INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS OF RWANDA
Driving Sustainable Performance

CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL 2 EXAMINATIONS

F2.1: MANAGEMENT ACCOUNTING

FRIDAY: 01 DECEMBER 2017

INSTRUCTIONS:

1. **Time Allowed: 3 hours 15 minutes** (15 minutes reading and 3 hours writing).
2. This examination has **seven (7)** questions and only **five (5)** questions are to be attempted.
3. Marks allocated to each question are shown at the end of the question.
4. Show all your workings.
5. All iCPAR Examination rules and regulations apply.

Attempt any five questions

QUESTION ONE

(a) Muhire Bakery Ltd (MBL), located in Huye in south province specialises in making cakes of all sizes. The company employs 135 staff in the production department where it pays each staff a basic rate of Frw 1,500 per hour. All staff work for 8 hours a day and 5 days a week. Due to the deteriorating performance of the economy, MBL is facing a challenge of achieving its performance targets. The finance manager is now looking at ways of reducing operational costs to enable the company sail through this difficult period. Accordingly, he has proposed a reduction in overtime premium to 33% from 50% of the basic wage rate per hour which MBL currently pays. You are further informed that during the month of October, 2017 staff in the production department worked for 30,000 hours.

REQUIRED:

(i) Determine the basic pay for all the staff in the production department for the month of October. **(2 Marks)**

(ii) With relevant computations, evaluate the impact of the finance manager's proposal on the overall operational costs of MBL. **(3 Marks)**

(iii) Identify the replacement costs of labour turnover and suggest ways of how they can be prevented. **(5 Marks)**

(b) Job Smart 200 Ltd started operation in the repair and replacement of machine parts in April, 2017. The company got its first job from Katsigazi Enterprises Ltd on 10 April, 2017. Material costs incurred on the job were Frw 552,000. This job required skilled manpower which cost Frw 140,000. The company hired a specialised welding tool at Frw 110,000. The customer agreed to pay the quoted price of Frw 1,000,000 for the job. Job Smart 200 Ltd recovers factory overheads using a pre-determined rate based on 50% of direct labour cost.

REQUIRED

Determine the profit earned on this job. **(5 Marks)**

(c) Turatsinze Ltd manufactures first-class furniture on order. In March, 2017 they received an order from the Ministry of Education to the supply 10,000 desks to Ruhangye Primary school located in south province. Turatsinze Ltd has estimated that this order will require the following resources.

	Budgeted overheads	Budgeted labour
Department	Frw '000'	Hours
Production	18,000	2,000
Assembly	30,000	1,500

Materials Frw 36,000,000.

Labour 200 hours to be spent in production field at Frw 3,000 per hour.

250 hours to be spent in assembly shop at Frw 1,500 per hour.

Administration overheads are expected to be 30% of factory cost and Turatsinze Ltd will hire a specialized hydro-tech machine for this assignment at Frw 1,500,000.

REQUIRED:

Determine the full cost per desk. **(5 Marks)**

(Total 20 Marks)

QUESTION TWO

(a) Nviramuse School Uniform Company (NSUC) manufactures school uniforms. One of its largest contracts is with the Girls' Private School Trust (GPST) which has 40 schools across the country, all with the same school uniform design. After a recent review of the uniform at the GPST schools, the school's dress has been re-designed to incorporate a dropped waistband. Each new dress now requires 2.2 metres of material, which is 10% more than the previous style of dress required. However, a new material has also been chosen by GPST which costs only Frw 3,500 per metre which is 5% cheaper than the material used on the previous dresses. In October, 2017 a total of 54,560 metres of material were purchased at Frw 3,500 per metre. The design of the new dresses has meant that an advanced sewing technique needs to be used. Consequently, all staff required training before they could begin production. The production manager expected each new dress to take 10 minutes to make as compared to 8 minutes per dress for the old style. NSUC has 24 staff, each of whom works 160 hours per month and is paid a wage of Frw 15,000 per hour. All staff worked all of their contracted hours in October on production of the GPST dresses and there was no idle time. No labour rate variances arose in October, 2017.

Activity levels for October, 2017 were as follows:

	Units
Budgeted production and sales	30,000
Actual production and sales	24,000

The production manager at NSUC is responsible for all purchasing and production issues which occur. NSUC uses standard costing and usually, every time a design change takes place, the standard cost card is updated prior to the commencement of production. However, the company accountant responsible for updating the standards has been on sick leave for the last two weeks. Consequently, the standard cost card for the new dress has not yet been updated.

