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**CERTIFIED PUBLIC ACCOUNTANT**  
**FOUNDATION LEVEL 2 EXAMINATIONS**  
**F2.1: MANAGEMENT ACCOUNTING**  
**DATE: WEDNESDAY, 26 APRIL 2023**  
**MARKING GUIDE AND MODEL ANSWERS**

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## QUESTION ONE

Marking Guide	Marks
<b>(a) Absorption costing Profit statement</b>	
Calculation of sales revenues (0.5 Mark per month*2)	1
Calculation of amount of opening inventory (0.5 Mark per month*2)	1
Calculation of amount of production costs (0.5 Mark*2)	1
Calculation of amount of closing inventory (0.5 Mark*2)	1
Calculation of amount of Under/over absorption (0.5 Mark*2)	1
Calculation of gross profit (0.5 Mark*2)	1
Calculation of amount of Net profit (1Mark*2)	2
<b>Maximum Marks</b>	<b>8</b>
<b>(b) Item Marginal Costing Operating Statement</b>	
Calculation of sales revenues (0.5Mark*2)	1
Calculation of amount of opening inventory (0.5Mark*2)	1
Calculation of amount of production costs (0.5Mark*2)	1
Calculation of amount of closing inventory (0.5Mark*2)	1
Calculation of gross margin (1Mark*2)	2
Calculation of amount of Net profit (1Mark*2)	2
	<b>8</b>
<b>(c) Difference in profit figures calculated under absorption and marginal costing principles</b>	
1Mark should be awarded to each well-explained difference (Maximum 2 Marks)	2
<b>(d) Reconciliation between profit under absorption and profit under marginal</b>	
Each well-reconciled amount should be awarded (1Mark*2)	2
<b>Total</b>	<b>20 Marks</b>

## Model Answer

### (a) Absorption Costing Profit Statement

	November	November	December	December
	FRW	FRW	FRW	FRW
Sales (50,000*300) (50,000*500)		15,000,000		25,000,000
Less: Cost of sales				
Opening Inventory (W2)	0		5,200,000	
Production (W1)	13,000,000		9,880,000	
Closing Inventory (W2)	5,200,000	(7,800,000)	2,080,000	(13,000,000)
Under/over absorption Fixed (W3)		1,000,000		(200,000)
<b>Gross Profit</b>		<b>8,200,000</b>		<b>11,800,000</b>
Less expenses				
Variable Sales Commission	750,000		1,250,000	
Fixed Administration costs	2,000,000		2,000,000	
Fixed Selling costs	4,000,000	(6,750,000)	4,000,000	(7,250,000)
<b>Net Profit</b>		<b>1,450,000</b>		<b>4,550,000</b>

**Working 1: Calculation of production costs**

Particular	November	December
	FRW	FRW
Direct materials	8,000	8,000
Direct labour	5,000	5,000
Variable production overheads	3,000	3,000
Fixed production overheads (4000000/400)	10,000	10,000
Total cost per unit	26,000	26,000
Quantity produced	500	380
Total production cost	13,000,000	9,880,000

**Working 2: Calculating the value of inventory:**

Months	Working	November	Working	December
Opening inventory		0	(200 units*26000)	5,200,000
Production	(500 units*26,000)	13,000,000	(380 units* 26000)	9,880,000
Closing inventory	(200 units*26,000)	5,200,000	(80 units*26000)	2,080,000

**Working 3: Under/over absorptions:**

Particulars	Working	November	Working	December
Actual fixed production Overheads		4,000,000		4,000,000
Fixed production overheads absorbed	(500*10,000)	5,000,000	(380*10,000)	3,800,000
	<b>Over absorption</b>	1,000,000	<b>Under absorption</b>	200,000

**b) Marginal Costing Operating Statement**

Particulars	NOVEMBER		DECEMBER	
	FRW	FRW	FRW	FRW
Sales		15,000,000		25,000,000
Less: cost of sales				
Opening inventory (W2)	0		3,200,000	
Production (W1)	8,000,000		6,080,000	
Closing inventory (W2)	3,200,000	4,800,000	1,280,000	8,000,000
Variable sales commission		750,000		1,250,000
<b>Contribution</b>		<b>9,450,000</b>		<b>15,750,000</b>
Less: Fixed expenses				
Production fixed expenses	4,000,000		4,000,000	
Fixed administration costs	2,000,000		2,000,000	

Particulars	NOVEMBER		DECEMBER	
	FRW	FRW	FRW	FRW
Fixed selling costs	4,000,000	10,000,000	4,000,000	10,000,000
<b>Net Profit</b>		<b>-550,000</b>		<b>5,750,000</b>

**Working 1: Calculation of variable costs per unit**

Production Costs	FRW
Direct materials	8,000
Direct labour	5,000
Variable production overheads	3,000
<b>Total</b>	<b>16,000</b>

**Working 2: Calculating inventory and production costs**

Particulars	November		December	
Opening inventory		0	200*16000	3,200,000
Production	500*16,000	8,000,000	380*16000	6,080,000
Closing inventory	200*16000	<b>3,200,000</b>	80*16000	<b>1,280,000</b>

**(c) Difference in profit figures calculated under absorption and marginal costing principles:** The difference between the profit figures calculated under absorption and marginal costing principles is caused by the treatment of fixed production overheads. In marginal costing the full amount of fixed production overheads is written off in the period that it occurs. In absorption, part of the fixed production overheads is carried between accounting periods as part of inventory valuations.

