CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATIONS

A2.2: STRATEGIC PERFORMANCE MANAGEMENT

DATE: THURSDAY 27, NOVEMBER 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

Nile Manufacturing Ltd (NEL) is a mid-sized Rwandan manufacturing company specializing in the production of high-quality ceramic tiles and sanitary ware for both domestic and regional markets. The company operates within Rwanda's rapidly growing manufacturing sector, which supports the government's Vision 2050 goals of industrial transformation, sustainable development and export diversification.

a) NEL situated in the Southern Province near Nyungwe industrial corridor, has invested heavily in modern production facilities, automation, and eco-efficient technologies that reduce waste and energy consumption. Its operations emphasize the use of locally sourced raw materials such as clay and feldspar, supporting local mining cooperatives and reducing import dependency. Over the past five years, Rwanda's manufacturing industry has recorded steady growth, contributing an increasing share to GDP and creating thousands of industrial jobs. However, the sector continues to face challenges from rising global energy costs, supply chain bottlenecks, and inflationary pressures. Despite these headwinds, NEL has maintained its market presence through lean production, innovation, and continuous process improvement.

As part of its strategic plan, NEL aims to expand exports to neighboring countries such as DRC, Uganda, and Burundi, leveraging the African Continental Free Trade Area to access larger markets. In line with Rwanda's Green Growth and Climate Resilience Strategy, the company has launched sustainability initiatives to recycle production waste, install solar systems, and adopt clean production technologies.

The following financial and production data were produced by the management of Nile Manufacturing Ltd in the year 2024.

Details	Product A	Product B	Product C
Factory manager's salary (FRW)	68,000,000	80,000,000	92,000,000
Factory rent (FRW)	40,000,000	45,000,000	50,000,000
Factory building depreciation (FRW)	38,000,000	35,000,000	27,000,000
Factory insurance (FRW)	92,000,000	140,000,000	74,000,000
Profit (FRW)	80,000,000	120,000,000	135,000,000
Units sold	5,000	3,000	2,000
Factory hours per unit	2	1	2
Contribution/sales ratio	60%	70%	70%

Additional information:

1) Total factory hours available in the period were 20,000 hours
2) Direct materials were 10%, 10% and 15% of sales value for Product A, Product B and Product C respectively.
3) All units produced were sold and there was no opening stock.

4) Assume NEL has other non-material costs not provided in the above information

Required:

Using the throughput accounting ratio calculated for each of the three products**, advise the management of NEL on the optimal production decision and justify your recommendation**

(25 Marks)

b) Nile Manufacturing Ltd (NEL) recently diversified into the regional export of ceramic tiles. The company serves two major markets, Rwanda and Tanzania where it operates under limited competition. Management has been using a single export price of FRW 55,000 per square meter in both markets. Recent market analysis conducted by the company's Management Accountant revealed the following demand functions, where P1 and P2 represent selling prices in FRW and Q1 and Q2 represent the quantity of square meters sold in the Rwandan and Tanzanian markets, respectively $P1=75,000-5.5Q1$, $P2=72,000-10.5Q2$. Fixed production cost per month were FRW 25, 000,000 and variable production cost per square meter were FRW 50,000. Management wants to explore price discrimination to improve profitability and market competitiveness.

Required:

i) **Evaluate and derive the optimal price point for each market and establish the corresponding profit-maximizing monthly sales volumes of square meters** (4 Marks)

ii) **Formulate the revenue function for each market and ascertain the total maximum monthly profit achievable** (4 Marks)

iii) **Assess, using the existing uniform price of FRW 55,000, the resulting sales quantities and total monthly profit, and critically appraise the shift in overall profitability and pricing relative to the outcome in part(ii)** (4 Marks)

c) Nile Manufacturing Ltd (NEL) produces ceramic tiles for the Rwanda and Tanzania markets. Although sales are stable, the company faces many operational problems. NEL keeps finished goods worth about FRW 180 million, equal to two months of production. Management is worried that this high inventory increases storage costs, hides quality problems, and ties up money. To reduce waste and produce only what customers need, NEL introduced a Just-In-Time (JIT) system. After six months, the JIT system was not working well. Instead of smooth production, NEL experienced frequent stock outs, irregular heating chamber schedules, long delays, and more customer complaints. Raw materials often arrived late because suppliers had transport and cash-flow issues. Power cuts were common, and long setup times in glazing and finishing also caused problems. Workers were not trained in JIT or continuous improvement. Defect rates were still high at 4% for Product A, 3% for B, and 6% for C, and customer complaints increased by 10%. These issues showed that NEL's processes were too unstable for JIT to succeed.

