,250,000**

It is known that break even sales *C/S ratio gives Total fixed costs or
(BES*4,819/9,000) =FRW 157,250,000,
Break Even point in terms of FRW will be FRW 293,681,262
Break Even point in terms of units will be 32,631 boxes of chalks (FRW 293,681,262/9,000)

ii. Advise the board of directors on the number of boxes of chalk to be produced and total revenues if the proposed investment is undertaken for RBCC Ltd to earn the expected ROI

Management wants 15% of ROI per annum on the investment of FRW 60,000,000

Expected monthly profit after tax: (FRW 60,000,000 *0.15/12): FRW 750,000
Expected monthly profit before tax: (FRW 750,000*100/70): FRW 1,071,429
Expected contribution each month: Profit +FC: FRW 1,071,429+157,250,000
: FRW 158,321,429
Therefore, Sales*C/S ratio=FRW 158,321,429
Required sales: FRW 158,321,429*9,000/4,819
Required sales: FRW 295,682,270
Therefore, required monthly sales in units to make ROI of 15% will be FRW 295,682,270/9,000
Sales will be: 32, 854 Boxes of chalks.

iii. Evaluate the proposal of the marketing director and advise the management of RBCC whether the plan should be implemented

If the proposal is accepted the new selling price per box will be FRW 9,000*90%= FRW 8,100 and the variable cost per unit will remain unchanged at FRW 4,181

Details	Calculations	FRW
Sales as per revised plan	(35,000*115%*FRW 8,100):	326,025,000
Less: Variable costs	(FRW 4,181*35,000*115%)	168,285,250
Monthly contribution as per revised plan		**157,739,750**
Less Monthly Fixed costs		157,250,000
Additional advertising costs		8,500,000
Total fixed costs		165,750,000
Profit/Loss before tax		(8,010,250)
Taxation		-
Profit/Loss after tax		**(8,010,250)**

Advise/Conclusion: The existing profit after tax during the month of august is FRW 7,990,500. Considering the proposal of the marketing director, the company would suffer a loss of FRW

8,010,250. Therefore, basing on financial considerations, the plan should not be implemented.

Rwamagana 5K Furniture (R5KF) Ltd

i. Revised cost statement

Details	Note	Student desk and Chair	Staff Chair
		FRW	FRW
Selling Price per unit		10,000	48,000
Costs			
Material Costs			
Chair bases	1	-	1,320,400
Chair foots	1	108,000,000	
Armrests	2	-	396,750
chair adjustable steel sheet	3	100,000,000	-
Total material costs		**208,000,000**	**1,717,150**
Labor Cost	4,5	390,000	390,000
Other Overhead costs	6	500,000	500,000
Total Costs		**208,680,000**	**2,397,150**
Number of units		20,000	52
Cost per unit		**10,434**	**46,099**

Conclusion:

Considering financial factors, this offer should not be accepted as for the student desk and chairs, the offer price is not covering total relevant costs and for the staff chair there is a difference of only FRW 1,901 which may not cover every cost, remember in relevant costs principle we only consider relevant cost, but it does not necessarily mean that there are no other fixed costs to be pai d by the company. Considering all those factors it is hard for the company to accept this offer in financial perspectives.

Considering non-financial factors, It is clearly stated that Future Leaders academy is a growing school in the country as well as in the region, therefore as it is the potential royal and good customer and company is expecting much orders and demand in the future, R5KF Ltd can consider this and accept this offer for it to create a good relationship with this big customer by expecting much demand in the future from Future Leaders Academy.

Notes:

Material costs

1. Chairbases

52 chair bases are needed for staff chairs, as in the inventory there is 32 chairbases with no future use, they should be used for the current offer at the residual value which is FRW 23,200 each. The remaining 20 chairbases will be purchased at the normal and current market price which is FRW 28,900 each. Giving the total costs of chairbases of (FRW 23,200*32)+(20*28,900) which gives a total of FRW 1,320,400. In this regard, FRW 182,400 is a sunk cost and it should not be used.