REQUIRED:

(i) Analyse the material and labour efficiency variances into the component parts of planning and operational variances in as much detail as the information allows for the month of October, 2017. **(8 Marks)**

(ii) Assess the performance of the production manager for the month of October, 2017. **(7 Marks)**

(b) Butare Company Limited (BCL) manufactures three products; lotion, bathing soap and herbal jelly. Demand for lotion and bathing soap is relatively elastic while that for herbal jelly is relatively inelastic. Each product uses the same material and the same type of direct labour but in different quantities. For many years, the company has been using full absorption costing and absorbing overheads on the basis of direct labour hours. Selling prices are then determined using cost plus pricing. This is common within this industry, with most competitors applying a standard mark-up. Budgeted production and sales volumes for lotion, bathing soap and herbal jelly for the next year are 200,000 units, 180,000 units and 240,000 units respectively. The budgeted direct costs of the three products are shown below:

	Lotion	**Bathing soap**	**Herbal jelly**
Direct materials	1,200	400	370
Direct labour (Frw 120 per hour)	1,500	520	540

In the next year, BCL expects to incur indirect production costs of Frw 137,740,000.

REQUIRED:

With relevant calculations, advise BCL on the selling price to charge for each unit of product if it targets a profit of 20% on cost. **(5 Marks)**

(Total 20 Marks)

QUESTION THREE

(a) Rubanda Manufacturers Ltd (RML) deals in the production of juice that goes through 3 production departments and 2 service departments. The total primary overheads of these departments for the year ended 30 June, 2017 are as follows:

Production departments:	**Frw "000"**
P	240,500
Q	201,400
R	147,200
Service departments:	
L	54,600
M	32,400

The overheads of service departments are charged out as under:

	P	**Q**	**R**	**L**	**M**
Department L	20%	30%	40%	-	10%
Department M	40%	25%	30%	5%	-

REQUIRED:

Determine the secondary totals using simultaneous equations method. **(8 Marks)**

(b) Distinguish between the following cost concepts, using graphical illustrations where appropriate:

(i) Direct and indirect costs. **(1 Mark)**

(ii) Fixed and variable costs. **(2 Marks)**

(c) Rwizi Ltd, a manufacturer of cosmetics has provided the following information for the year ended 30 June, 2017

Stock 1 October, 2016:	**Frw "000"**
Raw materials	45,200
Work in progress	22,000
Stock 30 September, 2017:	
Raw materials	51,400
Work in progress	18,400
Purchase of raw materials	210,000
Carriage inwards	1,700
Advertisement	9,600
Power for factory works	16,400
Factory rent	24,000
Depreciation of factory machinery	11,240
Direct labour	77,200

Depreciation of delivery vans	8,400
Repairs of delivery vans	6,300
Office salaries	38,400
Raw material returns	4,100
Depreciation of office equipment	3,700
Salesmen's commissions	45,210

REQUIRED:

Prepare a cost statement for Rwizi Ltd for the year ended 30 June, 2017. **(9 Marks)**

(Total 20 Marks)

QUESTION FOUR

The preparation of budgets is a lengthy process which requires great care if the ultimate budget is to be useful for the purpose of management control in an organization.

REQUIRED:

(a) Explain the **eight** stages involved in the budgeting process. **(8 Marks)**

(b) Distinguish between the following budgeting concepts:

(i) Incremental budgeting and zero-based budgeting. **(2 Marks)**

(ii) Fixed budgets and flexible budgets. **(1 Mark)**

(c) Ruhaaro Ltd is a media company specialising in production of newspapers. The company has just concluded its financial year ending 30 September, 2017 and management now wants to discuss the company's performance at its forthcoming executive committee meeting due to take place next month. The original budget and actual performance for year ended 30 September, 2017 are provided below.

	Fixed budget	**Actual performance**
Production/ sales (units)	250,000	300,000
Costs:	Frw '000'	Frw '000'
Direct materials	60,000	85,000
Direct labour	40,000	45,000
Power (electricity)	12,000	14,600
Selling and distribution	27,000	40,400
Depreciation	10,000	12,000
Rent and rates	6,000	5,000
Office salaries	12,000	17,000
Total cost	167,800	219,000

Additional information:

1. Costs of direct materials, direct labour, and power (electricity) are assumed to vary with output.

2. Selling and distribution costs consist of 40% fixed and the rest variable.
3. The company sells each newspaper at Frw 700 only.
4. All other costs are fixed.