Management decided to introduce Total Quality Management (TQM) to solve the basic quality problems. Teams from mixing, pressing, glazing, firing, and packaging worked together to find root causes. They discovered issues such as inconsistent clay moisture, uneven glaze thickness, changes in heating chamber temperature, and lack of standard operating procedures. Under TQM, new standard operating procedures were introduced, statistical process control charts were used for heating chamber operations, communication improved, and staff received training. As processes became more stable, NEL rebuilt its JIT system. Large batches were replaced with smaller batches, a simple card system to control production was introduced, and the factory layout was improved. Key suppliers were trained to deliver smaller but more frequent shipments. Quality checks were added to detect defects early, and workers were allowed to stop production when needed. Over time, defect rates dropped, heating chamber downtime reduced, and inventory levels fell. TQM created the strong quality foundation needed for JIT to work well, helping NEL improve customer satisfaction, shorten lead times, and strengthen its overall performance.

Required:

Using the scenario provided on Nile Manufacturing Ltd (NEL), **explain why the initial implementation of the Just-In-Time (JIT) system failed and how the introduction of Total Quality Management (TQM) helped create the necessary conditions for JIT to operate effectively in a tile manufacturing environment**. (8 Marks)

d) As NEL continues to expand within the region, management has recognized that its existing performance measures mainly focused on output, cost control, and profit and are no longer adequately reflect the company's strategic priorities of sustainability, innovation, and export competitiveness. To address this gap, the Managing Director instructed the finance and operations teams to design a Balanced Scorecard. However, several challenges have emerged during the development process, including an overreliance on financial measures with limited integration of customer and operational performance metrics; resistance from departments toward performance monitoring and target setting; weak data-management systems, making it hard to track non-financial indicators such as defect rates, delivery times, and energy consumption; poor alignment between departmental KPIs and the organisation's overall strategy; and difficulty translating sustainability initiatives such as solar energy use and recycling into measurable performance outcomes.

Despite these challenges, management remains committed to establishing a strategic performance measurement system that incorporates the perspectives of the Balanced Scorecard while aligning with Vision 2050 and Rwanda's industrial sustainability goals.

Required:

Explain how adopting the Balanced Scorecard could help NEL address the performance measurement challenges identified above. (5 Marks)

(Total: 50 Marks)

SECTION B

QUESTION TWO

a) Nara Phone Ltd is a multinational telephone manufacturing company operating in more than 20 countries including Rwanda since 2005. The company has been experiencing an increasing growth rate as the market is very competitive and much of the success has been due to which was attributed to the flexibility and the development of an experienced and cohesive management team.

Below is the four quarters budget as extracted from the recent management reports for new hired management reference:

Details	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
	FRW'000	FRW'000	FRW'000	FRW'000
Direct materials	175,000	185,500	196,630	208,428
Indirect materials	62,500	66,250	70,225	74,439
Direct labor	130,000	137,800	146,068	154,832
Indirect labor	49,750	52,735	55,899	59,253
Fixed production overheads	25,000	25,000	25,000	25,000
Other expenses	69,650	73,829	78,259	82,954

With a view to get much insights and know much about the current budgetary system, the newly appointed managing director organized the meeting and the following are typical of managerial reactions about the current budgetary systems:

"Last months' budgets were impossible to achieve. My department operated at its most efficient level for months, and still didn't make the target."

"My results totally ignore the interruptions to production in my main supplying department"

"I may have made my budget, but I wouldn't like to guarantee either the quality of the output or the accuracy of the output figures."

"We don't even know where the budgets are prepared, what we do is just to implement them."

"The only response I got to last and other previous month's performance was no bonus and a nasty memo"

Required:

Using the data provided and the managerial reactions, critically assess the current budgetary systems and assess in THREE ideas, how the use of Zero-Based Budgeting system will improve the budgetary systems at Nara Phone Ltd. (8 Marks)

b) Nara Phone Ltd is currently using a variance analysis approach where the marginal costing system was adopted. The company is now producing the new telephone brand named Nara Pro.II. The below standard costs data apply for the production of 200 phones. The production requires 1,000 kg of materials at FRW 80 each, while the labor hours needed are 4,000 hours at FRW 150 each. The 200 phones require 4,000 hours of fixed overheads at FRW 100 each. The monthly production and sales budget is 180 phones and the budgeted unit selling price is FRW 6,000.

