

CERTIFIED PUBLIC ACCOUNTANT
ADVANCED LEVEL 2 EXAMINATIONS
A2.2: STRATEGIC PERFORMANCE MANAGEMENT
DATE: THURSDAY, 31 MARCH 2022

INSTRUCTIONS:

1. **Time Allowed: 3hours 45minutes** (15minutes reading and 3 hours 30 Minutes writing).
2. This examination has two sections: A & B.
3. Section A has one Compulsory Question while section B has three optional questions to choose any **two**.
4. In summary attempt **three** questions.
5. Marks allocated to each question are shown at the end of the question.
6. Show all your workings where necessary.
7. The question paper should not be taken out of the examination room

SECTION A

QUESTION ONE

Mezeneza Company Limited (MC Ltd) makes high quality, handmade shoes which it sells for an average of FRW 18,000 per pair. The standard cost for each pair is FRW 4,200 and the standard labour time of each pair is three hours. In the last quarter MC Ltd had budgeted production of 12,000 pairs, although actual production was 12,600 pairs in order to meet demand. 37,000 hours were used to complete the work and there was no idle time. The total labour cost for the quarter was FRW 53,193,000.

At the beginning of last quarter, the design of the shoes was changed slightly. The new design required workers to sew the company's logo onto the side of every shoe made and the estimated time to do this was fifteen minutes for each pair. However, no-one told the accountant responsible for updating standard cost that the standard time per pair of shoes needed to be changed. Similarly, although all workers were given 2% pay rise at the beginning of the last quarter, the accountant was not told about this either. Consequently, the standard was not updated to reflect the changes. The workers are also paid 25% overtime premium above their usual hourly rate when required to work overtime.

The sales budget of MC Ltd for last year was based on the following estimates:

Total size of market: 200,000 pairs

Expected market share: 25%

Standard contribution per pair FRW 4,000

At the end of the year, it was estimated that the actual size of the market during the year had been 260,000 pairs.

Actual sales in the last year were 61,000 pairs.

MC Ltd production department also produces chemical Y, which is used to treat leather used in making shoes. The standard ingredients of 1 kilogram of Y are:

0.65 kilograms of ingredient F @ FRW 400 per Kg

0.30 kilograms of ingredient D @ FRW 600 per Kg.

0.20 kilograms of ingredient N @ FRW 250 per Kg.

The following additional information is provided:

- Production of 4,000 kilograms of chemical Y was budgeted for January 2022.
- The production of chemical Y is entirely automated and production costs attributed to its production comprise only direct materials and overheads.
- MC Ltd's production process works on a just-in-time (JIT) inventory system and no ingredients or inventories of chemical Y are held.
- 4200 kilograms of Y were produced in January 2022 and the cost details of Materials used were 2,840 kilograms of F, 1,210 kilograms of D and 860 kilograms of N at a total cost of FRW 2,038,000.

The production manager is assessed based on the performance of the variances on chemical Y.

MC Ltd is about to launch a new sports shoe onto the market as a way of diversification. It needs to prepare its budget for the coming year and it is trying to decide whether to launch the product at a price FRW 30,000 or FRW 35,000 per pair. The following information has been obtained from market research.

Price per pair FRW 30,000		Price per pair FRW 35,000	
Probability	Sales Volume	Probability	Sales volume
0.4	120,000	0.3	108,000
0.5	110,000	0.3	100,000
0.1	140,000	0.4	94,000

Notes

1. Variable production cost would be FRW 12,000 per pair for production volumes up to and including 100,000 pairs each year. However, if production exceeds 100,000 pairs each year, variable production cost would fall to FRW 11,000 for all pairs produced.
2. Advertising costs would be FRW 900 million per annum at selling price of FRW 30,000 and FRW 970 million per annum at a selling price of FRW 35,000.
3. Fixed production costs would be FRW 450 million per annum.

MC Ltd in 2020 also started a business in restaurant which is known as Tamu Tamu Foods.

