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**CERTIFIED PUBLIC ACCOUNTANT**  
**FOUNDATION LEVEL 2 EXAMINATIONS**  
**F2.1: MANAGEMENT ACCOUNTING**  
**DATE: WEDNESDAY 27, NOVEMBER 2024**

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**INSTRUCTIONS:**

1. Time Allowed: **3 hours 15 minutes** (15 minutes reading and 3 hours writing).
2. This examination has **Seven questions** and only **five questions** should be attempted.
3. In summary attempt **Five questions**.
4. Show all your workings where necessary
5. Marks allocated to each question are shown at the end of the question.
6. The question paper should not be taken out of the examination room.

## QUESTION ONE

a) Budget is defined as quantitative financial plan prepared and approved prior to a determined period of time, usually detailing projected income to be generated and expenditure to be incurred during that period and the capital allocated to attain a given objective.

### Required:

**List eight steps that are followed during budget preparation process for a company.**

(8 Marks)

b) Mukabura Co. Ltd (MCL) uses budget execution report to compare actual performance with the budget that was set at the start of the year. This process directs attention towards achieving the agreed financial targets. The budget is flexed and all noted variances are reported accordingly.

It is a common practice that, during last quarter of each financial year, Muhabura Co. Ltd (MCL) start to prepare the budget for the next financial year. Information from all departments and directorates are consolidated together by strategy department, and budget team prepare a consolidated budget to be approved by the board. Below is extract of MCL' performance operating statement for the financial year ended 31<sup>st</sup> December 2023:

Details	Unit of measurement	Budgeted amount	Actual results	Variance
Production	Units	5,200,000	6,100,000	900,000
Sales	FRW	10,955,000	11,420,000	465,000
<b>Direct costs:</b>				
Raw materials	FRW	3,170,700	3,455,000	284,300
Labour	FRW	1,430,500	1,685,000	254,500
Variable costs	FRW	976,300	737,400	(238,900)
		<b>5,577,500</b>	<b>5,877,400</b>	<b>299,900</b>
<b>Operating costs</b>				
Fixed	FRW	1,200,000	1,510,100	310,100
Variable	FRW	565,000	382,400	(182,600)
<b>Selling and distribution costs</b>				
Fixed	FRW	1,218,600	1,430,000	211,400
Variable	FRW	1,072,000	539,200	(532,800)
<b>Total costs</b>		<b>4,055,600</b>	<b>3,861,700</b>	<b>(193,900)</b>
<b>Net operating profit</b>		<b>1,321,900</b>	<b>1,680,900</b>	<b>359,000</b>

**Required:**

- (i) **What is flexible budget?** (2 Marks)
- (ii) **Prepare a revised operating statement using flexible budget approach and interpret variance of each element of the revised operating statement** (10 Marks)
- (Total: 20 Marks)**

**QUESTION TWO**

a) Ishami Real Estate Ltd (IRE) is a company which involves in Real Estates design, construction for sale and offers construction services, its primary targeted customers include Rwandan Diaspora seeking a fully furnished house for purchase or an apartment for rent during vacation period. During the first quarter of 2023, in first management meeting, Managing Director (MD) informed all departmental managers about the importance of management accounting, costs are typically classified into various element which helps in analysis and understanding of the total cost incurred by the company.

Managing Director further explained that despite the company operating without a management accounting department in the past year, it was now crucial to establish one. This was necessary because costs had previously been mixed up and needed identification for greater cost efficiency. Managing Director assigned a team to classify different costs according to their Behavioural, ensuring that the total costs of the company are well-defined. this would help Ishami Real Estate Ltd make informed decisions regarding pricing, production, resource allocation, and overall profitability analysis.

**Required:**

As a CPA student, **explain at least 4 classifications of costs based on their behaviour in management accounting to be presented to the Managing Director of Ishami Real Estate Ltd (IRE)** (8 Marks)

b) Shami Furniture Ltd (SFL) is one of the subsidiaries of Ishami Real Estate Ltd (IRE) that exclusively manufactures wood products. It renowned for its Muvura Product line, which includes Muvura doors and Gates designed, produced and installed to the customer houses. Due to the nature of its operations and the process required to manufacture a final Muvura Products, Shami Furniture Ltd (SFL) opted to use process costing because it is difficult to distinguish the costs of each part in manufacturing one Muvura product.

