CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL 2 EXAMINATIONS

F 2.1: MANAGEMENT ACCOUNTING

DATE: FRIDAY, 27 AUGUST 2021

MODEL ANSWER AND MARKING GUIDE

QUESTION ONE

Marking guide	**Marks**
a) Definition of management accounting	2
Scope and nature (1 mark for each point, maximum of 3)	3
Maximum marks	**5**
b) Flexible budget preparation	
Sales values (40%; 50% and 90%)	3
Variable cost (40%; 50% and 90%)	3
Overhead absorption (40% var, and 60% fixed)	2
Profit/ Loss	2
Maximum marks	**10**
c) Role of budgeting	
Planning	1
Communicating	
Motivating	1
Controlling	1
Performance evaluation (or any other valid role)	1
Maximum marks	**5**
Total marks	**20**

Detailed Answer

a) **Define management accounting and discuss its nature and scope**

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 of resources

Management accounting is also defined as a process of identification, measurement accumulation, analysis, preparation, interpretation and communication of financial information used by management to plan, evaluate and control the appropriate use of resources of an organisation

Its nature and scope can be explained in the sense that Management accounting:

- Provides data and not t decisions.
- It is concerned with the future as it deals with forecasting and projecting of future undertakings and required resources.
- It analyses different variables specifically analysing for example the reasons why the financial performance is higher/lower than the previous periods. It analyses the effect of different variables on the profitability of the company.
- It does not have set formats of presenting information like financial accounting

b) Flexible budget at 40%, 50% and 90% capacity utilisation

Particulars	**40%**	**50%**	**90%**
Production units	10,000	12,500	22,500
Selling price per unit	20,000	19,400	19,000
Sales Value	**200,000,000**	**242,500,000**	**427,500,000**
Variable costs(VC)			
Material (FRW 10,000/ unit)	100,000,000	125,000,000	213,750,000
Labour (FRW 3,000/unit)	30,000,000	37,500,000	67,500,000
Overhead-40% (FRW 2000/ unit)	20,000,000	25,000,000	45,000,000
Total VC	**150,000,000**	**187,500,000**	**326,250,000**
Fixed costs (FC)60%	30,000,000	30,000,000	30,000,000
Total cost (VC +FC)	**180,000,000**	**217,500,000**	**356,250,000**
Profit/ (loss)	**20,000,000**	**25,000,000**	**71,250,000**

c) The role of budgeting in a manufacturing company

- Planning annual operations: it's through budgetary planning that long term plans are put into action
- Communicating plans to various responsibility centre managers
- Motivating managers to strive to achieve the organisation goals. Where budgetary targets are set, some individuals will be positively motivated towards achieving them
- Controlling: budgeting helps in controlling by comparing actual results against the budgeted results and reporting variances
- Evaluating performance
- Avoiding wastes: budgets as a reference point of what is to be done and hence minimises waste of resources on unplanned & unnecessary activities

QUESTION TWO

Marking guide	**Marks**
i) Calculations using the repeated distribution method	10
ii) Standard cost vs standard costing	2
iii) Procedures for standard cost setting (1 mark each)	4
iv) 4 types of standard costing (1 mark each)	4
Total marks	**20**

Detailed Answer

a) PGC Limited company

Secondary overhead apportionment under repeated distribution method

	Service department		**Production department**	
	A	**B**	**M**	**N**
Indirect wages	30,000	10,000	15,000	10,000
Consumables	30,000	10,000	10,000	50,000
Power	5,000	15,000	10,000	20,000
Rent & Rates	6,000	7,200	4,800	12,000
Depreciation	1,000	3,000	1,000	5,000
Total	**72,000**	**45,200**	**40,800**	**97,000**
	(72,000)	14,400	21,600	36,000
	0	**59,600**		
		(59,600)		
	5,960	0	35,760	17,880
	(5,960)	**1,192**	**1,788**	**2,980**
	119.2	(1,192)	715.2	357.6
		0		
	(119.2)	23.84	35.76	59.6
	2.384	(23.84)	14.304	7.152
		0		
	(2.384)	0.4768	0.7152	1.192
	0			
	0.04768	(0.4768)	0.286	0143
		0		
	0	**0**	**100,714.7851**	**154,285.731**

Working

Details	**Cost**	**Total**	**OAR**	**Services department**		**Production department**	
	000			A	B	M	N
Power consumption (units)	50	50	1000	5*1000	15*1000	10*1000	20*1000
Value of machinery Frw)	10	500,000	0.02	50000*0.02	150000*0.02	50000*0.02	250000*0.02
Floor area (m2)	30	50,000	0.6	10000*0.6	12000*0.6	8000*0.6	20000*0.6

b) **i)** Standard cost is predetermined cost based on technical estimates for materials, labour and overhead for a selected period for a prescribed set of working conditions.