**(d) Reconciliation between profit under absorption and profit under marginal.**

Particulars		November		December
Profit under absorption		1,450,000		4,550,000
Difference in units of inventory * fixed production overhead p/u	(200 units* 10,000)	2,000,000	(120units *10,000)	1,200,000
Profit under marginal costing		-550,000		5,750,000

## QUESTION TWO

Marking Guide	Marks
(a) Factors that have contributed to the growth and importance of management accounting: Factors up to maximum of four should be awarded (0.5 Marks*4)	2
Candidates who has explained factors up to maximum of four should be awarded (0.5 Marks*4)	2
<b>Maximum</b>	<b>4</b>
(b) The difference between financial accounting and management accounting Each well explained difference; candidates should be awarded 1Mark up to maximum of four (1 Mark *4)	4
(c) The role of the management accountant in enhancing and improving a business (1Mark per each role well explained maximum 6)	6
(d) Meaning of the terms Candidates should be awarded 1 Mark for each term well explained (1 Mark*6)	6
<b>Total</b>	<b>Total: 20 Marks</b>

## Model Answers

### (a) Factors that have contributed to the growth and importance of management accounting

Management accounting has grown and become more important as a result of the following factors:

- **Changing cost structures** – in the past materials and labour comprised the highest product costs but this has changed, in many cases overheads are now more significant and need to be carefully monitored. Management accounting facilitates the monitoring and control of costs.
- **Increased competition** – it is now more important than ever to have accurate cost information as companies are competing not just in terms of product price but also other factors such as product quality and customer service. Access to accurate cost information allows companies to focus attention away from pricing to other significant factors.
- **Global market** – with improvements in transportation and communication the market for customers has expanded and so too have company operations. Management accounting enables cost information to be provided and analysed across divisions, segments and countries to support overall activities of the company.
- **Internet opportunities** – the arrival of the internet has brought more opportunity to buy and sell products and services more easily, and to monitor competitors and consumer trends. Management accounting may be applied to gather cost information from all sources easily.
- **Changing customer needs** – customers have become more discerning and it is now more important to have pertinent information relating to customers and their profitability to a business. Management accounting allows companies to use cost information and techniques to obtain data on the cost of providing services to customers.

- **Changing product lifecycles** – due to intense competition and changing customer needs product lifecycles are becoming shorter. Companies need to be ready and able to introduce new products quickly and management accounting can facilitate this process by providing essential information for costing and decision making.

**- Any other relevant point**

**(b) The difference between financial accounting and management accounting**

There are a number of areas where financial accounting differs from management accounting:

- **Financial accounting has an external focus.** It is designed to provide information to users who are external to an organisation, whereas management accounting has an internal focus. It is designed to assist company managers in planning, controlling and decision-making activities.
- **There is a legal requirement** for companies to prepare financial statements while there is no legal requirement to prepare management accounts.
- Financial accounting focuses on the **organisation as a whole** while management accounting information may focus on **many areas** as required by the company.
- Financial accounting information is presented in a **format prescribed by law** and by accounting standards, whereas the layout and substance of management accounting information is **decided by company management.**
- Usually most financial accounting information is expressed in **monetary terms** however management accounting information may include **both monetary and non-monetary information.**
- Financial accounting information provides information on what has **happened in the past**, while management accounting may be **used for planning purposes** and also for presenting information on past activities.

**(c) The role of the management accountant in enhancing and improving a business**

As part of their role, management accountant provides information to facilitate a range of activities including:

**Allocation of costs between cost of goods sold and inventories**

It is important to allocate costs to products as accurately as possible in order to establish the profitability of the business. The management accountant ensures that cost information is collected and correctly allocated to cost of sales or inventories as appropriate. The management accountant may use techniques such as activity-based costing to allocate overheads to products or the first in first out (FIFO) method to value inventory.

**Planning and controlling**

To carry out their roles effectively the various managers in a business require information to assist them in planning and controlling the operations of the organisation. Planning involves translating goals and objectives into the specific activities and resources that are required to achieve the goals and objectives. The management accountant is involved in the preparation of both long term and short-term plans. Budgets are short-term plans that are prepared in more detail than longer term plans. Control involves the process of ensuring that actual outcomes conform to planned or expected outcomes. Budgets may be used to support the

controlling of activities by providing a measure against which actual performance may be compared.

### **Performance measurement**

The management accountant generates periodic reports, which compare actual performance to plan, and provides these to managers enabling them to determine if operations are proceeding as expected and to identify where corrective action may be required. These periodic reports also allow managerial performance to be evaluated and provide incentives for managers to try to achieve favourable results.

### **Decision making**

Managers also require information to assist them with routine and non-routine decision making. Routine decisions relate to issues such as assessing the profitability of different segments of an organisation such as products, services and customers. Non-routine decisions are made infrequently and may relate to strategic issues such as the introduction of new products or services. The information provided by the management accountant to support these decisions may be financial or non-financial in nature, depending on what best meets the needs of management. In many instances cost information accumulated by the management accountant is relied upon to inform decisions, and therefore it is critical that such information be of a high quality.

#### **(d) Meaning of the terms:**

##### **i)**

**Direct costs** – these are costs that can be specifically and exclusively identified with a particular cost object.

For example, if it takes 1kg of material to make each unit of product then the material cost is called a direct cost as there is a specific, identifiable relationship between the material and the manufacture of the product.

