CERTIFIED PUBLIC ACCOUNTANT ADVANCED

LEVEL 2 EXAMINATIONS

A2.2: STRATEGIC PERFORMANCE MANAGEMENT

DATE: THURSDAY 29, MAY 2025

INSTRUCTIONS:

1. Time Allowed: **3 hours 45 minutes** (15 minutes 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

Rebero Investment Company (RIC) Ltd is a famous transport company operating in over five African countries, and its headquarters are in Rebero hills of Kigali City. Recently, the transport regulatory body informed RIC Ltd that it was given more routes to operate in. As a result, RIC Ltd wants to increase the number of coasters to accommodate these changes.

In the recent Annual General Meeting, a FRW 50 million budget was approved for the new investment. The company needs to choose between two mutually exclusive investments as outlined below:

RIC Investment proposals

Investment 1: Acquisition of brand-new coasters

The company is considering the acquisition of five (5) coasters at FRW 10 million each. They are expected to be used for five (5) years after which each coaster will be scrapped at FRW 2 million. The expected cash flows are outlined below:

Details	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
	FRW'000	**FRW'000**	**FRW'000**	**FRW'000**	**FRW'000**
Revenues	40,000	32,000	28,000	24,000	29,000
Maintenance costs	400	500	600	750	1,000
Salaries to drivers	1,250	1,250	1,250	1,250	1,250
License fees	1,000	1,000	500	500	1,000

Investment 2: Acquisition of second-hand coasters

Alternatively, the company is considering the acquisition of 10 second-hand coasters whose investment is FRW 5 million each. They are expected to be used for three years after which they will be scrapped at zero value. The expected cash inflows from each coaster are outlined below:

Details	**Year 1**	**Year 2**	**Year 3**
	FRW'000	**FRW'000**	**FRW'000**
Revenues	3,000	3,000	3,000
Maintenance costs	600	700	800
Salaries to drivers	1,250	1,250	1,250
License fees	1,000	1,000	500

Additional information:

1. All the above investments will require an immediate investment in working capital equivalent to 10% of annual revenue. The working capital is to be recovered at the end of the project’s life.
2. Liability to tax will be reduced by tax-allowable depreciation on coasters which the company can claim on a straight-line basis over the useful life of the coasters. The tax rate to be used is 30% and it is paid in the year in which profits arise. Losses are not taxed.

3. The company uses 12% as a cost of capital to appraise all new investment projects.
4. The annuity factors at 12% are 2.402 and 3.605 for 3 years and 5 years respectively.

RIC Ltd transfer pricing issues

The tax rate from the five African countries in which RIC Ltd operates has different rates of Corporate Income Tax (CIT). RIC Rwanda Ltd operates under a 30% CIT regime while RIC Uganda Ltd operates under a 17% CIT regime. Recently, the Chief Executive Officer (CEO) attended an online Rwanda Revenue Authority (RRA) training on transfer pricing guidelines. This workshop discussed in detail how transfer pricing works more specifically in multinational corporations like RIC Ltd, to evade illegal tax liability. The CEO needs to deeply understand how this works.

Required:

a) **Assess the financial acceptability of the two proposed investments and advise which investment to be undertaken by RIC Ltd.** (12 Marks)

b) Using a simple numerical example, **show how setting a transfer price could reduce tax liabilities between RIC Rwanda Ltd and RIC Uganda Ltd, and discuss the special factors for consideration in comparing controlled and uncontrolled transactions while selling or transferring other intangible assets.** (4 Marks)

c) RIC Ltd offers transport services to two distinct markets (the Rwandan Market and the Ugandan Market) in which it is a monopoly. The fixed costs of production per month are FRW 30 million and variable costs per unit produced and sold are FRW 50,000. Recently, detailed market research conducted, revealed the demand functions in the markets to be as follows: with prices shown as P1, and P2 for market prices and Q1, and Q2 for the quantity of tickets produced and sold for Rwandan and Ugandan markets respectively. $P1 = 80{,}000 - 7.5Q1$ for Rwandan market and $P2 = 79{,}000 - 14.5Q2$ for Ugandan Market. The newly hired management accountant believes there should be price discrimination; the price is currently FRW 65,000 per ticket in both markets.