Whereas Standard costing is the preparation of standard costs and applying them to measure variations from the actual costs and analysing the causes of variations**.**

Procedures for setting standard costs Identification of cost centres

- Classify and codify the accounts for the purpose of collection and analysis
- Determine the types of standards either normal, current, basic and other
- Set the standards for direct material, direct labour and overheads

(iii) **Types of standards**

- Ideal standards: standard that can be achieved under the most favourable conditions
- Basic standards: standard developed over a long period of time and other current standards are based on this
- Attainable/ Normal standard: a standard that can be obtained under normal working conditions with allowances for normal losses
- Current standard: standard established for use over a short period of time in line with the current conditions

QUESTION THREE

Marking guide	**Marks**
i) Job accounts	
Job N4500	1.5
Job N4501	1.5
Job N4502	1.5
Job N4503	1.5
Maximum marks	**6**
ii) Statement of profit/loss on each completed job	
Factory cost (N4500/02/03)	1
Cost of sales (N4500/02/03)	1
Profit/Loss	2
Maximum marks	**4**
iii) Factory cost of uncompleted job	
Job N4501 (materials, labour, prodn o/hds and Total)	**2**
b) (i) High – low method	
Variable cost	2
Unit fixed cost	2
Maximum marks	**4**
ii) using the linear regression	**4**
Total marks	**20**

Detailed Answer

A)

i) Job accounts

Job N4500				
	Frw			**Frw**
Balance b/f	1,220,000		Job N4502 materials transfer	620,000
Materials(store a/c)	2,390,000		Materials returned to store	870,000
Labour (wages a/c)	1,290,000		**Cost of sales a/c balance**	**4,270,000**
Production overheads	860,000			
	5,760,000			**5,760,000**

Job N4501				
	Frw			**Frw**
Materials (store a/c) balance b/f	1,680,000		**Cost of sales a/c balance**	**5,180,000**
Materials transfer from Job N4502	250,000			
Labour (wages a/c)	1,950,000			
Production overhead	1,300,000			
	5,180,000			**5,180,000**

Job N4502				
	Frw			**Frw**
Materials (store a/c)	3,950,000		Materials transferred to N4501	250,000
Labour (wages a/c)	840,000		Cost of sales a/c balance	5,720,000
Production overhead	560,000			
materials transfer from Job N4500	620,000			
	5,970,000			**5,970,000**

Job N4503				
	Frw			**Frw**
Materials(store a/c)	4,420,000		Materials returned to store	170,000
Labour (wages a/c)	1,230,000		Cost of sales a/c balance	6,300,000
Production overhead	820,000			
	6,470,000			**6,470,000**

ii) Statement of profit or loss on the completed jobs

Particulars	**Job N4500**	**Job N4502**	**Job N4503**
	Frw	**Frw**	**Frw**
Materials	1,530,000	4,320,000	4,250,000
Labour	1,640,000	840,000	1,230,000
Production overhead	1,100,000	560,000	820,000
Factory cost	**4,270,000**	**5,720,000**	**6,300,000**
Administration and marketing overhead (20%)	854,000	1,144,000	1,260,000
Cost of sales	**5,124,000**	**6,864,000**	**7,560,000**
Sale invoice value	5,500,000	8,000,000	7,500,000
Profit/ (loss)	**376,000**	**1,136,000**	**(60,000)**

iii) Factory cost of uncompleted job

Particulars	**Job N4501**
	Frw
Materials	1,930,000
Labour	1,950,000
Production overhead	1,300,000
Factory cost	**5,180,000**

B)

i) Estimating total cost function using High low method
Total cost function= Y = a+b(x)

Then b = cost @high level activity – cost @low level activity

Units @high level activity – units @low level activity

Particulars	**Units**	**Cost**
High activity level	8,000	1,600,000
Low activity level	1,000	350,000
Difference	**7,000**	**1,250,000**

b = 1,250,000/7000 = Frw 179 per unit
Having the variable cost per unit, we can get the fixed cost from the total cost function as follows:
Y= a+b(x)

1,600,000 = a + 179(8,000) a= 1,600,000 – 1,428,571= 171,429

ii) Estimating total cost function using linear regression analysis

Formulas:

Variable cost (b) = $\frac{n\sum xy - \sum x\sum y}{n\sum x2 - (\sum x)2}$

Fixed cost (a): {$(\sum Y - b\ (\sum x)\}/n$

Month	**Advertisement cost(Frw)**	**Sales units**			
	X	**Y**	X2	Y2	XY
January	800,000	4000	640,000,000,000	16,000,000	320,000,000
February	500,000	3000	250,000,000,000	9,000,000	150,000,000
March	350,000	1000	122,500,000,000	1,000,000	35,000,000
April	1,000,000	6000	1,000,000,000,000	36,000,000	600,000,000
May	850,000	5000	722,500,000,000	25,000,000	425,000,000
June	1,300,000	7000	1,690,000,000,000	49,000,000	910,000,000
July	1,100,000	6000	1,210,000,000,000	36,000,000	660,000,000
August	1,600,000	8000	2,560,000,000,000	64,000,000	1,280,000,000
Total	**7,500,000**	**40,000**	**8,195,000,000,000**	**236,000,000**	**4,380,000,000**

(b) = {(8*4,380,000,000) – (7,500,000*40,000)}/ {(8*236,000,000) – (40,000*40,000)} =

= (350,400,000,000 – 300,000,000,000)/ (1,888,000,000 – 1,600,000,000) = 175

(a) = {7,500,000 – (175*40,000)}/8 = 62,500

QUESTION FOUR

Marking guide	**Marks**
a) Calculations	
i) Sales budget in quantity and value	3
ii) Production budget in units	5
iii) Material utilization budget	3
iv) Purchase budget in quantity and value	5
Maximum marks	**16**
b) Rubavu Hills	
Direct labour budget	3
Interpretation	1
Maximum marks	**4**
Total marks	**20**

Detailed Answer

a) Umurava company Limited

(i) Sales budget

Particular	**X**	**Y**	**Y**	**TOTAL**
Units sold	4,000	1,000	3,500	8,500
Unit price (Frw)	300	120	340	
Sales value (Frw)	**1,200,000**	**120,000**	**1,190,000**	**2,510,000**

(ii) Production budget in units

Particular	**X**	**Y**	**Z**
Forecasted sales	4,000	1000	3500
Closing stock	1,500	1650	400
	5,500	**2,650**	**3,900**
Opening stock	(1,000)	(2,000)	(500)
Net production required	**4,500**	**650**	**3,400**

(iii) Material utilization budget

	Material		
Required units (units)	**A**	**B**	**C**
X - 4,500	4,500*4 = 18,000	4,500*2 = 9,000	4,500*4 = 18,000
Y – 650	650*3 = 1,950	650*3 = 1,950	650*2 = 1,300
Z - 3,400	3,400 *2 = 6,800	3,400*1 = 3,400	3,400*1 = 3,400

(iv) Material purchase budget in quantity and value

	Material		
Particulars	**A**	**B**	**C**
Total material utilisation (units)	26,750	14,350	22,700
Add: Closing stock of material	32,000	20,000	10,000
	58,750	**34,350**	**32,700**
Less: Opening stock of materials	(16,000)	(10,000)	(12,000)
Required purchase units	42,750	24,350	20,700
Price per unit	7	6	4
Material	299,250	146,100	82800

b) Rubavu Hills Limited

i) Direct labour budget

Particulars	**Number of hours**
Total standard hours required	(3*1,390) = 4,170
Productivity ratio	75%
Actual hours required	4,170/75% = 5,560
Budgeted hours available	40 * 120 = (4,800)
Shortage	(760)

Remark:
From the direct Labour budget, it is seen that the direct labour hours available are not sufficient and hence there is a shortage of 760 hours.
Consequently, it will be necessary to work overtime as well as enhance efficiency

QUESTION FIVE

Marking guide	**Marks**
a) (i) Production overheads vs administrative overheads	2
Well, explained with examples	1
Maximum marks	**3**
ii) Functional costs	
Production costs	0.5
Research and Development	0.5
Distribution	0.5
Selling	0.5
Administration	0.5
Finance	0.5
Any other valid cost	0.5
Maximum marks	**2**
b) (i) Statement of equivalent production units	
Equivalent units Material	1
Equivalent units Labour	1
Equivalent units Overheads	1
Total Units	1
Maximum marks	**4**
ii) Statement of cost	
Cost per unit Material	1

