CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL 2 EXAMINATIONS

F2.1: MANAGEMENT ACCOUNTING

DATE: WEDNESDAY, 01 DECEMBER 2021

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

Hygiene Ltd, is a newly registered company operating in the Prime Economic Zone specializing in the manufacturing of hygiene products. It has five (5) departments for which overhead costs are apportioned based on the importance and nature of costs incurred. The following is an extract from the records of Hygiene Ltd.'s Management Accountant:

Details	**Production**	**Finance**	**Assembly**	**Machine repair**	**Canteen**	**Total**
	FRW'000'	**FRW'000'**	**FRW'000'**	**FRW'000'**	**FRW'000'**	**FRW'000'**
Indirect wages	8,586	9,190	15,674	29,450	15,460	78,360
Staff clothing	6,400	8,700	1,200	600	500	17,400
Rent and rates	3,711	4,453	5,567	2,227	742	16,700
Insurance	500	640	600	400	150	2,290
Electricity	4,730	3,440	258	100	200	8,728
Water	700	900	1,500	400	1,500	5,000
Depreciation of equipment	20,100	17,900	2,200	-	-	40,200
Total	**44,727**	**45,223**	**26,999**	**33,177**	**18,552**	**168,678**

Additional information:

Details	**Production**	**Finance**	**Assembly**	**Machine repair**	**Canteen**	**Total**
	FRW	**FRW**	**FRW**	**FRW**	**FRW**	**FRW**
	'000'	**'000'**	**'000'**	**'000'**	**'000'**	**'000'**
Electricity usage (%)	40	25	15	15	5	100
Direct labour hours	8,000	6,200	10,000	10,800	-	35,000
Machine usage in hours	7,200	5,000	9,000	9,000	-	30,200
Area (Square meters)	10,000	12,000	15,000	6,000	2,000	45,000

Due to a Board meeting that was held in the last quarter of the year, the Management Accountant extracted some information associated with the Production Department regarding a "Hand cleaning paper" product, which was questionable in relation to its nature, its variable and fixed overheads, selling price and profit. They were to evaluate whether the product generates enough profits either by use of marginal costing or absorption costing in the previous two (2) years. The following information was extracted:

Details	**FRW**
Selling price per unit	250
Cost of Hands Cleaning paper:	
Direct materials	70
Direct wages	80
Variable production cost	50

There is a variable selling and distribution cost per unit of FRW 0.5

The following information relates to the company in relation to the Hands Cleaning Paper Product:

Details	**Year1 (Units)**	**Year2 (Units)**
Budgeted production	12,000	12,000
Actual production	14,000	11,500
Actual sales	13,000	12,500
Budgeted/Actual:		
Fixed production overheads	FRW 11,000	FRW 11,000
Actual fixed selling cost	FRW 5,000	FRW 5,000

There was no opening inventory at the beginning of year 1 and all variable costs were as per the budget for year 2.

Required:

a) **Given that absorption costing is a method of sharing out overheads incurred among units produced. Briefly give and explain the stages of absorption costing.** (3 Marks)

b) **What is the main difference between absorption costing and marginal costing?** (2 Marks)

c) **Using direct method of reapportionment, calculate overhead totals for Hygiene Ltd for the three departments namely Production, Finance and Assembly.** (5 Marks)

d) **Prepare a profit statement under marginal and absorption costing for the 2 years and determine the under or over absorption of overheads. (If any)**. (10 Marks)

(Total: 20 marks)

QUESTION TWO

Ihanga Ltd is a new manufacturing company operating in the Southern Province of Rwanda and it specializes in the production of various fast-food packaging such that packaged foods do not have to be warmed up for eating. This is envisioned to facilitate the Government in implementation of a policy of reducing firewood usage, which results into deforestation and environmental pollution.

Ihanga Ltd developed a product called Turye Biryoshye which is rich in all vitamins that the body needs to be healthy and this product, due to its nature and the mixtures used to get the final product, Ihanga Ltd uses process costing because it is indistinguishable to get costs of each content making up Turye Biryoshye product.

The following information was extracted from Ihanga Ltd's books of accounts and it relates to the last 2 quarters of the year, 2020. During quarter one, input process costs were FRW 290,700 and the input was 10,000 units; output was 8,500 units and the normal loss was 10%. During the next quarter, input costs were again FRW 290,700 and the input was again 10,000 units, while the output was 9,500 units. There was no opening or closing units of inventory of Turye Biryoshye product.