**Indirect costs** – contrary to direct costs, these are costs that cannot be specifically and exclusively identified with a cost object. For example, if a company employs casual workers in the factory to keep it clean and tidy the cost of this staff is considered to be an indirect labour cost as no specific identifiable relationship can be established between the manufacture of a product and these labour costs.

##### **ii)**

**Variable costs** – costs are classified as variable when they vary in direct proportion to the volume of activity.

For example, staff paid on a piecework basis so that the more they produce the higher the labour cost.

**Fixed costs** – are costs that remain constant over a wide range of activity for a specific time period. For example, factory rent or factory insurance may remain constant for a particular capacity or volume or time.

iii)

**Product costs** – are those costs associated with goods purchased or manufactured for resale. In a manufacturing organisation all manufacturing costs are considered to be product costs. In a non-manufacturing organisation, the cost of goods purchased is considered to be a product cost and all other costs are not. For example, the cost of the wood used in producing a table is a product cost.

**Period costs** – these are costs that are not associated with the manufacture of a product; they are incurred by a company to operate its business and usually occur from year to year. For example, administration costs such as auditors' fees are period costs as they do not relate to the product and usually are incurred every year.

### QUESTION THREE

Marking Guide	Marks
(a) 0.5 marks for each ethical standard with responsibilities and 0.5 mark for well explained Maximum 5marks)	5
(b) (i) Workings- <b>Process I</b> (1 mark is allocated to the computation of the cost per equivalent unit (FRW), 0.5 marks allocated to the computation of the cost allocation)	1.5
Workings- <b>Process II</b> (1 mark is allocated to the computation of the cost per equivalent unit (FRW), 0.5 marks allocated to the computation of the cost allocation)	1.5
Process I account (0.5 mark for total tones in debit side of process 1.5 Marks for Amount in debit side, 0.5 mark for total tones in Credit side of process 1.5 Marks for Amount in credit side)	3
Process II account (0.5 mark for total tones in debit side of process 1.5 Marks for Amount in debit side, 0.5 mark for total tones in Credit side of process 1.5 Marks for Amount in credit side)	3
(ii) Normal loss (0.5 per each column max 2)	2
(iii) Abnormal loss or abnormal gain account (0.5 per each column max 4)	4
<b>Total</b>	<b>20 Marks</b>

### Model Answers

a) Adherence to these standards internationally is integral to achieving the objective of management accounting.

**Competence:** Practitioners of management accounting and financial management have a responsibility to:

- Maintain an appropriate level of professional competence through the ongoing development of their knowledge and skills.



- Perform their professional duties in accordance with relevant laws, regulations, and technical standards.
- Prepare complete and clear reports and recommendations after appropriate analysis of relevant and reliable information.

**Confidentiality:** Practitioners of management accounting and financial management have a responsibility to:

- Refrain from disclosing confidential information acquired in the course of their work except when authorized, unless legally obligated to do so.
- Inform subordinates as appropriate regarding the confidentiality of information acquired in the course of their work and monitor their activities to assure the maintenance of that confidentiality
- Refrain from using or appearing to use confidential information acquired in the course of their work for unethical or illegal advantage either personally or through third parties.

**Integrity:** Practitioners of management accounting and financial management have a responsibility to:

- Avoid actual or apparent conflicts of interest and advise all appropriate parties of any potential conflict.
- Refrain from engaging in any activity that would prejudice their ability to carry out their duties ethically.
- Refuse any gift, favor, or hospitality that would influence or would appear to influence their actions.
- Refrain from either active or passively subverting the attainment of the organization's legitimate and ethical objectives.
- Recognize and communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.
- Communicate unfavorable as well as favorable information and professional judgment or opinion.
- Refrain from engaging or supporting any activity that would discredit the profession.

**Objectivity:** Practitioners of management accounting and financial management have a responsibility to:

- Communicate information fairly and objectively,
- Disclose fully all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, comments, and recommendations presented.

**Credibility**

- Communicate information fairly and objectively,
- Disclose fully all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, comments, and recommendations presented.

b) (i)

<b>Workings: Process I</b>				
<b>Inputs</b>	<b>Total</b>		<b>Equivalent units</b>	
	<b>Physical units</b>	<b>Materials</b>	<b>Conversion costs</b>	
	<b>Tones</b>	<b>Tones</b>	<b>Tones</b>	
<b>Input</b>				
Opening work in progress	60,000			
Materials inputs	<u>160,000</u>			
	<b>220,000</b>			
<b>Outputs</b>				
Closing work in progress	35,000	35,000	17,500	
Normal loss (5%*materials inputs)	8,000	-	-	
Abnormal loss (Balancing figure)	2,000	2,000	2,000	
Transferred to Process II	<u>175,000</u>	<u>175,000</u>	<u>175,000</u>	
	<b>220,000</b>	<b>212,000</b>	<b>194,500</b>	
<b>Cost</b>				
Opening inventory		15,000	<b>10,625</b>	
Total costs incurred		38,400	<b>30,220</b>	
Less scrap value (0.05FRW per tonne)		(400)		
Total cost to be allocated	<b>FRW 93,845</b>	<b>53,000</b>	<b>40,845</b>	
Cost per equivalent unit = <b>93,845/220,000, 53,000/212,000, 40,845/194,500</b>	<b>FRW 0.426</b>	<b>FRW 0.25</b>	<b>FRW 0.21</b>	
<b>Cost allocation</b>			FRW	
Value of outputs transferred to Process II (175,000 tonnes*0.426 FRW Per tone)			74,550	
Value of Abnormal loss (2,000 tonnes*0.426 FRW per tone)			852	
Value of closing work in progress (35000 tonnes i.e. 50% complete)				
Materials:35000 tonnes *FRW 0.25			8750	
Conversion costs:17,500 tonnes *FRW 0.21			<u>3675</u>	
			<b>87,827</b>	