Cost per unit Labour	1
Cost per unit Overheads	1
Total cost per unit	1
Value of finished goods	1
Maximum marks	**5**
iii) Statement of evaluation	
Output to finished goods	1.5
Closing WIP	1.5
Maximum marks	**3**
iv) Process account	
Opening inventory	1
Total amount added	1
Output transferred to B	1
Maximum marks	**3**
Total marks	**20**

Detailed Answer

a) **(**i) Production overheads include all indirect material costs incurred in the factory from receipt of a production order until its completion. Examples include consumables, wages of foremen, fuel, power, etc

while administration overheads are indirect material costs and expenses incurred in the direction, control and administration of an undertaking. Examples include depreciation of office building, insurance, rent, office salaries, etc

(ii) The following functional costs that are incurred by a manufacturing company as it carries out its daily operations:

- Production costs: Costs incurred during the production process beginning from the supply of raw materials and ending with the completion of a finished product ready for warehousing as a finished good
- Distribution costs: costs of the sequence of operations with the receipt of finished goods from Production Department and making them ready for dispatch and ending with the reconditioning for reuse of empty containers
- Selling costs: costs of creating demand for a product and securing firm orders from customers
- Administration costs: costs for managing the organisation, that is planning and controlling operations.i.e. other costs not associated with production, sales, distribution, research and development
- Finance costs: costs incurred to finance the business such as interest on loans
- Research costs and development costs: are costs for searching for new or improved products as well cost for producing or improving the new products

b) Process costing

i) Statement of equivalent production units

Particulars	**Total**	**Equivalent units-material**		**Equivalent units-labour**		**Equivalent units-Overhead**	
		% of completion	Units	% of completion	Units	% of completion	Units
Units output to process B							
Opening stock	200						
Units added during the period	2,000						
Closing WIP	(460)						
Output to finished goods	**1,740**	100%	1,740	100%	1,740	100%	1,740
Closing WIP	460	100%	460	65%	299	35%	161
Total	**2,200**		**1,785**		**2,039**		**1,901**

ii) Statement of Cost

Particulars	**Material**	**Labour**	**Overhead**	**Total**
Opening stock	24,000	14,000	4,000	42,000
Added during the period	60,000	33,500	15,000	108,500
	84,000	**47,500**	**19,000**	**150,500**
Equivalent units	2,200	2,039	1,901	6,140
Cost per unit	38	23	20	71
Value of finished (1,740 * 71)	**124,362**			

Statement of evaluation

Particulars	**Material**	**Labour**	**Overhead**	**Total**
Output to finished goods	66,436	40,535	17,391	124,362
Closing WIP	17,564	6,965	1,609	26,138
				150,500

iii) Process account

Particulars	**Quantity**	**Amount**		**Particulars**	**Quantity**	**Amount**
Opening inventory	200	42,000		Output transferred to B	1,740	124,362

Added:						
Material	2,000	60,000		Closing WIP	460	26,138
Labour		33,500				
Overhead		15,000				
	2,200	**150,500**			**2,200**	**150,500**

QUESTION SIX

Marking guide	**Marks**
a) (i) Break-even point in sales	
Sales	0.5
Direct material	0.5
Direct labour	0.5
Direct overheads	0.5
Selling and distribution	0.5
Total variable cost	0.5
Contribution	1
Contribution ratio	1
Break-even sales	1
Maximum marks	**6**
ii) Margin of safety	
Formula	1
Calculation	1
Maximum marks	**2**
iii) To make a profit of 2.25m	
Determine Target sales	1
Calculation	1
Maximum marks	**2**
iv) Summary of operating statement	
Sales	0.5
Variable costs	0.5
Contribution	0.5
Profit	0.5
Maximum marks	**2**
v) **CVP analysis limitations**	
Time consuming	1
Applicable to a single product	1
Lacks accuracy and precision	1
Limited significance of cost data	1

Complexity of analysis	1
Any other valid limitation	1
Maximum marks	**5**
b (i) The order that minimises inventory costs is EOQ	
Formula	**1**
Calculation	**1**
Calculate the reorder level	**1**
Maximum marks	**3**
Total marks	**20**

Detailed Answer

a) (i) Break even sales Contribution

Sales	**15,000,000*97%**	**14,550,000**
Less Variable cost		
Direct material	3,250,000*102%	3,315,000
Direct labour	2,700,000*104% %	2,808,000
Variable Overhead	3,500,000*97%	3,395,000
Selling and Distribution cost	1,000,000*95%	950,000
Total Variable cost		10,468,000
Contribution		**4,082,000**
Contribution ratio	**4,082,000/14,550,000**	**0.28**