For the month of August 2024, the following production and sales is available.

Details	
Quantity produced/Sold	212 phones
Sales value-FRW	1,260,000
Material purchased and used (1,064Kg)-FRW	85,000
Labor (4,080 hours)-FRW	620,000
Fixed overheads-FRW	380,000

The following data relates to the other two new produced telephones named Nara S and Nara S Plus whose standard contribution per unit are FRW 50,000 and FRW 60,000 respectively. The company was expecting to produce and sell 8,000 units and 12,000 units of Nara S and Nara S Plus respectively. In the current month of August 2024, the actual contribution turns out to be FRW 55,000 and 65,000 for Nara S and Nara S Plus respectively. The actual units produced and sold for Nara S and Nara S Plus are 9,500 units and 11,000 units.

Required:

i) Prepare an operating statement for Nara Pro.II in the month of August 2024 **(**12 Marks**)**

ii) Calculate and interpret the sales mix and quantity contribution variances for Nara S and Nara S Plus (5 Marks)

(Total: 25 Marks)

QUESTION THREE

CRYPTO Ltd. is a reputed toy manufacturing company operating in Kigali Special Economic Zone. The company has been found use the old-fashioned costing methods and did not perform any financial performance analysis for years. Recently, CRYPTO Ltd has hired the new management team including the Chief Executive Officer (CEO), The Chief Finance Officer and a Senior Production Manager who were all tasked to revamp different company's operations and boost company's profitability. As the new management, they agreed to first review the company's strategic orientation (mission statement, goals and objectives), analysis of company's past years' financial performance and the review of the existing costing system.

Exhibit 1: Our mission statement
"We grow and prosper together with our customers, by providing services of greater value to them at the cheaper prices. We aim to maximize our shareholders' value through the continuous growth of our business. We create a work environment that encourages and rewards diligent and highly motivated employees".

Exhibit 2: Analysis of current costing method
CRYPTO Ltd has been using variance analysis whereby the budgeted production data are compared with the actual output. Considering the recently produced variance analysis report, CRYPTO Ltd.'s most of its budgeted items showed the adverse variances which were arisen due to poor budgeting. The new management is keen to implement the target costing system as a strategy to cut unnecessary costs.
One of the most know product is a vehicle toy whose selling price is FRW 24,500 after adding 25% margin as per the company's policy. Below is the cost structure of the vehicles toy as extracted from the recent management reports.

Details	**FRW**
Direct materials	11,300
Direct Labor	5,760
Indirect labor	4,660
Other expenses	2,780
Total costs	24,500

Exhibit 3: Financial and non-Financial Performance Analysis
In their review, the new management is keen to analyze the two recent years' financial statements of 2023 and 2024. Other companies in the manufacturing sector benchmark their performance to the following sector performance benchmark.

Ratio type	**Ratio**
Current ratio	3:1
Receivable days	36 days
Payable days	32 days
Inventory days	30 days
Debt to Equity ratio	36%
Return on Assets	12%

Below is the extract of Statement of Financial Position as at 31st December

Details	**FYE 2023**	**FYE 2024**
Assets	**FRW'000**	**FRW'000**
Non-Current Assets		
Property, Plant& Equipment	100,965,456	132,803,326
Intangible Assets	8,309,294	7,752,246
Total Non-Current Assets	**109,274,750**	**140,555,573**
Current Assets		
Inventory	10,997,400	8,742,933
Accounts Receivable	14,678,139	17,952,493
Other Current Assets	12,722,716	14,449,370
Cash & Cash Equivalent	9,086,240	10,216,341
Total Current Assets	47,484,494	51,361,137
Total Assets	**156,759,245**	**191,916,709**
Equity& Liabilities		
Equity	65,000,000	65,000,000
Long term debt	68,317,823	92,912,239
Notes Payables	14,676,922	20,547,690
Accounts Payable	8,764,500	13,456,780
Total Equity and Liabilities	**156,759,245**	**191,916,710**

Below is the extract of the Statement of Financial Performance for the year ended 2023 and 2024