Required:

i) **Calculate the price to charge in each market, and the quantity of tickets to be sold each month to maximize profits.** (2 Marks)
ii) **Determine the revenue function for each market and the maximum monthly profit in total.** (3 Marks)
iii) **Calculate and comment on the change in total profitability and prices.** (4 Marks)
iv) **Support the predominance of a full cost-plus strategy over other pricing approaches.** (2 Marks)

d) RIC Ltd discovered that in festive seasons it produced and sold more transport services than other seasons for the rest of the year since many travelers were going to celebrate these seasons with their loved ones in the countryside. RIC Ltd is now trying to work out the level of seats for the coming year and the corresponding demand levels for the coming year. The three possible states of the economy have equal probabilities to occur.

State of the economy	Demand
Peak	700 tickets
Expansion	560 tickets
Trough	450 tickets

The expected selling price and variable cost per seat for the coming year are FRW 9,000 and FRW 4,000, respectively. The regulatory authority will charge FRW 500 for an unoccupied seat. RIC Ltd has decided to offer transport services at one of the three service levels described above to match forecast demand.

Required:

i) **Construct a pay-off table to show all the possible outcomes.** (5 Marks)

ii) **Determine the level of service (seats) the company should choose based on Maximin.** (3 Marks)

iii) **Briefly, discuss any SIX methods and approaches used to incorporate risk and uncertainty into strategic planning.** (6 Marks)

e) To improve efficiency and boost profitability, the management of RIC Ltd needs to redesign its daily operations across all departments and review its corporate governance structure.

Rebero Investment Company (RIC) Ltd redesign

The management of Rebero Investment Company (RIC) Ltd needs to restructure its operations to ensure efficiency and cut down unnecessary costs. Currently, RIC Ltd has nine departments namely: planning & budgeting, accounting, reporting, procurement, purchasing, human resource management, production, talent detection & development, sales & marketing department. All decisions in the company are made by the Chief Executive Officer, which delays the production process mostly in purchasing and procurement of raw materials when she is not present as other staff cannot make any decision in the company. The company has established more than five quality control processes to ensure that the quality and specifications of the produced product meet the ones in the customer's order. RIC Ltd uses a functional organizational structure where the managers and normal workers are completely different in terms of both pay and responsibilities.

Rebero Investment Company (RIC) Ltd corporate governance

Since its establishment, RIC Ltd has never appointed a board. Recently, the shareholders met and decided to comply with all corporate governance requirements as they are planning to list the company on the Rwanda Stock Exchange (RSE) in the coming years. After consultation and review of all listing requirements, they were told that good corporate governance is one of the key requirements.

Required:

i) **Discuss any FIVE ways RIC Ltd could use to implement Business Process Re-engineering and boost its performance.** (5 Marks)

ii) **Briefly discuss the FOUR common board committees that RIC Ltd will need to introduce to ensure a good corporate governance structure.** (4 Marks)

(Total: 50 Marks)

SECTION B

QUESTION TWO

Nyabugogo Limited has three issues that require your urgent attention as the management accountant.

a) **Investment Appraisal**

The company is planning to develop a new product that will revitalize its stagnating industry. The market analyst has given it a positive review, but cannot tell how long the product will last.

The analyst has advised that the product may last for four years if there is stiff competition but if not, and the competitor comes up with a new product, then it will last for six years.

The machines that will be used in manufacturing this product will need to be leased, and the company can either enter into a four-year lease contract or a six-year lease contract (but not one that can be extended).

You have been provided with the following information on sales volumes, production volumes, and selling prices:

Details	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Sales and production units	30,000	25,000	20,000	20,000	17,000	17,000
Saling price per unit-FRW	280	270	260	240	200	200
Variable cost per unit-FRW	120	120	120	120	120	120
Fixed cost-FRW	600,000	600,000	600,000	600,000	600,000	600,000

Additional information:

1. Advertising costs to boost sales are estimated to be FRW 650,000 in year one and FRW 100,000 in year two, there is no advertising cost in the third and fourth year. However, if the project is extended for an additional two years, then the company will spend an additional FRW 200,000 per year in advertisements in years five and six;
2. The initial cost of the project will be FRW 7,500,000 if the project is operated for four years and FRW 6,500,000 if it is operated for six years;
3. Maintenance costs amounting to FRW 1,400,000 will be spent in year five and FRW 600,000 in year six;
4. The company can claim tax allowable depreciation on a straight-line basis over the life of the project;
5. Fixed costs are specific to the new product;
6. Taxation is at the rate of 30% payable in the same year as cash flows arise;
7. The company uses an after-tax discount rate of 10% for such projects;
8. Present value interest factor at 10% from year 1 to year 6 are 0.9090, 0.8260, 0.7510, 0.6830, 0.6210, and 0.5640.

