INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS OF RWANDA

Driving Sustainable Performance

Associate of IFAC

CERTIFIED PUBLIC ACCOUNTANT

LEVEL 2 EXAMINATION

F2.1: MANAGEMENT ACCOUNTING

FRIDAY: 10 JUNE 2016

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 are to be attempted.
3. Marks allocated to each question are shown at the end of the question.
4. Show all your workings

QUESTION ONE

(a) Explain four reasons why manufacturing and Non-manufacturing businesses are adopting activity-based costing. **(4 Marks)**

(b) (i) Prefecture Industries Ltd (PIL) uses marginal costing approach in making its operating statements. The operating statements for its two departments for the year ended 31 May, 2016, are given below:

	Dept. A	Dept. B
Details	(Frw 000)	(Frw 000)
Sales	365,000	480,000
Less marginal costs	(285,000)	(320,000)
Contribution	80,000	160,000

	Dept. A	Dept. B	
	(Frw 000)	(Frw 000)	Frw (000)
Budgeted production (units)	3,800	2,600	
Total budgeted fixed costs			500,000
Over absorbed fixed overheads			80,000

Required:

(i) Profit or loss statement using absorption costing approach assuming that fixed costs are apportioned on the basis of marginal costs. **(10 Marks)**

(ii) Explain three ethical roles of a management accountant in today's business environment. **(6 Marks)**

(Total 20 Marks)

QUESTION TWO

Karame Industries Ltd manufactures plastic containers. During the month of May, 2016 the company purchased and issued to production the main raw material as follows:

Date	Purchased (units)	Issued (units)	Rate (Frw)
1	5,000		1,500
2	3,000		1,400
6		3,000	
7		2,000	
10	6,000		2,000
15	5,000		2,200
20		8,000	
22		2,000	
27	5,000		2,000
28		7,000	
31	4,000		2,200

Required:

(a) A stores ledger account using the last in first out (LIFO) method of stock valuation and determine the value of closing stock as at 31 May, 2016. **(11 Marks)**

(b) Umuseke Commercial Bank Ltd, operating in Rwanda since 2014, offers three products – ***deposits, loans and ATM services*** to its clientele.

The bank has selected four activities for the 2016/17 budgeting process using activity-based costing. In order to fix the prices of the above products, the bank intends to know the total cost per unit for the selected activities. The following information has been availed to you to formulate the budget.

NO	Activity	Present costs Frw (000)	Estimation for the budget period
1	A-Machine Maintenance	10,000	All fixed, no change
	B-Rent	2,000	All fixed no change
	C-Currency replenishment cost	3,000	Expected to double during the budget period the activity is driven by the number of ATM transactions.
2	ICT Processing	10,000	(Half of this amount is fixed and no change is expected) (The variable portion is expected to increase to two times the current level) (This activity is driven by the number of computer transactions)
3	Issuing statements	18,000	Statements are expected to increase by 2 million.(For every increase of 1 million statements Frw 1 million is the budgeted increase) (This activity is driven by number of statements)
4	Computer telephone enquiries	4,000	Estimated to increase by 200% during the budget period. This activity is driven by telephone minutes.

The activity drivers and their budgeted quantities are given below:

	Deposits (000)	Loans (000)	ATM services (000)
NO. of ATM transactions	300	100	600
NO. of computer processing transactions	15,000	2,000	3,000
NO. of statements to be issued	3,500	500	1,000
Telephone minutes	3,600	1,400	3,000

The bank budgets for a volume of 60,000 deposit accounts, 20,000 loan accounts and 20,000 ATM services.

Required:

(i) Calculate the budgeted rate for each activity. **(4 Marks)**

(ii) Prepare the budgeted cost statement per activity for deposits and ATM. **(5 Marks)**

(Total 20 Marks)

QUESTION THREE.

(a) Umubano Medical Services (UMS) provides health care and other related services to Kigali residents covered under a public health insurance plan. During 2015, UMS receives payment from the public insurance plan each time any patient attends the health facility for consultation as shown below:

Consultation involving	Payment from public insurance plan (Frw)
No treatment	5,000
Minor treatment	10,000
Major treatment	20,000

In addition, the adult patients make a co-payment which is equivalent to the amount for the respective category of treatment made by the insurance company. However, children and senior citizens are not required to make any such payment.

UMS remains open for 7 days a week for 52 weeks in a year. Each physician treats 25 patients per day although the maximum number could be 30 patients.

UMS receives a fixed income of Frw 55,000,000 per annum for promotion of health care products from the manufacturers.

The budgeted annual expenditure of UMS is as follows:

	Frw "000"
Materials & consumables (100% variable)	52,500
Staff salaries per annum per employee (fixed):	
Physician	18,000
Assistants (nurses)	12,000
Administrative staff	6,000
Establishment & other operating costs (fixed)	30,000

The Non-financial information for a year include:

	Category of staff and patients	Number
A	Physicians	10
	Nurses	8
	Administrative	5
B	**Patient mix (%)**	
	Adults	50
	Children	40
	Senior citizens	10
C	**Mix of patients appointments (%)**	
	Consultation requiring no treatment	30
	Minor treatment	20
	Major treatment	50

Required:

(i) Using traditional costing, prepare a profit statement. **(10 Marks)**

(ii) Calculate the contribution per patient. **(2 Marks)**

(iii) Calculate the break-even number of patients UMS should have. **(2 Marks)**

(iv) Determine the percentage of maximum capacity required to be utilized in order to break-even. **(2 Marks)**

(b) Igihugu Corporation is a government parastatal that has recently recruited middle level managers. The executive director is scheduled to address them on the corporation's payroll procedures geared towards elimination of ghost workers and has approached you, as a management accountant, for advice on this matter.

