CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL 2 EXAMINATIONS

F2.1: MANAGEMENT ACCOUNTING

DATE: WEDNESDAY 29, MAY 2024

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. Marks allocated to each question are shown at the end of the question.
4. Show all your workings where necessary.
5. The question paper should not be taken out of the examination room.

QUESTION ONE

(a) Information is a critical component in an organization. There are many sources of data an organization can use to obtain such important information. Management accounts is one of the very many sources of such information that management requires for use in both short term and long term.

Required:

Explain 4 usefulness of information obtained from management accounting in an organization (8 Marks)

(b) Management accounting differ in a number of areas with financial accounting in terms, scope, application among others.

Required:

Explain six differences between management accounting and financial accounting in the following areas (12 Marks)

(Total: 20 Marks)

QUESTION TWO

(a) One of the fundamental roles of a management accountant is decision making. Decision making is normally defined as a choice of action between alternatives. Only relevant costs should always be factored in the process of making a choice.

Required:

Explain four characteristics of relevant costs which are normally considered when making a decision. (4 Marks)

(b) ZURI Ltd prepared the following budget for the first five months of the year 2023.

Month	Sales Budget (Units)
January	22,500
February	24,200
March	22,600
April	20800
May	18,200

Additional information

1. Inventory of finished goods at the end of every month is to be equal to 25% of sales estimate for the next month
2. On 1st January, 2023, there were 5,200 units of the product on hand
3. There is no work in progress at the end of the month

4. The selling price per unit was estimated to be FRW 3,500 per unit
5. Each unit of the product requires two types of materials in the following quantities:
   Material A: 8 kgs
   Material B: 6 kgs

Required:

For the months of February, March and April, 2023 prepare:

i.	**Sales Budget**	(3 Marks)
ii.	**Production Budget**	(3 Marks)
iii.	**Materials Usage Budget**	(3 Marks)

(c) The Chief Executive Officer of Mediplan Hospital would like to establish a cost formula linking the administrative costs involved in admitting patients to the number of patients admitted during the month. The admissions departments costs and the number of patients during the last seven months for the year 2022 are given below:

Month	Number of Patients Admitted	Admission Departments Costs FRW
June	3,800	304,000
July	3,400	274,000
August	3,200	280,000
September	3,000	286,000
October	2,600	262,000
November	2,200	256,000
December	3,100	282,000

Required:

Using high low method

i.	**Estimate the variable cost per patient**	(3 Marks)
ii.	**Estimate the fixed cost incurred by Mediplan Hospital**	(2 Marks)
iii.	**Estimate the Admission Department Cost of admitting 2,100 patients in the hospital using which function/model-one determined by high-low method or one determined by regression analysis.**	(2 Marks)

(Total: 20 Marks)

QUESTION THREE

a) The following data relates to **Kayunga company ltd** for the year ended 31st December 2021.

Budget details

1. Direct material purchases 50,000 kgs @ FRW 80 per kg
2. Direct labor cost 60,000 hours @ FRW 70 per labor hour
3. Variable production over heads 60,000 hours @ FRW 50 per labor hour
4. Fixed production overheads FRW 1,000,000
5. Budgeted production 100,000 units

Actual performance

1. Direct material 48,000 kg @ FRW 85 per kg
2. Direct labor cost @ FRW 65 per hour FRW 3,770,000.
3. Variable production overhead @ FRW 45 per hour FRW 2,610,000
4. Fixed production overhead FRW 1,200,000
5. Actual production 90,000 units

Required:

Calculate the following variances

i.   **Material price variance**   (2 Marks)
ii.   **Material usage variance**   (2 Marks)
iii. **Labor rate variance**   (2 Marks)
iv.   **Labor efficiency variance**   (2 Marks)
v.   **Variable overhead efficiency variance**   (2 Marks)
vi.   **Variable overhead expenditure variance**   (2 Marks)

b) **Explain the following terms as used in standard costing**

i.   **Attainable Standards**   (2 Marks)
ii.   **Ideal Standard**   (2 Marks)
iii. **Current Standard**   (2 Marks)
iv.   **Basic Standard**   (2 Marks)

                                                                                            (Total: 20 Marks)

QUESTION FOUR

(a) Amani Ltd manufactures three products namely A, B and C.

The following data relates to the three products

	A	B	C
Demand in units	2,000	3,000	1,800
	FRW	FRW	FRW
Selling price per unit	2,500	3,200	4,600
Production cost per unit:			
Labour cost	400	560	800
Raw materials	700	1,100	1,550

Additional information:
1. Highly skilled labour is required for the installation of the three products in the customer's premises. A maximum of 25,000 hours of highly skilled labour are currently available at FRW 80 per hour during the production period
2. Fixed cost for the production period is FRW 4,500,000.

Required:
i. **Find the current short fall in the highly skilled labour** (2 Marks)
ii. **Calculate the optimal production plan** (6 Marks)
iii. **Calculate the profit at the optimal production plan** (2 Marks)

(b) Chrystal Ltd has two production departments and two service departments. The company incurred overheads and the management accountant has provided you with the following basis of apportionment.