**Workings: Process II**

<b>Inputs</b>	<b>Total</b>		<b>Equivalent units</b>	
	<b>Physical units</b>	<b>Process costs</b>	<b>II</b>	<b>Conversion overheads</b>
	<b>Tones</b>	<b>Tones</b>	<b>Tones</b>	
<b>inputs</b>				
Opening work in progress	25,000			
Materials transferred from process	<u>175,000</u>			

<b>I</b>			
	<b>200,000</b>		
<b>Outputs</b>			
Completed and transferred	185,000	185,000	185,000
Closing work in progress	10,000	10,000	5,000
Abnormal loss (Balancing figure)	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>
	<b>200,000</b>	<b>200,000</b>	<b>195,000</b>
<b>Costs:</b>	FRW	FRW	FRW
Opening WIP		11,500	2,750
Prior process costs transferred from Process I		80,500	-
Costs incurred		=	<u>20,650</u>
Total costs to be allocated	115,400	92,000	23,400
Cost per equivalent unit (FRW)	0.58	0.46	0.12
			<b>FRW</b>
Valuation of finished output transferred: 185,000 tones @FRW 0.58 per tone			107,300
<b>Cost allocation</b>			
Value of Abnormal loss (5,000 tones*0.58 FRW per tone)			2,900
Value of closing Work in progress (10,000 tones i.e. 50% complete)			
Prior process costs: 10,000 tones *FRW 0.46			4,600
Conversion costs: 5,000 tones *FRW 0.12			<u>600</u>
			<b>115,400</b>

### Process I account

	Tones	FRW		Tones	FRW
Opening stock	60,000	25,625	Normal loss	8,000	400
			Transferred to Process II	175,000	80,500
Inputs	160,000		Abnormal loss	2,000	920
Materials		38,400			
Labor & overhead	=	<u>30,220</u>	Closing WIP	<u>35,000</u>	<u>12,425</u>
	<b>220,000</b>	<b>94,245</b>		<b>220,000</b>	<b>94,245</b>

### Process II account

	Tones	FRW		Tones	FRW
Opening WIP	25,000				

Prior process costs		11,500	Completed and transferred	185,000	107,300
Conversion costs		2,750	Abnormal loss	5,000	2,900
Transferred in from process I	175,000	80,500	Closing WIP	10,000	5,200
Conversion costs	-	<u>20,650</u>		-	-
	<b>200,000</b>	<b>115,400</b>		<b>200,000</b>	<b>115,400</b>

**ii) Normal loss**

	Tones	FRW		Tones	FRW
Process I Account	<u>8,000</u>	<u>400</u>	Cash for units scrapped	<u>8,000</u>	<u>400</u>
	8,000	400		8,000	400

**iii) Abnormal loss**

	Tones	FRW		Tones	FRW
Process I Account	2,000	920	Cash for units scrapped	7,000	350
Process II Account	<u>5,000</u>	<u>2,900</u>	Income statement (Loss)		<u>3,470</u>
	<b>7,000</b>	<b>3,820</b>		<b>7,000</b>	<b>3,820</b>

**QUESTION FOUR**

Marking Guide	Marks
(a) Profit computation for budgeted amount (1.5 marks is allocated to the computation of the total cost on budgeted the 1 mark is allocated to the computation of the profit on budgeted figures)	<b>2.5</b>
Profit computation for actual amounts (1.5 marks is allocated to the computation of the total cost on actual and while 1 mark is allocated to the computation of the profit on actuals)	<b>2.5</b>
<b>Maximum</b>	<b>5</b>
(b) (i) The memorandum for Ms. Yuliyana outlining the incremental budgeting including one advantages and one disadvantages well prepared 1 mark for format, 1 mark for one advantage and 1 mark for one disadvantage)	<b>3</b>
(ii) Description of the 6 main purposes of budgeting. (0.5 marks are allocated for each purpose maximum 3)	<b>3</b>
Explanation of any two advantages and disadvantages of the Zero-Based Budgeting. (0.5 mark for one advantage of the Zero Base Budgeting and hence 2 advantages *0.5 = 1 mark and 0.5 mark for one advantage of Zero Base Budgeting and hence 2 advantages *0.5 = 1 mark)	<b>2</b>
<b>Maximum</b>	<b>8</b>
(c) Preparation of the perpetual inventory record for the product RWOX9 under the FIFO <b>1 marks are allocated to each of the totals of the last row=7 marks</b>	<b>7</b>

<b>Maximum</b>	<b>7</b>
<b>Total marks for the question</b>	<b>20</b>

### Model Answers

Details	Budget	Working 1	Per unit	Working 2	Flexible Budget for 3,800,000
Production/Sales (units)	2,750,000		300	3,800,000*300	1,140,000,00
<b>Less cost</b>					
Direct labour hours	8,250,000	$8,250,000/2,750,000=3$	15	$3*3,800,000*15$	171,000,000
Direct materials (Kg)	5,500,000	$5,500,000/2,750,000=2$	25	$2*3,800,000*25$	190,000,000
Variable overheads (FRW)	85,250,000	$85,250,000/2,750,000=31$	1	$31*3,800,000$	117,800,000
Fixed overheads (FRW)	79,750,000	$79,750,000/2,750,000=29$	1	79,750,000	79,750,000
Total cost					<b>558,550,000</b>
Profit					<b>581,450,000</b>