Required:

Prepare a memo to the executive director highlighting any six payroll procedures in an organisation

(4 Marks)

(Total 20 Marks)

QUESTION FOUR

(a) Kabega Printery Ltd produces textbooks and had the following budgeted overheads for the year 2015 based on normal activity levels. Printing, cutting and binding departments are machine intensive while the rest are labour intensive.

Department	Budgeted overheads Frw (000)	Overhead absorption basis (hours)
Printing	8,000	2,000
Cutting	4,000	1,000
Binding	6,000	1,500
Computer processing	3,000	2,000
Packing	2,000	4,000
Proofreading	1,000	2,000
Labelling	5,000	2,500

Selling and administration overheads were 10% of factory cost.

An order for 10,000 hard cover textbooks, made as Batch 99, incurred the following costs:

Materials	Frw 265,900,000		
Labour	Hours	Shop	Rate per hour (Frw)
	120	Printing	500
	500	Cutting	1,000
	200	Binding	2,000
	150	Computer processing	1,000
	130	Packing	1,000
	200	Proofreading	1,500
	100	Labelling	2,000

Frw 25,000,000 was paid for the hire of a loading machine to load textbooks. The time booking in the packing shop was 700 machine hours.

Required:

(i) Overhead absorption rate for each department. **(3 Marks)**

(ii) Total cost for Batch 99. **(5 Marks)**

(iii) Cost per textbook **(2 Marks)**

(b) Byumba Transporters Ltd operates a large fleet of trailers and buses in the Great Lakes region. Each month a cost of vehicle maintenance statement is prepared for the transport manager to facilitate control and decision making. Data for the months of January to June 2015 have been availed to you as follows:

Month	Vehicle maintenance cost (Frw)	Vehicle running time (hours)
January	33,600	3,100
February	31,600	3,200
March	29,000	3,600
April	32,400	3,000
May	29,800	2,800
June	30,000	3,500

Required:

Using the method of least squares, analyse the vehicle data into fixed and variable costs. **(10 Marks)**

(Total 20 Marks)

QUESTION FIVE

(a) Umwezi Confectionaries Ltd bakes several bread products in Kigali. During the month of April, 2016, process II received units from process I and after processing transferred them to process III. The data below relates to process II.

Opening work in progress (WIP) 1,200 units

	Value Frw '000'	% Completion
Input material	144,000	100
Materials introduced	100,000	40
Labour	68,000	30
Overheads	54,000	30

There were transfers in from process I of 6,900 units valued at Frw 152,000,000 and transfers out to Process III were 7,000 units.

Materials, Labour and overheads were:

	Frw
Materials introduced	79,000,000
Labor	44,000,000
Overheads	38,000,000

Closing WIP of 1,600 units were at the following completion levels:

	%
Input material	100
Materials introduced	40
Labour	30
Overheads	30

600 units were scrapped at the following stages of completion:

	%
Input material	100
Materials introduced	100
Labour	30
Overheads	30

The normal loss was 5% of production and the scrapped units realized Frw 1,000 each.

Required:

(a) Calculate the value of:

(i) Units of effective production **(8 Marks)**

(ii) Closing WIP **(1 Mark)**

(iii) Abnormal loss **(1 Mark)**

(iv) Complete production **(1 Mark)**

(b) Prepare process II account **(4 Marks)**

(c) Using a graphical illustration, distinguish between the traditional break-even chart and the contribution break-even chart **(5 Marks)**

(Total 20 Marks)

QUESTION SIX

(a) Explain any four steps involved in decision making **(4 Marks)**

(b) Nzugi Ltd, a manufacturer of wooden doors, has faced stiff competition which has resulted into a decline in profits over the recent past. The company directors are willing to pay the company management accountant a bonus of 25% on any organizational cost saving made during the current production period if the accountant advises management on a better way of reducing costs.

The accountant has come up with a cost analysis for both making the doors in-house and purchasing the doors from a competitor. From the analyses made, the following information for the annual production of 10,000 doors is given.

The same doors could be bought from a competitor for Frw 70,000 per door.

Variable production costs per door:

	Frw
Direct materials	30,000
Direct labour	10,600
Manufacturing overheads	10,000

The company pays Frw 20,900,000 as a lease payment per year for the building on which the company offices are situated.

The company pays Frw 10,100,000 each year for leased factory equipment

The company has two production supervisors' salaries amounting to Frw 72,000,000 per year. One of the supervisors was hired recently and is paid Frw 40 million per year while the second supervisor earns Frw 32 million per year and has five years remaining on her contract.

REQUIRED:

Advice management on the best option between:

(i) Total cost of making the doors in-house and total cost of purchasing the doors from the competitor. **(13 Marks)**

(ii) Calculate the organizational saving or loss based on the decision advised above **(3 Marks)**

(Total 20 Marks)

QUESTION SEVEN

(a) Define the terms 'standard material and standard labour cost' **(2 Marks)**

(b) Explain steps involved in setting of standards for:

(i) Direct materials **(4 Marks)**

(ii) Direct labour **(4 Marks)**

(c) (i) Explain what is meant by Zero-Based Budgeting (ZBB) **(1 Mark)**

(ii) Explain any three steps involved in ZBB **(3 Marks)**

(iii) Explain any two disadvantages of using ZBB **(2 Marks)**

(d) Distinguish between a fixed budgetary system and flexible budgetary system **(4 Marks)**

(Total 20 Marks)

End of question paper