The following information was extracted from Shami Furniture Ltd (SFL)'s books of accounts and it relates to the 2<sup>nd</sup> quarter of the year 2024. During this period, the input costs for process1 were FRW 20,500,000 with an input of 15,000 units; the output was 13,500 units and the normal loss was 8% for each step. Output from process1 was transferred to process2, where the input costs were again FRW 20,500,000 for 13,500 units of input, resulting in an output of 12,720 units. There was no opening or closing units of inventory of Muvura products.

**Required:**

**Prepare the process account and abnormal loss or gain for each assignment. (12 Marks)**  
**(Total: 20 Marks)**

**QUESTION THREE**

a) Briefly, **explain Just in Time (JIT) stock management** (2 Marks)

b) Butaro Mining Ltd (BML) is a company registered in Rwanda since 2013 and carry out mineral extraction in Burera District. BML has not been able to measure the efficiency of its work and the performance of its employees in respect of the mineral extraction. This resulted in changes of executive management and newly appointed Managing Director said that they need to use ratios including labour efficiency ratio, the labour capacity ratio and the production volume ratio to measure labour performance.

During first quarter of the period just after appointment on new Managing Director, BML has budgeted to produce 10,000 units of Cobalt and taking 4,000 hours. During evaluation of the 1<sup>st</sup> quarter results, they noted that actually produced 12,000 units of cobalt and took 4,200 hours.

**Required:**

As a CPA student, you have been approached by BML management accountant to advise them and requested to **compute the labour efficiency ratio, the labour capacity ratio and the production volume ratio and clearly interpret results.** (10 Marks)

c) **Explain at least 4 types of labour remuneration methods** (8 Marks)

**(Total: 20 Marks)**

**QUESTION FOUR**

Inyange Nziza Ltd (INL) is a company operating in Prime Economic Zone (PEZ) specialised in powder milk processing and supply them in East Africa market. INL's milk powder requires two processes, and it is normal for stocks of goods completed by Process I to be held for some time before being used in Process II. this require INL to open process accounts. The following information has been collected for the year ended 31<sup>st</sup> December 2023:

Details	Process1	Process2
Direct materials used	FRW 2,000,000	FRW 1,400,000
Direct labour cost	FRW 2,000,000	FRW 2,100,000
Opening Stocks of Finished goods	1,000 units valued at FRW 500 each	1,111 units valued at FRW 900 each
Opening Work-In-Progress	1,400 units valued at FRW 250 each	644 units valued at FRW 155.658 each

Details	Process1	Process2
Closing Work-In-Progress	600 units valued at FRW 250 each	200 units valued at FRW 500 each
Closing Stocks	1,600 units valued at FRW 500 each	555 units valued at FRW 900 each
Units completed during Period	9,600 units	9,444 units
Machine hours worked during Period	1,200	2,000

Additional information:

1. Sales 10,000 units at FRW 1,100 each.
2. Absorption Production overhead was FRW 1,150,000 is absorbed at the rate of FRW 500 per machine hour for Process I and FRW 250 per machine hour for Process II.
3. Process II used 9,000 units of Process 1 output

**Required:**

**Prepare process account, stock account, over/under absorption of overhead account and profit and loss account for INL Ltd. (Total: 20 Marks)**

## QUESTION FIVE

Murera Steel Insustry Ltd (MSI) in a steel manufacturing company established in Rwanda since 2010. MSI is specialised in manufacturing steel and has its head office in Nyanza District of the Southern Province. It has been experiencing losses due to intense competition with other steel manufacturing companies in Rwanda, but is well known for producing better quality and strong steel, which gives it a competitive advantage over competitors.

During the end of the year 2022 board meeting, management introduced new market product of producing steels, assembling them and producing final products ready to be installed on client houses without further modification. Before board approval, management presented this project with the following data:

1. Fixed costs expected to be incurred are FRW 12,000,000 per year
2. Variable costs attributed to the project is FRW 67,500 per unit
3. MSI Ltd's management informed board that they expect to generate a profit of FRW 12,685,000
4. MSI Ltd management again presented to the board that one unit will be sold at FRW 135,500
5. MSI Ltd management informed the board that after one year, Budgeted sales units will be increased by 10%, costs will remain unchanged and this implies an increase in profit by 10% as well.

The board of directors was reluctant to approve this project as they were requesting further information considering cost volume profit analysis for this project.