Chairfoots:

The current market price of a chairfoot is FRW 5,400 each, even though in the inventory of the company there is enough chairfoots equivalent to 20,800 units, these items are regulary used by the company. R5KF Ltd may use this existing inventory but they will neeed to be replaced, as a result we should consider the replacement value. Therefore, the costs of chairfoot will be given by: FRW108,000,000 (FRW 5,400*20,000). The initial cost of chairfoot of FRW 6,500 per unit is a sunk cost as it should not be used because it is a non-relevant cost.

2. Armrest:

Each staff chair needs two armrest, as a result the company will need 104 armrests (52 chairs*2) to complete this offer**.**

In its inventory there is 70 armrests which need to be revised, in this regard, we should check the costs of 70 existing armrest and the cost of additional 34 armrests to be purchased and compare this with the full purchase cost of 104 armrests.

Details	**Calculations**	**Amount FRW**
Residual value of 70 armrests	70*2100	147,000
Revisiting costs of 70 Armrests	70*1200	84,000
Cost of additional 34 armrests	34*4875	165,750
Total costs		**396,750**

If they are all purchase at the current market price, they would cost the company FRW 507,000 (FRW 104 armrests*FRW4,875). The company should therefore choose to use the ones which are cheap.

The unit costs of FRW 7,400 is a non-relevant costs as it is a sunk costs, therefore, it should not be considered in this matter.

3. Chair adjustable steel sheet (6*48 crem)

These chair adjustable steel should be purchased at FRW 5,000 each giving a total cost of FRW 100,000,000 (FRW 5,000*20,000 students chairs).

4. Carpenters costs

Labour cost is calculated by taking 12 staff * 100,000*2 weeks/ 4 weeks = FRW 600,000. This cost is non-relevant as workers were at spare capacity and penalty is a non-relevant cost as this contract is not the cause of the delay of AH Co contract. Cost will be shared equally

5. Designer expert costs

In this regard, the overtime of 15 hours at the normal rate plus 50% will be considered as the designer expert is being employed at full capacity. Therefore, the cost will be FRW 180,000 for each product (15hrs*8,000*1.5). Cost will be shared equally

Overheads

6. Carpenter costs

The carpenter cost will be relevant to this decision, the cost will therefore be FRW 500,000 for each product which is (2 carpenters*FRW 50,000*5 visits).

ii. Explain the implications of the minimum price that has been calculated in relation to the minimum price agreed with Future Leaders Academy

- The relevant cost is the future incremental cash flow associated with the decision. Hence any past or sunk costs should be ignored. Any non-cash flows such as depreciation or other such accounting adjustments should be excluded from the relevant cost statement.
- Incremental implies that the future cash flow should be as a direct result of the decision taken so any items such as a salary, which is a committed cost rather than an incremental one, should be ignored.
- The minimum price calculated in the above relevant cost statement would not be practical to charge Future Leaders Academy.
- In reality, R5KF Ltd would want to cover all costs, not only just relevant ones. Hence, any sunk, committed or fixed costs incurred would also need to be covered.
- Also, R5KF Ltd would look to make a profit on the contract. In adding a profit margin to arrive at a final price, R5KF Ltd should be mindful of remaining competitive and attracting future work.
- The minimum price calculated in part a should serve only as (i) starting point when calculating the final price

SECTION B

QUESTION TWO

Marking Guide

a) i) Critically evaluate the difference between incremental budgeting and rolling budgets

Incremental budgeting (2 Marks awarded to a well evaluated budget type)	2
A rolling budget	2
Maximum Marks	**4**

ii) Discuss Five limitations that could be encountered by Kandagira Ltd while using the traditional budgeting approach (1Mark for listing and 1 Mark for discussing)

Allows past inefficiencies to be carried forward	2
Unethical behaviour	2
Time consuming	2
Value to users	2
Shareholder value	2
Rigidity	2
Protection	2
Stifle innovation	2
Sales focus	2
Forgotten strategy	2
Reinforces dependence culture	2
Any other valid implication	2
Maximum Marks	**10**

iii)Discussing some of the difficulties they might encounter as they change the budgetary system

Resistance to change	1
Loss of control	1
Training	1
Implementation costs	1
Lack of accounting information	1
Any other valid implication	1
Maximum Marks	**5**

b) Advise the management of Kandagira Ltd the factors they should put into consideration when setting a multinational transfer price.