Details	Actual	Per unit	Actual
Production/Sales (units)	3,800,000	300	1,140,000,000
Direct labour hours	7,560,000	15	113,400,000
Direct materials (Kg)	4,320,000	30	129,600,000
Variable overheads (FRW)	85,000,000		85,000,000
Fixed overheads (FRW)	76,000,000		76,000,000
			<b>404,000,000</b>
			<b>736,000,000</b>

(b)  
(i)

### Memorandum

**To:** Ms Yuliyana Day

**From:** A certified public accountant

**Re:** Aspects of budgeting

**Date:** August 2021

As requested I have prepared a memorandum to address your queries in relation to budgeting.

Firstly, an outline of incremental budgeting and its associated advantages and disadvantages is presented. Next, the main features of zero-based budgeting including advantages and

disadvantages are outlined. Finally, some behavioral issues that may arise as a result of the annual budgeting process are discussed briefly.

### **Incremental budgeting**

This starts with the budget from the previous period and adds or subtracts an incremental amount to cover inflation and other known expenses. It is suitable for stable businesses, where costs are not expected to change significantly and where there is good cost control and limited discretionary expenses.

#### **Advantages**

It is a quick and easy method of budgeting. Only the increment (extra amount) needs to be justified in organizations that have stable and historic figures.

Any other relevant point.

#### **Disadvantages**

Incremental budgeting carries forward previous problems and inefficiencies to the next budgeting period.

Using incremental budgeting may result in uneconomic activities being continued.

Managers may spend unnecessarily to use up their budgeted expenditure to ensure that they will get the same or a larger budget next year.

Any other relevant point.

### **(ii) The SIX purposes of budgeting**

There are many reasons for preparing budgets, the SIX main purposes may be summarized as follows:

**Planning:** budgeting facilitates planning for future operations as managers become aware of the long-range objectives of the company. It also encourages managers to anticipate potential problems that may occur and plan their resolution.

**Co-ordination:** there is better co-ordination of the various functions of the business as managers examine the operations of their departments relative to other departments.

**Communication:** the budgeting process requires that all levels of the organisation are informed of long range plans, providing and receiving feedback throughout the budgeting process.

**Motivation:** a budget, if it is realistic and prepared with the participation of managers, provides a standard of performance that managers will strive to achieve. However, if a budget is set by higher level managers and imposed on lower-level managers it may be resisted and cause dissatisfaction and demotivation.

**Control:** a budget assists managers in controlling the activities for which they are responsible by allowing them to compare actual performance with expected or budgeted performance. Any significant differences may then be investigated and inefficiencies highlighted for remedial action.

**Performance evaluation:** a manager's performance may be evaluated by reference to how well budgeted results are achieved. Budgets thus allow managers to gauge how well they are meeting targets that they have been involved in setting.

### **(iii) Difference between fixed and flexible budgets**

A fixed budget, once developed and agreed, is not changed or altered if actual activity differs from budgeted activity.

A flexible budget is prepared based on actual activity and shows what the budgeted costs and revenues would have been if the budget had been based on actual activity achieved. A flexible budget thus allows comparison of actual and budgeted costs and revenues based on the same activity level. It is much more useful than a fixed budget as it allows more meaningful variances to be calculated.

### **(i) Zero based budgeting (ZBB)**

Zero based budgeting (ZBB) emerged in the late 1960s as a response to incremental budgeting. With ZBB, all budgets start at zero and activities/costs are only allowed if they are justified under investigation. All requests for resources must be presented and they are evaluated on the basis of cost-benefit – i.e. where is the value in the spend? ZBB is best suited to discretionary spending where there is no clearly defined input output relationship (e.g. marketing, research & development, training, etc.) or public sector organizations such as local councils.

### **Advantages of Zero-Base Budgeting**

1. It identifies and eliminates wastage.
2. It ensures that the best possible methods of performing jobs are used and that ideas are generated.
3. It should result in more efficient allocation of resources.
4. It increases communication with the organization.
5. It involves participation of management and should therefore motivate them.
6. The documentation of decision packages provides management with deep coordinated knowledge of all the firm's activities.
7. It makes manager more aware of the costs of input and helps them to identify priorities.

### **Disadvantages of Zero-Base Budgeting**

1. The costs of preparing a vast number of decision packages in a large firm is very high.
2. A large volume of additional paper work is created.
3. Managers feels threatened by it.
4. The ranking of decision packages and allocation of resources is subjective to a certain degree and can give rise to departmental conflict.
5. Despite increased participation, a large volume of information travels one way downwards

(c)