Tamu Tamu Foods is a middle-class restaurant that is only open in the evenings. The restaurant has eight staff, who are each paid at the wage rate of FRW 960 per hour on the basis of hours actually worked. The restaurant also has a restaurant manager and a head chef, each of whom is paid a monthly salary of FRW 516,000.

The following data relates to operations for the month of January 2022:

	Budgeted	Actual
	FRW	FRW
Number of meals	1,200	1,560
Revenue: Food	5,760,000	7,300,800
Drinks	1,440,000	1,404,000
Total revenue	7,200,000	8,704,800
Variable costs: Staff wages	1,105,920	1,589,760
Food costs	720,000	861,600
Drink costs	288,000	633,600
Electricity costs	406,440	420,000
Total variable costs	2,520,360	3,504,960
Contribution	4,679,640	5,199,840
Fixed costs: Manager's and chefs salary	1,032,000	1,032,000
Rent and depreciation	540,000	540,000
Total fixed costs	1,572,000	1,572,000
Operating profit	<u>3,107,640</u>	<u>3,627,840</u>

The budget above is based on the following assumptions:

1. The restaurant is only open six days a week and there are four weeks in a month. The average number of orders each day is 50 and demand is evenly spread across all the days in the month.
2. The restaurant offers two meals: Meal A which costs FRW 4,200 per meal and Meal B, which costs FRW 5,400 per meal. In addition to this, irrespective of which meal the customer orders, the average customer consumes four drinks each at FRW 300 per drink. Therefore, the average spend per customer is either FRW 5,400 or FRW 6,600 including drinks, depending on the type of meal selected. The April budget is based on 50% of customers ordering Meal A and 50% of customers ordering Meal B.
4. Food costs represent 12.5% of revenue from food sales.
5. Drink costs represent 20% of revenue from drink sales.
6. When the number of orders per day does not exceed 50, each member of the hourly paid staff is required to work exactly six hours per day. For every increase of five orders in the average number of orders per day, each member of staff has to work 30 minutes of overtime for which they are paid at the increased rate of FRW 1,440 per hour.
7. Electricity costs are deemed to be related to the total number of hours worked by each of the hourly paid staff and are absorbed at the rate of FRW 352.8 per hour worked by each of the eight staff.
8. All costs for hourly paid staff are treated wholly as variable costs.

The board of directors are on the view that the comparison of the actual and the budget which shows a better performance is not accurate and would wish that for a reliable evaluation they should use flexible budget. MC Ltd's CEO has approached you as an expert in strategic performance management to advice on various issues based on the information provided.

Required:

- (a) i) **Considering the information on the launch of new sports shoes by MC Ltd, advice the CEO on the best price option to launch the sports shoes based on expected profit.** (12 Marks)
 - ii) **Identify which price option should be chosen by management for the launch if maximin decision rule was used.** (3 Marks)
 - (b) **Evaluate the performance of the production manager based on production of chemical Y for last year using the material mix, yield and price variances.** (9 Marks)
 - (c) **Assess the performance of MC Ltd sales using the market share and market size variances** (5 Marks)
 - (d) **Analyze the total labour variances for previous quarter into component parts for planning and operational variances in as much detail as the information allows.** (9 Marks)
 - (e) **Basing on the views of the board of directors, recalculate the budget operating profit for the month of January 2022 for Tamu Tamu Foods and comment.** (12 Marks)
- (Total: 50 Marks)**

SECTION B

QUESTION TWO

Kabaye Sports Company (KSC) is a large manufacturing company which specializes in the manufacture a of wide range of sports clothing and shoes in Rwanda. KSC operates from the Economic zone in Kigali and its mission statement is to create value for the shareholders through production of world-class sports items. The company has two divisions that are Clothing division and Leather division. Each division operates with very little intervention from head office and the divisional managers have autonomy to make decisions about long term investments.

KSC has been measuring performance of the divisions using return on investment (ROI), which is calculated using controllable profit and average divisional net assets. The target ROI for each of the divisions is 18%. If the divisions meet or exceed this target the divisional managers are entitled to a bonus.