Exchange rate fluctuation	1
Taxation in different countries	1
Import tariffs	1
Exchange control	1
Anti-dumping legislation	1
Competitive pressures	1
Repatriation of funds	1
Any other valid implication	1
Maximum Marks	**6**

Total: 25 Marks

Model Answer

Kandagira Ltd

a) Incremental budgeting

i) **Critically evaluate the difference between incremental budgeting and rolling budgets**

Incremental budgeting is a process of budgeting which considers current year's results as a base and adjusts it with an extra amount for estimated growth or inflation in the next year. This budgeting approach may be appropriate when an entity is budgeting for costs such as staff salaries which can easily be estimated based on the current salaries as opposed to, for example advertising costs which cannot be easily quantified. The issues with incremental budgeting is that it progressively builds on previously budgeted inefficiencies.

While, a rolling budget is one which gets updated continuously by adding a further period whilst dropping the earliest one, bidding at preparing targets and plans which are more realistic and certain. The rationale for rolling budgets is that, anticipated conditions could have changed from the time the budget was prepared due to several reasons such as new technologies in place, changed environmental conditions, among many other factors.

ii) **Discuss five limitations that could be encountered by Kandagira Ltd while using the traditional budgeting approach**

The main drawback with incremental budgeting similar to other traditional budgeting methods is that it allows past inefficiencies to be carried forward since cost levels are rarely subjected to close scrutiny.

Unethical behaviour: Incremental budgeting is also an inefficient form of budgeting as it allows or encourages budget slack and wasteful spending which is totally unethical. For example, staff in the marketing department at Kandagira Ltd may set a lower sales target if a bonus is capped at the number of washing taps sold.

Time consuming: Budgets are considered to be time consuming and expensive to prepare as it is estimated that even with the current support of computer models, organisations still spend on budget close to 20 or 30 hours of management precious time. With the production and selling department, among other departments, the budget setting process appear to take a couple of hours as consolidation will also be of a paramount.

Value to users: It is believed that some surveys have showed that a great deal of financial directors wish to reform the budgetary process as they feel that finance staff are spending too much time on low value adding activities during budget preparations. With Kandagira Ltd specialising in the production and selling of washing taps, it appears that staff in those departments would be expected to spend more time on the budget as opposed to the finance team.

Shareholder value: It is argued that budgets do not focus on shareholder value as most of them are set on an incremental basis acceptable between a manager and his or her supervisor. When it is achieved a manager may get a reward, an act that is myopic in its own nature. The budget process does not appear to add value to Kandagira Ltd shareholders but to its managers.

Rigidity: The process of reviewing and updating traditional budgets is rather too slow compared to the pace at which the external environment is changing. With advancements in technology, Kandagira Ltd would be better devising a means of relying on the strategic objectives that would be indicating the future of the company as opposed to much reliance over traditional budgets. Kandagira Ltd would adopt the budgetary system which allows flexibility and the adoption of its strategic objectives as need be other than relying on the rigid traditional budgetary system.

Protection: Budgets protect rather than reduce costs in a sense that once approved a manager will have the audacity of spending the approved amounts without further authorisation and sometimes leading them to spend costs unnecessarily especially at the end of the budget period.

Stifle innovation: Due to the need to respond to what was approved, managers end up not being innovate as they do fear to take risks, most especially when an adverse outcome impacts on their short-term performance. Eventually the staff at Kandagira Ltd would be less innovative.

Sales focus: Budgets have been accused of focusing much on sales targets as opposed to customer satisfaction. And when the short-term forecasts are also realised, you also find that still, Kandagira Ltd's customers are not satisfied.

Forgotten strategy: Most Kandagira Ltd's concern would be around monitoring the monthly results against the short-term monthly budget as opposed to establishing a system that monitors

the long-term process against the organisation's strategy.