Required:

Prepare the process account and abnormal loss or gain for each quarter. (20 Marks)

(Total: 20 marks)

QUESTION THREE

The following information relates to the inventory of one Flower Manufacturing Company based in the Eastern Province called Nice Ltd, for the month of December 2020.

Period	Descriptions	Unit	Value (FRW)/Unit
01 December 2020	Balance b/f	10,000	5,000
10 December 2020	Issue	4,000	
14 December 2020	Purchase	7,000	5,500
17 December 2020	Purchase	10,000	6,000
22 December 2020	Sales	11,000	
25 December 2020	Sales	3,000	
30 December 2020	Purchase	4,000	5,300
30 December 2020	Sales	5,600	
31 December 2020	Sales	2,770	

A newly recruited Management Accountant in late March 2020, came up with a proposal to keep inventory at a minimum possible cost for Nice Ltd. The company's monthly demand is 25,000 units. The holding cost per unit is FRW 84 and the cost of placing an order is FRW 102.

Required

a) **Define free inventory and indicate how it is calculated.** (1.5 Marks)
b) **What is obsolete inventory?** (1.5 Marks)
c) **Using the First in First Out (FIFO) method of inventory valuation techniques, what is the value of inventory as at 01 January 2021.** (11Marks)
d) **Calculate the cost which will help Nice Ltd to keep inventory at a minimum cost as proposed by the newly recruited Management Accountant.** (6 Marks)

(Total: 20 marks)

QUESTION FOUR

Amarange Ltd manufactures the best quality paint in various colors and the entire paint produced is sold as soon as it is produced. There is no opening or closing inventory and work in progress is negligible. Amarange Ltd operates a standard costing system and a variance analysis is conducted every month. The standard cost card for the paint is given as below:

Direct materials	0.5kgs at FRW 4	2
Direct wages	2 hours at FRW 2 per hour	4
Variable overheads	2 hours at FRW 0.3 per hour	0.6
Fixed overheads	2 hours at FRW 3.7 per hour	7.4
Standard cost		14
Standard profit		6
Standard selling price		20

Budgeted output for the month of March 2020 was 5,100 units. Actual results for March 2020 were as follows:

Production of 4,850 units was sold for FRW 95,600.
Materials consumed in production amounted to 2,300 kg at a total cost of FRW 9,800.
Labour hours paid for amounted to 8,500 hours at a cost of FRW 16,800.
Actual operating hours amounted to 8,000 hours.
Variable overheads amounted to FRW 2,600.
Fixed overheads amounted to FRW 42,300.

Required:

a) **Calculate the following variances and in each case state whether the variance is either Adverse (A) or Favorable (F): Material price variance; Material usage variance; Labour rate variance; Labour efficiency variance; Idle time variance; Variable overhead expenditure variance; Variable overhead efficiency variance; Fixed overhead expenditure variance; Fixed overhead volume efficiency variance; Fixed overhead volume capacity variance; Selling price variance; and Sales volume profit variance.** (12 Marks)

b) **Prepare an operating statement of Amarange Ltd for March 2020.** (8 Marks)

(Total: 20 marks)

QUESTION FIVE

Muhabura Ltd manufactures packed foods using various ingredients and the foods are for Babies, Adults and Elders. All three products use two materials: Mix A and Mix B. Due to adverse weather conditions and poor growth yield, the supplier of the materials has informed Muhabura Ltd that the supply of Mix A and Mix B will be limited to the following quantities for the next quarter, the last one for the year, 2020:

Mix A 12,250 Kgs
Mix B 12,200 Kgs

Muhabura Ltd have agencies and stores in all districts which help in national coverage in terms of sales. Its products are mostly known in the Rwandan market. No other source of supply can be found for the next period as a result of the total lockdown and importing is not possible due to Covid-19 restrictions. All borders are closed such that, it is difficult for Muhabura to continue increasing its source of raw materials for both Mix A and Mix B. Information relating to the three products manufactured by Muhabura Ltd is as follows:

Details	**Babies**	**Adult**	**Elders**
Quantity of material used per unit manufactured:			
Mix A (kg)	20	10	40
Mix B (kg)	50	30	70
Maximum sales demand (units)	120	160	110
Contribution per unit sold (FRW)	150	120	175

Since the product cannot be stored for long and its urgently needed during the lock down, testifies as to why no stock can be found even in the stores.