Due to COVID-19 pandemic the company has not been doing very well and last year, an investment which was expected to yield a return above the company's cost of capital was rejected by one of the divisional managers because it would have reduced the division overall ROI. Consequently, KCS is considering the introduction of new performance measure, residual income (RI), in order to discourage this dysfunctional behavior in the future. Like ROI, this measure would be calculated using controllable profit and average divisional net assets.

The draft operating statement for the year 2021, prepared by the company accountant is shown below:

	Clothing Division	Leather Division ‘
	‘FRW 000’	FRW 000’
Sales revenue	190,000	420,000
Less variable cost	(70,000)	(151,500)
Contribution	120,000	268,500
Less fixed costs	(47,250)	(71,000)
Net profit	<u>72,750</u>	<u>197,500</u>
Opening divisional controllable net assets	650,000	1,200,000
Closing divisional controllable net assets	450,000	1,500,000

Notes

1. Included in the fixed costs are depreciation costs of FRW 8,250,000 and FRW 23,000,000 for clothing and leather division respectively. 30% of depreciation costs in each division relate to the assets controlled but not owned by the head office. Leather division invested FRW 100 million in plant and machinery at the beginning of the year, which is included in the net assets figures above, and it uses reducing balance method to depreciate assets. Clothing division did

not make any significant additions to non-current assets during the year and uses the straight-line method to depreciate assets. It is the policy of both divisions to charge a full year's depreciation in the year of acquisition.

2. Head office allocates and charges all its costs to the two divisions. These have been included in the fixed costs and amount to FRW 31million for clothing division and FRW 35million for leather division respectively.
3. KSC cost of capital is 12%

Due to many restrictions by ministry of health for sports the company has seen the sales decline over the past two years but the leather division has majority share of sales. The management expected that in this year the company would increase its sales as the restrictions have been lessened for sports.

In the first quarter of year 2022 the two divisions segmented income statement was as follows:

Details	Total 'FRW 000'	Clothing Division 'FRW 000'	Leather Division 'FRW 000'
Sales revenue	35,000	20,000	15,000
Variable cost	(17,210)	(9,600)	(7,610)
Contribution	17,790	10,400	7,390
Less traceable fixed costs:			
Advertising	6,120	3,000	3,120
Administration	4,270	2,100	2,170
Depreciation	2,290	1,150	1,140
Divisional profit margin	5,110	4,150	960
Common fixed costs	(3,900)		
Net profit	<u>1,210</u>		

The management has questioned the low margin in the leather division while the leather division has 25% less sales than clothing division in quarter 1 of year 2022. The management has recommended that the leather division be further segmented into three product lines namely, Garment, Shoes and Handbags as follows:

Details	Garments 'FRW 000'	Shoes 'FRW 000'	Handbags 'FRW 000'
Sales revenue	5,000	7,000	3,000
Traceable fixed costs:			
Advertising	800	1,120	1,200
Administration	300	350	420
Depreciation	25	56	33
Variable costs as a percentage of sales	65%	40%	52%

Analysis of the first quarter of year 2022 show that FRW 1.1 million of administration costs in Leather division are common to the product lines.

Required:

- (a) Using segmental profitability analysis, assess how the key segments of the leather division performed for the first quarter of year 2022 and advice. (9 Marks)
- (b) i) Evaluate the performance of each of the two divisions of KSC using return on investment for year 2021. (6 Marks)
- ii) Discuss the performance of the two divisions for the year, including the reasons for differences in the ROI and impact on the behavior of the division manager with the worst performance. (6 Marks)
- (c) Analyse the performance of each of the two divisions of KSC for the year 2021 using residual income (4 Marks)
- (Total: 25 Marks)**

QUESTION THREE

Jean Paul Gafaranga (JP) is a renowned businessman in Rwanda and has some businesses in Kigali and other places in Rwanda. JP is the owner and CEO of Gafaranga beauty parlor salon which is a quality hairdresser that experiences high level of competition. The salon has been traditionally offering a range of hair services to female clients only including cuts, colouring, Rasta, straightening and weaves.