Reinforces dependence culture: The process of planning and budgeting within a framework devolved from senior management accelerates a culture of dependence. Such traditional budgeting system discourage a personal responsibility culture which is detrimental Kandagira Ltd.

iii)**Some of the difficulties that Kandagira Ltd may face during the process of changing its budgetary systems:**

Resistance to change: Due to some slack that could have been built by Kandagira Ltd's staff owing to the traditional budgeting system, introducing a new system may threaten to change the existing power relationships and hence the resistance.

Loss of control: It might take some time for senior management to adapt to the new system including comprehending its results.

Training: Like any new introduced system, training of all staff would be paramount in order for the new system to operate effectively which could be time consuming and expensive.

Implementation costs: The implementation of a new system such as a beyond budgeting approach would require careful attention which also increases the cost of implementation.

Lack of accounting information: Kandagira Ltd may not have the systems in place to accommodate and analyse the necessary information.

b) Factors to be considered when setting a multinational transfer price

Exchange rate fluctuation – The value of a transfer of goods between Kandagira Ltd and its other profit centres in different countries may equally depend on fluctuations in the Rwandan Franc exchange rate.

Taxation in different countries – Companies will tend to manipulate their profits especially when the tax regimes between profit centres are different by reducing profits in a country with a low tax rate. For example, if Kandagira Ltd has a subsidiary in Uganda where the tax rate is 20% and in Rwanda it is at 30%, profits in Uganda will tend to be manipulated due to a lower tax rate.

Import tariffs – Multinational companies will intend to import goods at a minimised cost in order to keep the transfer price at a minimum value especially in situations where import tariffs are imposed.

Exchange control – This situation may occur when Kandagira's foreign subsidiary, where transfer of profits is restricted, sells to Kandagira Ltd at an exorbitantly higher prices disguising profits as sales revenues.

Anti-dumping legislation – This occurs when governments take action to protect home industries by restricting Kandagira's subsidiary from transferring goods into Rwanda cheaply. For example, by insisting on the use of a fair market value as the transfer price.

Competitive pressures – Transfer pricing can be used to enable profit centres to match or undercut local competitors.

Repatriation of funds – Kandagira's subsidiary may repatriate profits to Rwanda by inflating transfer prices for goods sold to it by Kandagira where inflation is high, thereby reducing the subsidiaries' profits and consequently saving their value.

QUESTION THREE

Marking Guide

a) **i) Using the BCG portfolio matrix, advise ISIMBI Supermarket on the strategies that can be deployed in order to balance ISIMBI's product range.**

Stars – Harvest	2
Cash cows – Hold	2
Question marks – Build	2
Dogs – Divest	2
Maximum Marks	**8**

ii) Discuss at least four limitations of using a BCG portfolio matrix

Too simplistic model	0.5
Undefined market	0.5
Does not consider relationships	0.5
Requires collection of large amounts of data	0.5
Any other valid limitation	0.5
Maximum Marks	**2**

iii) Discussing five factors that might make it difficult to forecast future sales at ISIMBI super market.

Political and economic changes	1
Environmental changes	1
Technological changes	1
Technological advancements	1
Social changes	1
Any other valid limitation	1
Maximum Marks	**5**

b) **Referring to the coffee shop business, explain the specific characteristics of service costing.**

Simultaneous	2
Heterogenous	2
Intangible	2
Perishable	2
No transfer of ownership	2
Maximum Marks	**10**

(Total: 25 Marks)

Model Answer

a) i) Advise ISIMBI Supermarket on the strategies that can be deployed in order to balance ISIMBI's product range:

The BCG portfolio matrix provides a method of positioning products through their life cycles in terms of market growth and market share.

Stars – These are products with a high share of a high growth market, though they require some investments to maintain their market position. The bread product appears to belong here and ISIMBI may spend some money to further support this product or make a decision to instead spend it on cookies to increase on their market share.

Cash cows – These are products with a high share of a low growth market. These might require less investment though generating high levels of cash income. ISIMBI should preserve the market for cakes so that they remain cash cows, though this may require some additional investment for customer retention and loyalty.