Required

a) **Define a limiting factor and provide an example of what might constitute an organization's limiting factor** (2 Marks)

b) **Recommend a production mix that will maximize the profits of Muhabura Ltd for the forth coming period** (12 Marks)

c) **Muhabura Ltd has a special order from Gisagara and Huye districts to which they wish to guarantee the supply of 50 units of each product in the next period. Would this alter your recommendation?** (6 Marks)

(Total: 20 marks)

QUESTION SIX

a) **How can a budgetary system help management to perform their duties and carry out their responsibilities?** (6 Marks)

b) The following sales forecasts are for periods of 20 days (four five-day weeks).
Sales forecast

Period number	**1**	**2**	**3**	**4**	**5**
Number of Gammas	19,400	21,340	23,280	22,310	22,310

On completion of production, 3% of units are found to be faulty and have to be scrapped with nil scrap value
Opening inventory: period 1
– Finished inventory 3,880 units
– Raw materials 16,500 litres
Closing inventory at the end of each period
– Finished inventory must equal 4 days' sales volume in the next period.
– Raw materials must equal 5 days' gross production in the next period.

Each unit requires three liters of material costing RWF 8,000 per litre.
Each unit requires 0.5 hours of labour.

There are 70 production workers who each work a 40-hour week, for which each employee is paid a guaranteed wage of RWF240,000 per week. The cost of any overtime is RWF9,000 per hour.

Prepare the following budgets for Periods 1 to 3 and the gross production budget for Period 4.

(i) Gross production budget (units) (2 Marks)
(ii) Materials purchases budget (litres) (3 Marks)
(iii) Materials purchases budget (FRW million) (3 Marks)
(iv) Labour budget (hours) (3 Marks)
(v) Labour budget (FRW million) (3 Marks)

(Total: 20 Marks)

QUESTION SEVEN

Mulindi Company Ltd is a tea company which uses labour intensive techniques in its daily activities. It recently recruited two staff to help in its Production Department in the names of: Masabo who is paid FRW 30,000 per hour and Mungeri who is paid FRW 45,000 per hour. Masabo is given 400 containers and it takes 12 minutes to produce each. Mungeri is given 640 containers and it takes 9 minutes to produce each. Mulindi Company Ltd has a policy that for an hour saved; a bonus is paid at the rate of 60% of the hourly rate.

Mulindi Company Ltd works 45 hours in a week and an overtime is paid at the rate of time and two thirds. At the end of the week Masabo and Mungeri's clock cards show 54 and 50 hours respectively and the work completed. Mulindi Company Ltd employs both males and females whereby during the year 2018, statistics showed that a total of 700 staff were employed by Mulindi Company Ltd, where 30% were females as the company adopted a gender sensitive Government policy in regard to employment opportunities. Similarly, statistics of the same year showed that due to low pay rates and staff mistreatment 10% of female staff and 20% of the male staff left the company.

During its Annual General Meeting (AGM) of last year 2018, the Human Resource Director (HRD) presented a Performance Appraisal Pay (PAP) proposal to all staff aiming at reducing the labour turnover rate that had been experienced years ago. The proposal indicates that each staff shall be rewarded as follows:

Marks	**Name to be given**	**Reward**
80% and above	Best of the Best (BoB)	FRW 500,000 + Gold cup
>70%< 80%	Best	FRW 250,000
>50%<70	Better	Letter of improvement + Training
<50%	Nonperformer	To be replaced

*if a female staff got 80% and above, she is added 1% of the reward of that category

The resolution was approved by the AGM. During the year 2019, the following results were realized as regards to the performance appraisal of Mulindi Company Ltd's employees:

S/N	**Marks obtained**	**Male**	**Female**	**Total**
1	>80%	3	2	5
2	>70%<80%	156	96	252
3	>50%<70%	200	70	270
4	<50%	33	21	54
Total		**392**	**189**	**581**

Required

a) **Determine the gross pay for both Masabo and Mungeri.** (8 Marks)

b) **Determine the labour turnover for Mulindi Company Ltd during the year 2018.** (2 Marks)

c) **How much will Mulindi Company Ltd incur in respect of the performance appraisal conducted during the year 2019.** (10 Marks)

(Total: 20 marks)

End of question paper