A year ago, at the beginning of the 2021 financial year, due to COVID-19 pandemic effects on the business, JP decided to expand his operations to include the hairdressing needs of male clients. Male hairdressing prices are lower as the work is simpler and the time taken per male client is much less. The charges of the female clients were not increased during 2020 and 2021 and the mix of services provided for female clients in the two years was the same.

The latest financial results for the salon are as follows:

	2020		2021	
	'FRW 000'	'FRW 000'	'FRW 000'	'FRW 000'
Sales Revenue		20,000		23,850
Less cost of sales:				
Hairdressing staff costs	6,500		9,100	
Hair products- female	2,900		2,700	
Hair products- Male	-	9,400	800	12,600
Gross profit		10,600		11,250
Less expenses:				
Rent	1,000		1,000	
Administration salaries	900		950	
Electricity	700		800	
Advertising	200		500	
Total expenses		2,800		3,250
Net profit		<u>7,800</u>		<u>8,000</u>

JP is disappointed with his financial results. He thinks that the salon is much busier than a year before and was expecting more profits than the results provided. He has noted the following extra information:

- 1) Some female clients complained about the change in atmosphere following the introduction of male services, which created tension in the salon.
- 2) Two new staffs were employed at the start of 2021. The first was a junior hairdresser to support the specialist hairdressers for the female clients. She was appointed at a salary of FRW 900,000 per annum. The second new staff was a specialist hairdresser for the male clients. There were no increases in pay for existing staff at the beginning of 2021, as they had a pay increase at start of 2020 which was to cover for two years.

JP introduced some financial measures of success two years ago

	2020	2021
Number of complains	12	46
Number of male clients' visits	0	3,425
Number of female clients' visits	8,000	6,800
Number of specialist hairdressers for female clients	4	5
Number of specialist hairdressers for male clients	0	1

JP has also been running a small production company that has been producing Telephone in Rwanda. Recently due to the economic downturn as a result of the pandemic the performance has not been good and therefore, he launched a new version of the product. Development work continues to add a related product to the product list. The following details are given for the first quarter of 2022 financial year.

Details		FRW
Development costs		9,500,000
Cost of units produced	- Existing product	75,000,000
	- New product	14,000,000
Sales Revenue	- Existing product	110,000,000
	- New product	25,000,000
Units produced	- Existing product	500,000
	- New product	100,000
Hours worked	- Existing product	100,000
	- New product	25,000

JP has heard about performance evaluation using financial and non-financial measures. Recently, he also attended a workshop and heard about balanced scorecard and hence he has approached you as an expert for advice.

Required:

- (a) **Suggest and calculate performance indicators that could be used for each of the four perspectives on the balanced scorecard for JP's production company for the first quarter of 2022.** (8 Marks)

(b) Assess the financial performance of Gafaranga beauty parlor salon from the data provided. (11 Marks)

(c) Analyse and comment on the non-financial performance of JP's saloon business under the headings of quality and resource allocation (6 Marks)

(Total: 25 Marks)

QUESTION FOUR

Brick Building Company (BBC) is a building business that provides a range of building services to the public. The founder, Mr. Chris, is now semi-retired from active work in the business and was a construction manager before founding the company. His wife, Sarah, is a semi-retired architect and continues part-time as an advisor. Chris is suggesting that before he retires from his combined CEO/Chair role, an independent non-executive Chair should be recruited. Until a new Chair is appointed, and a successor CEO is recruited, Chris will cover necessary tasks as CEO while reducing his working hours. Except for the Company Secretary and Finance Director, the current executive directors are family members (two daughters, nephew, and niece). Each runs a division or business area as managing director following their own experience and skills.