	Production Department		Service Department		
	A	B	Stores	Maintenance	Total
Cubic Capacity (M3)	8,000	5,000	1,000	2,000	16,000
Floor Area (M2)	4,500	6,200	3,500	1,300	15,500
Number of Employees	420	280	140	120	960
Value of Equipment FRW	120,000	240,000	80,000	100,000	540,000

The following overheads were recorded for the month just ended

	FRW
Rent	18,000,000
Heat & Light	2,400,000
Welfare Costs	4,600,000
Depreciation of Equipment	2,000,000
Indirect Labour Dept A	1,450,000
Indirect Labour Dept B	1,200,000
Indirect Labour Dept Stores	800,000
Indirect Labour Dept Maintenance	920,000

Service centres support other centres as follows:

	Production Department		Service Department	
	A	B	Stores	Maintenance
Stores	50%	40%	_	10%
Maintenance	45%	50%	5%	_

Required:

i. Allocate and apportion the overheads to each department. (5 Marks)

ii. Reapportion overheads using simultaneous equation method (5 Marks)

(Total: 20 Marks)

QUESTION FIVE

(a) The following details were obtained from the stores manager of Rusage ltd for the month ended 30th September 2023. Opening inventory was 1,000 units valued at FRW 250 each.

Dates	Purchases	Sales
1st	2,000 units @ FRW 250 each	-
3rd	-	2,500 units @ FRW 300 each
5th	1,500 units @ FRW 260 each	-
7th	-	1,500 units @ FRW 300 each
10th	1,000 units @ FRW 280 each	-
15th	1,500 units @ FRW 290 each	2,000 units @ FRW 320 each
20th	500 units @ FRW 300 each	-
25th	1,000 units @ FRW 300 each	500 units @ 320 each
30th	-	1,500 units @ FRW 300 each

Required:

Calculate the value of closing inventory using the weighted average method (13 Marks)

(b) A company manufactures a product branded **DG**. The main raw materials used in the manufacture of product DG is called M2. The current inventory control policy of the company is to order material M2 twice a year. The quantity of each order is equivalent to one half of year's forecast demand.

The following relates to material M2

- Annual demand 2,400,000 units
- Ordering cost is FRW 6,000 per order
- Annual stock holding cost is 12% of the purchase price
- Purchase price per unit is FRW 7,500

Required:

i. **Compute the economic order quantity (round to the nearest whole number** (2 Marks)
ii. **Explain what will happen to the ordering cost if the company increases the order size by 25%.** **(round the answer to the nearest whole number)** (3 Marks)
iii. **How many orders will the company make annually if (ii) is adopted. (round answer to the next whole number)** (2 Marks)

(Total 20 Marks)

QUESTION SIX

Vision 2020 Ltd was recently registered and started its operations in the year 2020. The company is based at Kigali Special Economic Zone and makes clothes. In the year 2020 the cost accountant used the traditional method of absorbing production overheads to cost units. In the year 2021 he shifted from the traditional method of absorbing overheads using labor hours to activity-based costing (ABC). The following cost data was for the year 2021.

Production cost per unit of each product

Products	X	Y	Z
Direct material cost per unit (FRW)	100	80	60
Direct labor cost per unit (FRW)	80	60	45
Production units	125,000	80,000	60,000
Labor hours required per unit	8	6	10
Machine hours per unit	2.8	2.5	2.5

Additional information

1. Total production overhead cost was FRW 18,850,000.
2. For the purpose of activity-based costing as a basis of absorbing overheads the following details are provided

Overhead	Allocation	Cost driver	Product X	Product Y	Product Z
Machining cost	50%	Machine hours	350,000 hours	200,000 hours	150,000 hours
Material handling	30%	Number of orders	180 orders	140 orders	100 orders
Set up cost	20%	Number of set ups	120 set ups	100 set ups	60 set ups

Required:

a) Calculate cost per unit using traditional method of absorbing overheads on the basis of labour hours   (6 Marks)

b) Explain six steps followed in calculation of cost per unit under activity based costing   (6 Marks)

c) Calculate cost per unit using activity based costing method of absorbing overheads on the basis of labour hours   (8 Marks)

Note: All calculations to be rounded off to two decimal place

(Total: 20 Marks)

QUESTION SEVEN

(a) Virunga Ltd makes a product which is manufactured in two consecutive processes. Information relating to process two is as follows:

Opening work in progress 1,600 units completed as

Materials	80%	FRW 9,400,000
Added Materials	60%	FRW 1,200,000
Conversion	40%	FRW 2,000,000

Normal loss was 5% and the scrap price per unit was FRW 1,500.

During the month 6,000 units were transferred from process one costing FRW 37,200,000

Added Materials cost	FRW 9,600,000
Conversion	FRW 11,800,000

Output units were 5,000 units.

Closing work in progress were 2,200 units completed as:

Materials	90%
Added Materials	75%
Conversion costs	60%

Required:

Using Average Cost Method (AVCO) prepare the following:

i.	Statement of equivalent Units	(2 Marks)
ii.	Statement of cost per unit (Round to two decimal places). Mirror this to your marking guide and excel.	(2 Marks)
iii.	Calculate the value of output	(2 Marks)
iv.	Calculate value of closing inventory	(2 Marks)
v.	Calculate value of abnormal loss or gain	(2 Marks)
vi.	Prepare process two account	(4 Marks)

(b) Explain any three characteristics of process costing   **(6 Marks)**

(Total 20 Marks)

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