Required:

Advise Nyabugogo Limited whether it should undertake the project for four years or six years. (8 Marks)

b) **Product performance measurement**

Nyabugogo Limited has provided you with the data below so that you may assist in the performance evaluation of production and sales for one of its premium products. The Company's standard costing and data for the last quarter, for product LOTO are as follows:

Selling price per unit	FRW 1,100
Material KK	3.5 kg at FRW 180 per kg
Material MW	2.1kg at FRW 140 per kg
Labour	0.20 hours at FRW 650 per hour

Fixed production costs for the quarter were FRW 6,250,000

Actuals for the quarter were as follows:

Production and Sales	5,200 units were produced and sold for FRW 548,000
Material KK	1,320 Kgs was used at a cost of FRW 230,000
Material MW	572 Kgs was used at a cost of FRW 84,000
Labour	Total hours worked 136

Total hours paid were 142 hours at a cost of FRW162,000

Fixed costs are FRW 64,000

Budgeted production and sales for the quarter were 570 units

Had the company known in advance, it could have revised its sales and production volume, the overall market contracted by 10%, would have also revised selling prices to FRW 950 per unit. Labor rates were revised to 0.2 hrs. at FRW 1,050 per hour.

Required:

i) Calculate Mix and Yield variances for each material (4 Marks)

ii) Calculate sales volume variances, sales price variances, material price variances, and labour rate variances (4 Marks)

iii) Discuss the usefulness of calculating mix and yield variances for materials (4 Marks)

c) Nyabugogo Limited uses time series as a way of predicting the future and is concerned that sometimes the methods are quite unreliable, more often than not, it had to sell some of its products at lower than the cost price by simply relying on a model that supplied it with wrong predictions.

Required:

Briefly discuss the advantages and disadvantages of using time series statistical techniques to make predictions. (5 Marks)

(Total: 25 Marks)

QUESTION THREE

Uwamaliya Plc is a large conglomerate company with subsidiaries in almost every sector, including medicinal research, residential homes construction (done by Kalome Limited), the clothing industry (done by Baby Wares Limited), transport (done by MoTTo Limited), amongst other sectors. The company is loved by investors as it is well-diversified and is always coming up with new and innovative products. It has heavily invested in its research and development division.

Product 1 development

Uwamaliya has developed a "wonder drug" that will treat all diseases except death. It is unsure of what the introductory price should be and is considering either offering low introductory prices and gaining market share or offering it at a premium and recovering development costs before others start to copy it.

The following unit costs relates to the "wonder drug":

	FRW
Material cost	280
Other variables cost	90
Labour	0.75 hours (see note 1 below)

Additional information:

1. Labour is currently working at full capacity and the kind needed for this product is scarce and hard to find. In this case, many hours will have to be borrowed from other departments from where they are paid FRW 480 per hour.
2. The other productions will have to stop when the wonder drug is being produced; the contribution per hour is FRW 120.
3. The product is expected to be price sensitive, and market research predicts that for every decrease in price by FRW 4000, demand will increase by 10,000 units; however, due to limitations of other factors, production, and demand cannot exceed 4,000,000 units.

Required:

a) **Calculate the sales price at which profits are maximized.** (8 Marks)

b) **Discuss the two pricing options above and advise what Uwamariya should consider** (4 Marks)

c) **Product 2 development**

Uwamaliya is developing another product for new markets. Research indicates that the product will be profitable as it is one of a kind in that market. However, being a fast-moving consumer product, it appears very sensitive to changes in its variables, such as selling price, variable production costs, etc. Management will have to invest in plant and machinery at a cost of FRW 70 million and will evaluate its profitability on a four-year time horizon.

They are optimistic that 300 units will be sold each year at a constant selling price of FRW 205,000 per unit and produced at a variable cost of FRW 87,000 per unit. Fixed costs are estimated at FRW 10 million. All machines shall be scrapped at the end of year four. The current WACC is 18% with a debt-to-equity ratio of 40%. An equity beta factor of 1.2 is used. The cost of equity is 14% and debt is at 9%.