Question marks – These are products that possess a low share of a high growth market, with potential to become stars though with some investment reluctance as sufficient market retention may not be guaranteed at this level. ISIMBI should therefore build – by increasing the cookies market share such that it gets to the level of bread – which is the current star.

Dogs – These are products with a low share of a low growth market, and these are allowed to be killed off. ISIMBI should consider divesting pancakes and if cookies cannot be turned into stars, then, ISIMBI should consider divesting them as well.

i) Discussing at least four limitations in using the BCG matrix

✓ The model is too simplistic in the four classifications used in that some products are falling in more than one category

✓ The market is not always easy to define mainly for organisations operating in specialised markets

✓ The model does not consider the relationship between divisions or any links between products for example there may be a relationship between bread and cakes which is apparently ignored.

✓ The model requires the collection of large amounts of data which is time consuming and expensive.

ii) Discuss five factors that may make it difficult to forecast future sales at ISIMBI supermarket

Political and economic changes: When there are highly political and economic changes in an economy, uncertainty is created, which make it difficult to forecast future sales and the related costs.

Environmental changes: When the environment changes, it is believed that it will have a considerable impact on some of ISIMBI's markets and products.

Technological changes: Technology is changing by the day and therefore the past cannot be relied upon to tell the future.

Technological advancements: The advent of advanced manufacturing technology is changing the cost structure of so many organisations. Besides, faster machinery may arise which change the way output levels are currently being produced.

Social changes: Alterations in taste and preferences including changes in social acceptability of different products may cause difficulties in forecasting future sales levels.

Climate changes: Isimbi supermarket products depend on agricultural produces which are highly sensitive to climate changes

b) Discuss the specific characteristics of service costing:

Simultaneity: The production and consumption of a service are simultaneous which makes it difficult to be inspected for quality, nor can be it returned if it is not what was required. Poor quality service can only be determined after a customer has already received it.

Heterogeneity: The service received will be changing each time it is received. It appears impossible to consistently deliver the same quality of service. The service served on Monday's will different from that served the next day.

Intangibility: The performance of a service entails many other intangible factors. Personality of the person serving you, quality of the service itself etc. At ISIMBI coffee shop customers may also enjoy other intangibles such as listening to soft music while having coffee, quick service, smiling waiters and waitresses etc.

Perishability: A service cannot be stored neither can it be bought in bulk. There is no work in progress for services as it is usually seen with products. Coffee can be served one cup at a time in the coffee shop and therefore service cannot be stored or served in bulk similar to other products.

No transfer of ownership: Service costing does not result in the transfer of property. The purchase of a service only allows the customer access to or a right to use a facility.

QUESTION FOUR

Marking Guide	**Marks**
i) NOPAT Calculation	
Operating profit Award 0.5 for each year, max 1 mark	1
Research costs expensed (Project GK) Award 0.5 for each year, max 1 mark	1
Amortization of prior year expenses Award 0.5 for each year, max 1 mark	1
Expense relating to increase in allowance for doubtful debts Award 0.5 for each year, max 1 mark	1
Add non-cash expenses Award 0.5 for each year, max 1 mark	1
Cash taxes Award 1 for each year, max 2 marks	2
Calculation of adjusted capital employed at 01 Jan	
Capital employed as at 01 January Award 0.5 for each year, max 1 mark	1
Expense relating to increase in allowance for doubtful debts Award 0.5 for each year, max 1 mark	1
Project GK research costs Award 0.5 for each year, max 1 mark	1
New product development project Award 0.5 for each year, max 1 mark	1
Non-cash expenses during 2020 Award 0.5 for each year, max 1 mark	1
Adjusted capital employed at 01 January Award 0.5 for each year, max 1 mark	1
Calculation of WACC Award 1 for each year, max 2 marks	2
Calculation of EVA Award 1.5 for each year, max 3 marks	3
Maximum Marks	**18**
ii) Problems of using ROI and RI Award 0.5 for each well explained point, max 3 marks	3
iii) Problems of Short-termism and reward-based performance Award 0.5 for each well explained point, max 3 marks and award 1 mark for a well-presented email	4
Total Marks	**25**