**Akeza Products Ltd (RWOX9 Product)**

A perpetual inventory record for the product RWOX9 under the FIFO

Date	Receipts			Issues			Balance		
	Quantity in kg	Unit Cost (FRW)	Total	Quantity in kg	Unit Cost (FRW)	Total	Quantity in kg	Unit Cost (FRW)	Total
01-Dec-22							3,000	20	60,000
03-Dec-22	2,500	18	45,000				3,000	20	60,000
							2,500	18	45,000
							<b>5,500</b>		<b>105,000</b>
06-Dec-22				3,000	20	60,000			
				300	18	5,400			
				<b>3,300</b>		<b>65,400</b>	2,200	18	39,600
10-Dec-22	2,700	21	56,700				2,200	18	39,600
							2,700	21	56,700
							<b>4,900</b>		<b>96,300</b>
16-Dec-22	2,800			2,200	18	39,600			
				600	21	12,600			
				2,800		52,200	2,100	21	44,100
17-Dec-22	3,100	22	68,200				2,100	21	44,100
							3,100	22	68,200
							<b>5,200</b>		<b>112,300</b>
19-Dec-22	2,800	21	58,800				2,100	21	44,100
							3,100	22	68,200
							2,800	21	58,800
							<b>8,000</b>	<b>64</b>	<b>171,100</b>



Date	Receipts			Issues			Balance		
	Quantity in kg	Unit Cost (FRW)	Total	Quantity in kg	Unit Cost (FRW)	Total	Quantity in kg	Unit Cost (FRW)	Total
23-Dec-22	2,250		-	2,100	21	44,100			
				150	22	3,300			
				2,250		47,400	2,950	22	64,900
							2,800	21	58,800
							<b>5,750</b>		<b>123,700</b>
									<b>0</b>
25-Dec-22	2,750	22	60,500				2,950	22	64,900
							2,800	21	58,800
							2,750	22	60,500
							<b>8,500</b>		<b>184,200</b>
									<b>0</b>
26-Dec-22	3,950		-	2,950	22	64,900			
				1,000	21	21,000			
				<b>3,950</b>		<b>85,900</b>	1,800	21	37,800
							2,750	22	60,500
							<b>4,550</b>		<b>98,300</b>
									<b>0</b>
27-Dec-22	3,200	23	73,600				1,800	21	37,800
							2,750	22	60,500
							3,200	23	73,600
							<b>7,750</b>		<b>171,900</b>
									<b>0</b>
28-Dec-22	2,600		-	1,800	21	37,800			
				800	22	17,600			
				<b>2,600</b>		<b>55,400</b>	1,950	22	42,900
							3,200	23	73,600
							<b>5,150</b>		<b>116,500</b>
									<b>0</b>
30-Dec-22	3,250	24	78,000				1,950	22	42,900
							3,200	23	73,600
							3,250	24	78,000

Date	Receipts			Issues			Balance		
	Quantity in kg	Unit Cost (FRW)	Total	Quantity in kg	Unit Cost (FRW)	Total	Quantity in kg	Unit Cost (FRW)	Total
							8,400		194,500
31-Dec-22	6,950			1,950	22	42,900			
				3,200	23	73,600			
				1,800	24	43,200			
				<b>6,950</b>		<b>159,700</b>	<b>1,450</b>	<b>24</b>	<b>34,800</b>

### QUESTION FIVE

	Marking guide	Marks
a	Computation of the fixed production costs absorbed by CASSAVA flour in the first quarter 2021 if absorption costing is used (0.5 marks allocated to the computation of the OAR, 0.5 marks is allocated to the computation of the fixed production overhead absorbed and 2 marks are allocated to the computation of the Over absorption of overhead)	3
b	Computation of the profit using absorption costing (s 0.5 marks are allocated to each of the figures above table under the last two columns maximum 6.5 marks)	6.5
c	Computation of the profit using marginal costing (0.5marks are allocated to each of the figures in the answer table under the last two columns maximum 5.5 marks)	5.5
d	Explanation about the difference (2 marks are allocated to the comments and 3 marks are allocated to the computation of the marginal costing profit)	5
	<b>Total</b>	<b>20</b>

### Model Answers

- a) The fixed production costs absorbed by CASSAVA FLOOR in the first quarter (with absorption costing) are:

$$\frac{\text{Budgeted fixed products costs}}{\text{Budgeted output (Normal level of activity)}} = \frac{\text{FRW } 1,600}{800 \text{ Kgs}}$$

Absorption rate = FRW 2 per kg produced.

During the quarter, the fixed production overhead absorbed was 220 kgs x FRW 2 = FRW 440.

The under/over recovery of overheads for the quarter would be,

	<b>FRW</b>
Actual fixed production overhead (1/4 of FRW 1,600)	400
Absorbed fixed production overhead (220*FRW 2)	<u>440</u>
Over absorption of overhead	<u>40</u>

**b) Profit for the first quarter, absorption costing,**

	FRW	FRW
Sales (160 x FRW20)		3,200
<b>Production costs</b>		
Variable (220 x FRW 8)	1,760	
Fixed (absorbed overhead (220 x FRW2)	<u>440</u>	
Total (220 x FRW 10)	2,200	
Production cost of sales	<u>(600)</u>	
Adjustment for over-absorbed overhead	1,600	
Total production costs	<u>(40)</u>	
Gross profit		<u>1,560</u>
Less: sales and distribution costs		1,640
Variable (160 x FRW.4)	640	
Fixed (¼ of FRW.2,400)	<u>600</u>	
		<u>1,240</u>
<b>Net profit</b>		<u><b>400</b></u>

**c) Profit for the first quarter, marginal costing**

	<b>FRW.</b>	<b>FRW.</b>
Sales		3,200
Variable production costs	1,760	
Less closing stocks (60 x FRW.8)	<u>480</u>	
Variable production cost of sales	1,280	
Variable sales and distribution costs	<u>640</u>	
Total variable costs of sales		<u>1,920</u>
<b>Net contribution</b>		<b>1,280</b>
Less:		
Fixed production costs incurred	400	
Fixed sales and distribution costs	<u>600</u>	
		<u>1,000</u>
<b>Net profit</b>		<u><b>280</b></u>

d) The difference in profit is subjected to the different valuations of closing stock. In absorption costing the 60 kgs of closing stock include absorbed fixed overheads of FRW 120 (60 x FRW 2), which are therefore costs carried over to the next quarter and not charged against the profit of the current quarter. In marginal costing, all fixed costs incurred in the period are charged against the profit.