The new Finance Director, Mugabo, is not part of the family and believes that resource efficiencies could be made by coordinating the divisions and that the growth potential suggests an initial stock market listing would be appropriate. The board of BBC rarely meets formally. It frequently makes high-level decisions at "family only" gatherings with the other shareholders, who are nephews and grandchildren who previously worked for the business. The family is considering floating their company on Rwanda Stock Exchange (RSE)

Recently, it has been asked to quote for Kagugu Holdings (KH) for its building conversions and extension of properties. It has found that it is winning fewer building conversions contracts than expected. In addition, BBC also produces and sells different types of bricks to the construction industry. The three types of brick produced are Clay, Concrete and reclaimed bricks.

BBC has a policy to price all jobs at the budgeted total cost plus 50%. Overheads are currently absorbed on a labour hour basis. BBC thinks that a switch to activity based costing (ABC) to absorb overheads would reduce the costs associated with building conversions and hence make them more competitive.

BBC management accountant trainee has provided the following data:

Overhead category	Annual overheads 'FRW 000'	Activity driver	Total number of activities per year
Supervisors	90,000	Site visits	500
Planners	70,000	Planning documents	250
Property related	240,000	Labour hours	40,000
Total	400,000		

A typical building conversion costs FRW 3,500,000 takes 300 labour hours to complete and requires only one site visit by a supervisor and needs only one planning document to be raised.

An extension of property costs FRW 8,000,000, takes 300 labour hours to complete and requires six site visits and five planning documents. In all cases the labour is paid FRW 15,000 per hour.

BBC also has a Private polytechnic known as Brick Polytechnic (BP) in Rwanda, which has many polytechnics which are public. BP obtains the vast majority of its revenue through government contracts for academic research and payments per head for teaching students which are sponsored by government. The economy of Rwanda has been not doing well in the last two years and this has caused the government to cut funding for all the universities in the country.

In order to try to improve efficiency, the chancellor of the university, who leads its executive board, has asked the head administrator to undertake an exercise to benchmark BP's administration departments against the other two large Polytechnics in the country, MP and UP. The government education ministry has supported this initiative and has required all three universities to cooperate by supplying information.

The following information has been collected regarding administrative costs for the most recent academic year:

	BP RWF'000	MP RWF'000	UP RWF'000
Research			
Contract management	14,430	14,574	14,719
Laboratory management	41,810	42,897	42,646
Teaching facilities management	26,993	27,263	26,723
Student support services	2,002	2,022	2,132
Teachers' support services	4,005	4,100	4,441
Accounting	1,614	1,571	1,611
Human resources	1,236	1,203	1,559
IT management	6,471	6,187	6,013
General services	17,049	16,095	18,644
Total	115,610	115,912	118,488
Drivers:			
Student numbers	28,394	22,783	29,061
Staff numbers	7,920	7,709	8,157
Research contract value (FRW m)	185	167	152

The key drivers of costs and revenues have been assumed to be research contract values supported student numbers and total staff numbers. The head administrator wants you to complete the benchmarking and make some preliminary comment on your results.

The education ministry in Rwanda is keen to have potential students well informed on available choices to help them choose which polytechnic to apply to.

To this end, the ministry has proposed that summary league tables are published showing:

- The value of research funding secured by each polytechnic
- The proportion of students gaining first class and upper second (2:1) class degrees

- The proportion of students completing their courses
- The proportion of graduates who have secured full time employment within one year of graduating

However, the Principals of a number of polytechnics in Rwanda have written to the minister for education expressing their concern at the proposal to introduce the league tables.

Required:

- (a) **Assess the progress of the benchmarking exercise to date in BP, explaining the actions that have been undertaken, and those that are still required.** (7 Marks)
- (b) i) **Calculate the cost and advice on the quoted price of building conversion and of an extension of property using ABC to absorb the overheads.** (6 Marks)
- ii) **Assuming that the cost of a building conversion falls by nearly 7% and the price of an extension to properties rises by about 2% as a result of the change to ABC, suggest possible pricing strategies for the two products that BBC sells and suggest two reasons other than high prices for the current poor sales of the building conversions.** (5 Marks)
- (c) **Analyse the current board operations at BBC and Chris's suggestions for an independent Chair.** (7 Marks)
- (Total 25 Marks)**

End of question paper

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