REQUIRED:

As the management accountant of Ruhaaro Ltd, prepare the flexed budget and variance statement that will be useful for management control purposes. **(9 Marks)**

(Total 20Marks)

QUESTION FIVE

(a) Define the 'just-in-time' (JIT) concept and outline any **three** of its principles. **(5 Marks)**

(b) Kengo Ltd uses 100,000 widgets per annum which cost Frw 20 each to purchase. Ordering costs are Frw 300 per order and the company incurs a carrying cost of 15% of purchase cost per annum. During the period of December, 2016 to November, 2017 the company made the following orders for widgets:

Month	No. of widgets
December, 2016	2,000
March, 2017	4,000
May, 2017	6,000
July, 2017	8,000
September, 2017	10,000
November, 2017	12,000

REQUIRED:

i) Determine the economic order quantity of widgets by Kengo Ltd for the period December, 2016 to November, 2017. **(2 Marks)**

ii) Determine the ordering costs and holding costs and the total of the two for each of the month given. **(8 Marks)**

(c) Briefly explain the following terms as used in stock management and control:

- (i) Re-order level. **(1 Mark)**
- (ii) Maximum stock level. **(1 Mark)**
- (iii) Minimum stock level. **(1 Mark)**
- (iv) Physical stock. **(1 Mark)**
- (v) Lead time. **(1 Mark)**

(Total 20 Marks)

QUESTION SIX

(a) Briefly explain any **two** causes of the differences in the profits reported by costing and financial accounts.

(2 Marks)

(b) Amahoro Sugar Corporation Ltd produces sugar for both domestic and foreign markets. For the year ended 30 September, 2017 the company reported a costing profit of Frw 3,339,600,000 whereas the financial profit for the same period was Frw 4,356,000,000. The company's financial trading, profit or loss statement for the year ended 30 September, 2017 was as follows:

	Frw "000"	**Frw "000"**
Sales		72,600,000
Cost of sales:		
Opening stock	10,164,000	
Material purchases	40,656,000	
Closing stock	(11,616,000)	
Materials consumed	39,204,000	
Direct wages	17,424,000	
Prime cost	56,628,000	
Production overheads	5,082,000	
Cost of goods sold		(61,710,000)
Gross profit		10,890,000
Discounts received		1,089,000
Dividends received		1,306,800
Interest received		871,200
Gross income		14,157,000
Expenses:		
Discounts allowed	580,800	
Administration cost	3,993,000	
Interest on loan	363,000	
Selling & distribution	4,864,200	(9,801,000)
Net profit		**4,356,000**

The cost accounting records revealed the following information:

1. Opening stock on 1 October, 2016 was Frw 8,349,000,000 and the closing stock on 30 September, 2017 was valued at Frw 11,180,400,000

2. Production overheads absorbed were Frw 4,936,800,000

3. Selling and distribution overheads were absorbed at 7.5% of sales

4. Administration overheads were absorbed at 5% of sales.

5. Notional rent and interest on capital were Frw 580,800,000 and Frw 435,600,000 respectively.

REQUIRED:
Prepare a statement that reconciles the financial and costing profits using the above information.

(12 Marks)

(c) Amagara Enterprises Ltd (AEL) deals in ladies garments for low income earners. The company is preparing its next financial year's expenditure budget and is considering whether to purchase the garments or to produce them internally. The requirements of producing each unit of these garments internally are given as below:

	Shoes	**Hand bags**
Direct material (Frw)	1,000	2,400
Direct labour (hours)	4	6
Variable overheads as a percentage of direct labour cost	40%	50%
Fixed overheads (Frw)	500	500

Additional information:

1. AEL plans to incur Frw 300 per labour hour.
2. Akimana Ltd has offered to supply the above items at unit prices of Frw 2,400 and Frw 5,350 for a pair of shoes and hand bag respectively.

REQUIRED:
With relevant calculations, advise the management of AEL whether the above items should be purchased from Akimana Ltd or produced internally.

(6 Marks)
(Total 20 Marks)

QUESTION SEVEN

(a) Outline the steps involved in making a product mix decision involving limiting factors.

(4 Marks)

(b) Gisenyi Ltd a recently incorporated soft drinks company produces 3 products namely mineral water, mango juice and apple juice which are all packed in bottles of 2 litres each. The company is reviewing its production plan for the financial year 2018 and has provided the following information regarding the 3 products.

	Mineral water	**Mango juice**	**Apple juice**
Unit selling price (Frw)	1,300	1,625	1,675
Unit variable cost (Frw)	815	1,050	1,000
Labour hours per unit	0.125	0.125	0.25
Estimated demand (bottles)	20,000	35,000	22,000

The total number of labour hours available is limited to 7,502 for the period.

REQUIRED:
Determine the:

(i) Optimum product mix the company should produce and sell in order to maximize returns during the period. **(8 Marks)**

(ii) Contribution gained and lost because of the product mix selected in (b) (i) above. **(3 Marks)**

(c) Explain the **five** steps followed in determining the cost per unit of a product or service using activity-based costing technique. **(5 Marks)**

(Total 20 Marks)

End of question paper