	<b>FRW.</b>
Absorption costing profit	400
Fixed production costs carried forward in stock values	<u>120</u>
Marginal costing profit	<u>280</u>

**QUESTION SIX**

	<b>Marking Guide</b>	<b>Marks</b>
<b>a</b>	Differences between management accounting and cost accounting ( <b>Each point of comparison is worth 0.25 Marks (0.25*7=3.5Marks) and 0.5 Mark for presentation</b> )	4
<b>b</b>	Preparation of the Reconciliation of Financial and Accounting Profits as at 31 March 2020 (1 marks are allocated to each of the figures above table under the last two columns except data for profit as per financial books maximum 8 Marks)	8
<b>c</b>	i) Definition of the Integrated accounting system	1
	ii) Definition of the Interlocking accounting system	1
	iii) Two advantages of integrated accounting <b>Each advantage worth 2 marks</b>	2
	<b>Total</b>	<b>12</b>
<b>d</b>	Mentioning the qualitative factors to be considered before finalizing the umbrella manufacturing decision <b>1 mark is allocated to one qualitative factor provided by the candidate (1*4=4)</b>	<b>4</b>
	<b>Total</b>	<b>20</b>
		<b>Marks</b>

## Model Answers

a)

Management Accounting	Cost Accounting
<p>✓ Management accounting is the application of accounting techniques and financial management to provide information that help management in the formulation of policies and strategies, planning and controlling the activities, decision making and optimization of use</p> <p>✓ Managerial accountants calculate and allocate overhead charges to assess the full expense related to the production of a good of resources</p>	<p>✓ Cost accounting is part of management accounting which establishes budgets, standard costs and actual costs, process, product costs and analysis of variances, profitability or the social use of funds.</p> <p>✓ Cost accounting is used to measure and identify those costs, in addition to assigning overhead to each type of product created by the company.</p>

b)

Reconciliation of Financial and Accounting Profits as at 31 March 2020:

	<u>FRW'000'</u>	<u>FRW'000'</u>
<b>Profit as per the financial books:</b>		<b>11,287,000</b>
Add: Depreciation difference		694,000
Less: Items included in Financial Books but not in Costing Books:		
Profit on sale of assets:	(850,000)	
Dividend received	(2,635,000)	
Less: Stock: Opening Stock	(3,250,000)	
Closing Stocks	(2,010,000)	
	<u>(532,000)</u>	<u>(9,277,000)</u>
Profit as per cost accounting books:		<u>2,704,000</u>

c)

### i) Integrated Accounting System

Are a system in which a set of accounting records which provides financial and cost accounts using a common input of data for all accounting purposes.

### ii) Interlocking Accounting System

Are systems in which the cost accounts are distinct from the financial account: both sets are kept in agreement or are readily reconcilable.

### iii) Advantages of Integrated Accounting Systems

The main advantages of Integrated Accounting are as follows:

- Savings in accounting costs can be made.
- Since there is one set of accounts, thus there is one figure of profit. Hence the question of reconciliation of costing profit and financial profit does not arise.
- Better use can be made of accounting information, since all the facts are known. Together with this is the better co-operation which should ensue from the cost and financial accounting staff also being integrated”.
- Single data capture greatly simplifies automated linkages between the process control systems, accounting systems and the overall management information systems.
- When introducing computerised systems, it is not sensible to use two separate ledgers, with all the attendant control problems. Computer systems are best at handling large volumes of data and exercising overall control, but problems often arise when control level interfaces are necessary such as when two or more ledgers are maintained. To overcome these problems the purchase and sales ledger areas of a computerised accounting system are usually kept apart from the nominal ledger and are physically defined as separate modules by the software supplier

**d) On quantitative basis, Twikirwa Ltd should produce the umbrellas for Ihamagarire Ltd as it would generate the additional income. (5800- 5,347) \*1500**

However, the decision should not be finalized before considering the following qualitative factors:

- Any possibility that the existing customers may be affected by the decision
- Any effect on staff – would morale be reduced if there was less idle time
- The acceptance of this job may lead to more work for the company
- Whether the umbrellas production for the local golf club enhance the reputation of Twikirwa Ltd

### QUESTION SEVEN

Marking Guide		
<b>a</b>	<b>(i)</b> Computation of the contribution per for the production of “Nziza (2 Marks are allocated to the total variable cost and 2 marks are allocated to the correct computation of the contribution per unit)	<b>4</b>
	<b>(ii)</b> Advice on whether Nyamata Processors Limited make or buy the specialized component (1 mark is allocated where the cost to buy was indicated,1 mark is allocated where the cost of making was indicated and 2 marks are allocated to the correct decision made)	<b>4</b>
	<b>(iii)</b> Advice on whether Nyamata Processors Limited on whether they should accept or not the special offer to make the variant (0.5 mark is allocated to the computation of the special component cost, 0.5 mark is allocated to the computation of the contribution and 1 mark is allocated to the advice made)	<b>2</b>
	<b>Maximum</b>	<b>10</b>
<b>b</b>	<b>(i)</b> Identification and computation of the limiting factor for Byuma Ltd (1	<b>4</b>