Details	**2023**	**2024**
	FRW'000	FRW'000
Sales	459,876,500	510,462,915
Cost of Sales	(227,896,500)	(252,965,000)
Gross Profit	231,980,000	257,497,915

Operating expenses	(142,345,600)	(183,789,400)
EBIT	89,634,400	73,708,515
Interests	(33,890,776)	(37,618,761)
Earnings Before Tax	55,743,624	36,089,754
Taxation	(16,723,087)	(10,826,926)
Net Income	39,020,537	25,262,828

You were hired as a Financial Consultant to help the new management to analyze the financial performance of CRYPTO Ltd for the year ended 2024

Required:

a) Considering the mission statement of CRYPTO Ltd in the exhibit 1. Discuss THREE ways the company can measure whether it is succeeding in achieving its mission and TWO impact on performance management (5 Marks)

b) Using data provided in the exhibit 2. Advise on the target cost gap and using examples, show any FIVE ways it can be closed by CRYPTO Ltd. (8 Marks)

c) **Using data provided in the exhibit 3. Draft a memo to the new Chief Executive Officer which analyses the performance of CRYPTO comparing the year 2024 against the sector benchmark and advise how to improve performance** (12 Marks)

(Total: 25 Marks)

QUESTION FOUR

Niveax Ltd has two geographically dispersed divisions located in the Northern and Western provinces of Rwanda. The Northern division produces a designer perfume called “Kanda perfume.” Production requires two ingredients, A and B, used according to the production function:

$X = \sqrt{(A * B)}$

Where:

X= number of bottles of perfume produced per day

A= daily units of ingredient A

B= daily units of ingredient B

The company is currently operating at a level where the daily usage of ingredient A is 320 units**,** and ingredient B is 500 units**.** The overall cost of capital for Niveax Ltd is 12%**,** and inflation during the period under analysis is assumed to be zero.

Recently, Kanda perfume has faced stiff competition in the East African market. Rebranding efforts and discount strategies have not improved sales significantly, and board meetings have become tense. The production manager has also resigned to join a competing firm. To ease the situation, the Marketing Manager suggested entering the Western Africa market. A research firm, Xerox Ltd**,** has offered to provide market advice at a fee of FRW 4,600,000

The following demand probabilities and pay-off (profit) outcomes (in million FRW**)** for three alternative production levels in the proposed Western Africa market are provided:

Demand

	High	Medium	Low
Probability	0.30	0.50	0.20
Production level 1	80	-20	50
Production level 2	100	30	15
Production level 3	55	35	25

Niveax Ltd must also choose between continuing operations in one of its two existing divisions the Northern division or the Western division. These divisions are mutually exclusive, with viable lives of 6 years and 4 years respectively. The cost accountant has provided the following annual net cash flows (in million FRW**):**

Year	Northern division FRW "Million "	Western division FRW "Million "
0	(350)	(248)
1	100	105
2	65	35
3	90	80
4	70	120
5	150	
6	95	

The selling price of Kanda perfume, and the costs of ingredients A and B, are random variables. Fixed cost is FRW 12,000,000 per day. The probability distributions of the random variables are:

Selling price per bottle FRW	Probabilities
40,000	0.15
48,000	0.35
43,000	0.2
55,000	0.3

Cost of ingredient A (per unit) FRW	Probabilities
1,200	0.1
1,500	0.05
2,300	0.3
2,500	0.55

Cost of ingredient B (per unit) FRW	Probabilities
1,500	0.2
1,800	0.2
3,500	0.15
3,000	0.45

Note: For simulation purposes, assume all prices, variable costs, and fixed cost are per day, and treat each week as one decision period. Use the following random numbers sequentially for the simulation in Part (b): 48, 70, 86, 40, 14, 18, 46, 23, 35, 27, 85, 13, 89, 24, 34, 59, 19, 08, 79, 49, 75, 15, 32, 23, 02, 56, 88, 87, 59, 43, 06, 55.

Required:

a) **Critically assess the daily expected profit of the company.** (2 Marks)

b) **Using the random numbers provided, simulate the company's profit for 10 weeks** (11 Marks)

c) **Advise the board whether they should hire Xerox Ltd for the Western Africa market study** (4 Marks)

d) **Advise management on which division (Northern or Western) they should invest in, clearly supporting your conclusion**. (8 Marks)

(Total: 25 Marks)

End of Question Paper