**Required:**

- a) **Define Margin of safety** (2 Marks)
  - b) **Using information provided by MSI Ltd to the board, calculate the break-even-point both in units and value** (6 Marks)
  - c) **Calculate number of units corresponding with their sale revenue Required by MSI Ltd achieve on promised profit.** (4 Marks)
  - d) **Calculate margin of safety for MSI Ltd based on the projected sales increase** (4 Marks)
  - e) **Discuss at least four limitations of CVP analysis** (4 Marks)
- (Total: 20 Marks)**

**QUESTION SIX**

Nyaruguru Outgrowers Tea Ltd (NOT) is a company founded by two different women's cooperatives: one from Nyaruguru Tea Women Cooperative (NTWC) and other from Butare Tea Women Cooperative (BTWC). All cooperative members have equal shareholdings in NOT Ltd. The company was registered in the Rwanda Development Board (RDB) after the National Agricultural Export Development Board (NAEB) encouraged cooperatives to increase the value and quality of tea export for the country.

NOT Ltd produces tea, packs it well and then exports it to the East African market, Euro market and Dubai market. All company's final tea is produced by mixing harvest from both NTWC and BTWC to produce better quality tea. since NOT Ltd started its operation, it has received best tea production award twice.

Due to seasonal factors, output from both cooperatives is limited to the following quantities in the first quarter of 2024:

1. Nyaruguru Tea Women Cooperative (NTWC) 15,700 Kgs
2. Butare Tea Women Cooperative (BTWC) 15,300 Kgs

Due to heavy restriction and product quality check on international market, NOT Ltd is required to have a sufficient quantity of both tea harvest from both cooperative to continue exporting required quantity in all markets.

The following Information was extracted from NOT Ltd books of account relating to the market requirement of the three markets are shown below:

<b>Details</b>	<b>East African Market (EAM)</b>	<b>Euro Market (EM)</b>	<b>Dubai Market (DM)</b>
Quantity of output exported to the market			
NTWC (kgs) for each unit	10	40	20
BTWC (Kgs) for each unit	30	55	44

Details	East African Market (EAM)	Euro Market (EM)	Dubai Market (DM)
Maximum sales demand (units)	170	160	155
Contribution per Kgs sold (FRW)	175	140	208

NOT Ltd production department and quality department ensure that there are no defects or poor-quality tea by carefully control all packaging materials. This thorough process ensures that there is no wasted production for experts. NOT Ltd does not keep stock of finished production.

**Required:**

- Define the term limiting factor (2 Marks)
- Recommend market that will maximize the profit for NOT Ltd (10 Marks)
- NOT Ltd received offer to supply in each market 90 units during next period, would this offer alter your recommendation in (b)? (4 Marks)

d) Gako Multi Service Ltd (GMS) has three business lines whose performance was evaluated and results were to be presented to the GMS Ltd's shareholders for decision making purpose. GMS Ltd's performance results are shown below:

Details	Supermarket at Nyamata	Garage at Gikondo	Liquor store at Nyarutarama	Total
	FRW	FRW	FRW	FRW
Sales revenue	100,000,000	180,000,000	210,000,000	490,000,000
Variable costs	80,000,000	126,000,000	136,000,000	342,000,000
Fixed costs	31,000,000	21,000,000	40,000,000	92,000,000

Shareholders of GMS Ltd due to heavy loan that was taken from Bank of Nyamata, they needed to evaluate performance of each business line and decide to close poor performing business line in their portfolio.

**Required:**

With the use of calculations, **advise shareholders of GMS Ltd based on the performance results the portfolio to be closed out.**

(4 Marks)  
(Total: 20 Marks)

**QUESTION SEVEN**

- Explain the difference between controllable and non-controllable costs and give two examples on each. (8 Marks)
- Managing Director (MD) of Kigali Gakondo Ltd (KGL) a company based in Kigali specialized in manufacturing and sells of Gakondo products, has requested management to prepare a presentation to the Rwanda Green Fund (FONERWA) to request grant. Among FORENRWA's requirement to qualify for Grant is demonstrating the relationship between

activity level and total production cost to forecast total production costs in the next grant period of 2 years. The following past two years' data has been provided by management accountant for Grant application:

Year/Quarter	Activity level (Unit "000")	Total production cost (FRW"000")
2021 Q1	15	300
2021 Q2	45	615
2021 Q3	25	470
2021 Q4	55	680
2022 Q1	30	520
2022 Q2	20	350
2022 Q3	35	590
2022 Q4	60	740

**Required:**

Using Regression analysis, assist the Managing Director of KGL in understanding the relationship between activity level and total production cost in order to forecast the total production cost for first quarter of upcoming year of 2023, Assume the total expect production is 80,000 Units.

(12 Marks)

(Total: 20 Marks)

**End of question paper**