Required:

Calculate and explain how sensitive the project is to changes in variable costs and sales volume. (8 Marks)

d) Performance Measurement

Uwamaliya has provided you with the following information for the years just ended

Table A - Results for the whole group

Year ended	**31-Dec-23**	**31-Dec-22**
Return on capital employed	20.60%	31.90%
Gross profit margin	39.80%	45.00%
Operating profit margin	17.20%	22.80%
Net asset turnover (in times)	1.2	1.4
Current ratio	1.8	0.89
Gearing ratio	19.20%	15.80%

Table B - Subsidiary ratios for the year ended 31st December 2023

Subsidiary	**MoTTo Limited**	**Kalome Limited**	**Baby Wears Limited**
Return on net asset	52.7%	16.7%	40%
Asset turnover - times	1.2	0.7	1.3
Gross Profit Margin	75.7%	36.9%	48%
Net profit margin	43.9%	35.3%	30.8%
Current ratio	7.5	0.8	1.6

As part of the company's overall acquisition of new non-current assets, the Construction segment (Kalome Limited) acquired new constructions worth FRW 104 billion during the year.

Required:

Using ratios and other information provided, **evaluate the financial performance of Uwamaliya plc.** (5 Marks)

(Total: 25 Marks)

QUESTION FOUR

SUN Sports Ltd is a group of creative sports activities operating in Kigali City center for five years. In a recently convened Annual General Meeting (AGM), it was proposed to amend the currently applied performance management system. The AGM tasked senior management to assess the feasibility of the application of the Economic Value Added (EVA) in the company. The following financial data were extracted from the financial statements of SUN Sports Ltd for the year ended 2023 and 2024.

Extract Statement of Profit or Loss for the year ended

Details	**2023**	**2024**
	FRW'000	**FRW'000**
Sales	800,000	900,000
Profit before tax	192,000	234,000
Income tax expense	58,000	70,000
Profit After Tax	134,000	164,000

Extract Statement of Financial Position as of 2023 and 2024

Details	**2023**	**2024**
	FRW'000	**FRW'000**
Non-Current Assets	320,000	360,000
Current Assets	360,000	430,000
Total assets	**680,000**	**790,000**
Financed by		
Total equity	540,000	650,000
Long-term debts	140,000	140,000
	680,000	**790,000**

Additional information:

1. The impairment of goodwill amounted to FRW 10 million per year in 2023 and 2024. The cumulative amount of goodwill written off or impaired in earlier years amounted to FRW 90 million.
2. Company's pre-tax cost of debt was estimated to be 10%.
3. The company's cost of equity was estimated to be 16% and 18% in previous and current years respectively.
4. The company intends to have an equal proportion of debt and equity in its target capital structure.
5. The tax rate to be applied in both years is 30%.
6. The economic depreciation was equal to the depreciation used for tax purposes and depreciation charged to profit or loss for both years.
7. Included in the provided profit before tax presented above, are the interest expenses that amounted to FRW 12 million per year in 2023 and 2024.however, the capital employed for 2022 was FRW 558 million.

8. Other non-cash expenses amounted to FRW 24 million per year in both 2023 and 2024.

Recently, the Chief Executive Officer attended a CEOs' workshop organized by the ICPAR, where different non-financial performance measures were discussed in details, including a performance pyramid and the use of a balanced scorecard. Everything was fine until the presenter reached the concept of the Balanced Scorecard, which the CEO did not seem to understand well.

Required:

a) **Estimate the Economic Value Added (EVA) of SUN Sports Ltd for 2023 and 2024** (clearly state any assumption you will make) (6 Marks)

b) **Discuss the Economic Value Added (EVA) as both an organizational and a divisional performance measure.** (4 Marks)

c) **Briefly discuss FOUR challenges the CEO would face while implementing the Balanced Scorecard as a non-financial performance measurement system.** (5 Marks)

d) SUN Sports Ltd.'s investment center has net assets of FRW 800 million and made profits before interest of FRW 160 million. The notional cost of capital is 10% (It is also the company's target rate of return). An opportunity has arisen to invest in a new sports-related project costing FRW 100 million. This project is expected to generate a FRW 15 million profit for each of the four years of its life.

Required:

i) **Evaluate the Return on Investment (ROI) with and without this new investment (Base your calculations on opening book values). Would the investment centre manager wish to undertake the investment if performance is judged on ROI?** (3 Marks)

ii) **Calculate the annual average Residual Income (RI) with and without the investment (Base your calculations on opening book values). Would the investment centre manager wish to undertake the investment if performance is judged on RI?** (3 Marks)

iii) **Briefly discuss any FOUR challenges that may be encountered while comparing divisional performance.** (4 Marks)

(Total: 25 Marks)

End of Question Paper

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