Model Answer

i. Calculation of EVA

1. Calculation of NOPAT for 2020 and 2021

Details	**2021**	**2020**
	FRW (000,000)	**FRW (000,000)**
Operating profit	363,000	241,000
Add: research costs expensed (Project GK)	1,000	1,000
Less: Amortization of prior year expenses (Product development project)	(15,000)	(15,000)
Add: Expense relating to increase in allowance for doubtful debts	1,500	(500)
Add non-cash expenses	300	300
Less: Cash taxes (Working)	(108,900)	(72,300)
NOPAT	**241,900**	**154,500**

Working of cash tax

	2021	2020
	FRW (000)	FRW (000)
Tax charge as per the SOPL	108,300	71,760
Add tax relief on interest (Interest charge*30%)	600	540
Cash Taxes	**108,900**	**72,300**

2. Calculation of adjusted capital employed at 01 January 2020 and 2021

Details	**2021**	**2020**
	FRW (000,000)	**FRW (000,000)**
Capital employed as at 01 January	458,500	426,950
Add: Expense relating to increase in allowance for doubtful debts	4,500	5,000
Add Capitalization of research and development		
Project GK	1,000	1,000
New product development project	15,000	15,000
Add non-cash expenses	300	300
Adjusted capital employed at 01 January	**479,300**	**448,250**

3. Weighted average cost of capital

Details	**2021**		**2020**
Debt weight =121,500,000/458,500,000*100	26%	113,139,000/426,950,000*100	26%
Equity weight=337,000,000/458,500,000*100	74%	313,811,000/426,950,000*10	74%

After tax cost of debt	5.6%	5.6%
Weight of debt	26%	26%
Cost of Equity	15%	13%
Weight of Equity	74%	74%
WACC	13%	11%

4. Economic Value Added-EVA

	2021	2020
	FRW (000,000)	FRW (000,000)
EVA=NOPAT-(K*Capital)	179,591	105,192.5
(241,900-(479,300*13%) 2021		
(154,500-(11%*448,250) 2020		

ii)

Email to CEO

From:managementaccountant@gmail.com
To: ceo@gmail.com
Date:**01/01/2022**
Subject: Discussing the divisional performance measures and their related problems
Dear CEO,
I hope this email finds you well, as per your request kindly accept my view concerning the inquired matters:
The problems that may be involved in comparing divisional performance using RI and ROI
The following are some of the problems that may arise as a results of using RI and ROI as a divisional performance measure:

- Divisions may operate in different environments. A division earning a ROI of 10% when the industry average is 7% may be considered to be performing better than a division earning a ROI of 12% when the industry average is 15%.
- The transfer pricing policy may distort divisional performance.
- Divisions may have assets of different ages. A division earning a high ROI may do so because assets are old and fully depreciated. This may give a poor indication of future potential performance.
- There may be difficulties comparing divisions with different accounting policies (e.g. depreciation).
- Evaluating performance on the basis of a few indicators may lead to manipulation of data. A wider range of indicators may be preferable which include non-financial measures. It may be difficult to find nonfinancial indicators which can easily be compared if divisions operate in different environments.

ii. Analyze the objection of the CFO in both short- and long-term view and authenticity of the financial results when the idea of the CEO is bought.

Short-termism: Linking rewards to financial performance may tempt managers to make decisions that will improve short-term financial performance but may have a negative impact on long-term profitability. e.g. they may decide to cut investment or to purchase cheaper but poorer quality materials.
Manipulation of results: In order to achieve the target financial performance and hence their reward, managers may be tempted to manipulate results for example: accelerating revenue, delaying costs, understating a provision or accrual, manipulation of accounting policies
Not conveying the full picture: The use of these short-term financial performance indicators has limited benefit to the company as it does not convey the full picture regarding the factors that will drive long-term profitability, e.g. customer satisfaction, quality. Therefore, when monitoring performance, a broader range of measures should be used.
Best Regards
Management Accountant

END OF MODEL ANSWER AND MARKING GUIDE