Break even sales = Fixed cost/ contribution ratio
= (1,300,000+1,050,000)/ 0.28 = FRW 8,392,857
(ii) **Margin of safety** = Actual sales – break even sales = 14,550,000 – 8,392,857 = **6,157,142**
(iii) **To get target profit of 2.25 million**, Majyambere Hardware Company Limited will need to sales 16,428,571
To get target sales = (target profit +Fixed cost)/ contribution ratio = (2,250,000+2,350,000)/0.28=16,428,571

(iv) **summary of operating statement**

Sales	16,428,571
Variable costs	(11,826,571)
Contribution	4,600,000
Fixed cost	(2,350,000)
Profit	**2,250,000**

(v) Limitation of CVP analysis

- The CVP analysis is time consuming
- The analysis is only applicable to a single product

- Where there is difficult in classifying costs between variable and fixed, it is difficult to apply it
- At all levels of output, it assumes that sales price remains constant
- At all levels of output, it assumes that unit variable cost is constant
- At all levels of output, it assumes that fixed cost is constant which is not practicable in the long run
- Inventory is not taken into consideration
- It is not useful for production planning

B)

(i) The order that minimises inventory costs is EOQ

EOQ= $= \sqrt{2DCO/HC}$

D = 1000 units ,Co = FRW 50
HC= 15+(50*10%) = Frw 20
EOQ = 70.7 units

ii) Lead time is 7 days
Calculate the reorder level= D*(L/360) = 1000*(7/360) = 19 units

QUESTION SEVEN

Marking guide	**Marks**
Definition management accounting	1
Definition financial reporting	1
Differences	
Legal requirement	1
Reporting requirements	1
Reporting frequency	1
Primary users	1
Time period	1
Auditing requirements	1
Or any other valid point	1
Maximum marks	**8**

b) (i) Unit selling price

Production overhead/ unit (Juice, milk, and water)	3
Mark up of 20% (Juice, milk, and water)	3
Selling price per unit (Juice, milk, and water)	3

(ii) Steps of ABC

i.Identify cost activities	0.5
ii.Assign an overhead cost	0.5
iii.Identify cost drivers	0.5
iv. Predetermined overhead rate	0.5
v. Allocate overhead	0.5
Allocate 0.5 if points are in order and numbered	0.5
Maximum marks	3
Total marks	**20**

Detailed Answer

a) Compare and contrast management accounting and financial accounting

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 the use of resources. Financial accounting is the process of recording, classification and interpreting financial transactions.

The following are the differences between management accounting and financial accounting:

1. Legal requirements: Financial accounts must be prepared as a statutory requirement while management accounting is not compulsory as it depends on the management needs. It is a statutory requirement for all public limited companies to produce Annual Accounts at the end of every financial year while Management Accounting it is optional.

2. **Reporting requirements:** Financial accounts must be prepared and presented in conformity with GAAP while management accounting is not based on any accounting rules and regulations and not bound to use Generally Accepted Accounting Principles.

3. **Focus on part of organisation**: Financial Accounting reports describe the whole of the organization/business while Management Accounting focuses on small parts of the organization.

4. Reporting frequency: Financial Accounts are usually prepared annually or semi-annually where as Management Accounting requires information quickly if it is to act on it, and consequently Management Accounting reports on various activities may be prepared at daily, weekly or at monthly intervals. management reports are more routine (frequently prepared).

5. Primary users of information: Information generated under Management Accounting system is used by members of management at different levels while the users of Financial Accounting statements are mainly external to the business enterprise such as creditors, financial institutions, potential investors, government authorities, etc.

6. **Time dimension:** Financial Accounting reports what has already happened in the past in an organization while Management Accounting is concerned with future information as well as past information.

7. **Auditing requirement:** Financial Accounts must be subjected to an external audit since they are used by external parties but it is not a requirement to audit cost and management accounts.

b) (i) Unit selling price

Particulars	Juice	Milk	Water
Direct material	1,500	1,450	550
Direct labour (Frw 250 per hour)	400	150	450
Production overhead/ unit	926.6	670.9	1563.5
Total production cost (Frw)	**2,826.6**	**2,270.9**	**2,563.5**
Mark up 20%	565.3	454.2	512.7
Selling price per unit (Frw)	**3,392**	**2,725**	**3,076.2**

(ii) Steps involved in ABC system

- Identify cost activities (cost pools) required to complete an activity
- Assign an overhead cost to the activities identified in step one
- Identify cost drivers
- Calculate a predetermined overhead rate for each activity
- Allocate overhead cost to products

End of Model Answers and Marking guide