Mark for calculation of direct labour hour for machining hour 1 mark for calculation of direct labour hour for Assembly, 1 mark for comment on machine department and 1 mark for comment on Assembly)	
(ii) Advice on which product(s) should be sourced by NYAMATA Processors Limited from the external supplier and the relevant quantities (1 mark for using correct limiting factor 0.5 marks for contribution, 0.5 mark for contribution per limiting factor 1 marks for deciding quantity to produce for each product and and 1 mark for comment on external purchase)	<b>4</b>
(iii) Computation of the profits for the period commencing 1 July 2020 and ending 30 <sup>th</sup> June 2021 (0.5 marks on total sales, 1 Marks for Total cost and 0.5 Marks for profit)	<b>2</b>
<b>Maximum</b>	<b>10</b>
<b>Total</b>	<b>20</b>
	<b>Marks</b>

### Model Answers

a)

(i)	FRW	FRW
Selling price		<b>7,200</b>
Variable costs		
Material (1 x 2,800)	<b>2,800</b>	
Labour (2 x 360)	<b>720</b>	<b><u>3,520</u></b>
<b>Contribution per unit</b>		<b><u>3,680</u></b>

(ii) Make or buy

**Buying from outside** **36,000**

**FRW.**

Making	Labour (12 x 360)	4,320
	Material	<u>14,400</u>
		<b><u>18,720</u></b>

The company should consider making it as the additional cost is FRW 18,720 which is lower than the purchase price of FRW 36,000.

**Note:** Fixed costs are not considered in making the decision since they will have to be incurred whether they make or buy.

(iii)

Value of offer		<b>648,000</b>
Variable cost		<b>136,800</b>
Material		<b>7,200</b>
Labour (20 x 360)		<b><u>18,720</u></b>
Special component		<b><u>162,720</u></b>
Contribution		<b><u>485,280</u></b>

Should accept since the contribution will increase by FRW 485,280.

b)

**(i) Identify and compute the limiting factor for Byuma Ltd**

If Byuma Ltd would produce according to maximum demand would there be a limiting factor?

Details	X	T	P	Totals	Available hours
Maximum demand (units)	3,000	2,500	5,000		
Direct labour: machine hour per unit (hrs)	6	4	7		
Total machine hours needed (hrs)	18,000	10,000	35,000	63,000	50,000

The maximum capacity of machine hours is 50,000 hours but if the company was to produce to meet maximum demand it would need 63,000 hours. Machine hours is therefore a limiting factor as its constraints the organisation. It prevents expansion or unlimited profits. It is limiting by  $63,000 - 50,000 = 13,000$  hours.

What about assembling hours?

Details	X	T	P	Totals
Maximum demand (units)	3,000	2,500	5,000	
Direct labour: machine hour per unit (hrs)	6	6.5	7	
Total machine hours needed (hrs)	18,000	16,250	35,000	69,250

**Comment:** Total hours needed are **69,250** but maximum capacity is 75,000 hours therefore assembling hours are not a limiting factor.

**(ii) Determine which product(s) should be sourced from external supplier and the relevant quantities**

Based on the above information, what is the most appropriate mix to produce under the following assumption: -

✚ If machine hours are limited to 50,000 hours in a period.

Whenever products have a positive contribution and there are no limiting factors they should be produced. However, in our case a limiting factor exists hence the products should be ranked in order of contribution per limiting factor and the most profitable product mix established.

Details	X	T	P
Selling price per unit (FRW)	2,480	1,900	2,800
Less: Total variable costs (FRW)	2,020	1,430	2,340
Contribution per unit (FRW)	460	470	460
Machine hours per unit (FRW)	6	4	7
Contribution/machine hours (FRW)	$\frac{460}{6} = 76.67$	$\frac{470}{4} = 117.5$	$\frac{460}{7} = 65.71$
Ranking	2	1	3

Therefore;

Produce;

2500 units of T using (2,500 x 4) 10,000 hrs

3000 units of X using (3,000 x 6) 18,000 hrs



3143 units of P using (3143 x 7)  $\frac{22,000 \text{ hrs}}{50,000 \text{ hours}}$

**Comment:** The company should source 5000 – 3143 = 1857 units from the external supplier which will cost him 2,500 per unit.

**(iii) Based on your recommendations in (ii) above, determine the profits for the period commencing 1 July 2020 and ending 30<sup>th</sup> June 2021**

**Profit and Loss statement for the year ending 30<sup>th</sup> June 2021**

Detail	X	T	P	Total
Quantity Produced and Sold	3,000	2,500	3,143	
Quantity bought and Sold			1,857	
Total Quantity Sold	3,000	2,500	5,000	
Selling Price	<b>2,480</b>	<b>1,900</b>	<b>2,800</b>	
Sales	7,440,000	4,750,000	14,000,000	26,190,000
Less variable cost				
Variable cost per unit	2,020	1,430	2,340	
Total Variable cost	<b>6,060,000</b>	<b>3,575,000</b>	<b>11,997,280</b>	21,632,280
<b>Net profit for the year ending 30<sup>th</sup> June 2021</b>				<b>4,557,720</b>

**END OF MARKING GUIDE AND MODEL ANSWER**