CERTIFIED ACCOUNTING TECHNICIAN
STAGE 3 EXAMINATIONS
S3.2: MANAGEMENT ACCOUNTING
DATE: THURSDAY, 26 AUGUST 2021
MODEL ANSWER AND MARKING GUIDE

SECTION A

Marking guide

Question Number	Answer
1	**C**
2	**C**
3	**D**
4	**B**
5	**D**
6	**C**
7	**B**
8	**C**
9	**A**
10	**D**

	Marks
2 Marks for each correct answer	2
Total marks for this section	**20**

QUESTION ONE: Correct option is C

(i) is incorrect because Management accounts are prepared for internal managers of an organisation

(ii) is incorrect because the main purpose of management accounting is to aid management with planning, control and decision making within the organisation

(iii) and (iv) are correct statements for management Accounts and financial Accounts

QUESTION TWO: Correct option is C

(i) Data obtained from a survey conducted by the organization are highly reliable primary source of data not secondary source

(ii) is correct because the main sources of secondary data are governments; banks; newspapers; trade journals; information bureaux; consultancies; libraries; and information services.

(iii)Internet is a source secondary data not primary source

(iv) is incorrect because secondary data are cheaply available.

(v) is correct because both Quantitative and qualitative data can be collected from primary and secondary source

QUESTION THREE: Correct option is D

(A) is incorrect because rental expenses is not component of prime cost

(B) is incorrect because Cost codes can be possible for all environment not necessarily computerized environment

(C) Profit centres are accountable for both costs (direct and indirect) and revenues.

(D) Is correct answer because progressive or Sequence coding system is process of attributing distinct numerical to items

QUESTION FOUR: Correct option is B

High-low method

Month	**Units Produced**	**Total Costs (Frw)**	
June	76	788,000	
July	69	720,000	Lowest activity
August	83	855,000	Highest activity

Variable cost per unit:

$$\frac{855{,}000 - 720{,}000}{83 - 69} = \frac{135{,}000}{14} = Rwf 9{,}642.86\ per\ unit$$

Fixed cost = 855,000 – (83*9,642.86) = Rwf54,642.86

A and C are wrong
B is correct answer
D is variable cost per units

QUESTION FIVE: Correct option is D

i) Labour hours is principal budget factor in budgeting labour cost
(ii) is incorrect because responsibilities of the budget committee is to Co-ordination of the preparation of budgets, which includes the issue of the budget manual ,Issuing of timetables for the preparation of functional budgets, Allocation of responsibilities for the preparation of functional budgets ,Provision of information to assist in the preparation of budgets, Communication of final budgets to the appropriate managers, Continuous assessment of the budgeting and planning process, in order to improve the planning and control function

(iii) is incorrect because usually, individuals responsible for the preparation of annual budgets are also responsible for implementing the budget

(iv) is incorrect because the budget manual is a collection of instructions governing the responsibilities of persons and the procedures, forms and records relating to the preparation and use of budgetary data

QUESTION SIX: Correct option is C

Population	**Calculations**	**Sample**
A = 320	**=320*100/1,000**	**32**
B = 370	**=370*100/1,000**	**37**
C = 310	**=310*100/1,000**	**31**
Total = 1,000		**100**

(i) **32+37 is 69 which is correct**
(ii) is correct statement about stratified sampling

(iii) stratum C will contribute a sample of 31 items not 32

(iv) **37+31 is 68 which is correct**

(v) Multistage sampling is a probability sampling method which involves dividing the population into several sub-populations and then selecting a small sample of these sub-populations at random. Each sub-population is then divided further, and then a small sample is again selected at random. This process is repeated as many times as is necessary.

QUESTION SEVEN: Correct option is B

Use of terminal value

Cash at year end	Calculations	Terminal value at Year 3
Initial investment	=-60M*1.1*1.1*1.1	(79.86M)
Year1 =	=23M*1.1*1.1	27.83M
Year2 =	=28M*1.1	30.8M
Year3 =	=25M	25M
Total		+3.77M

(i) Terminal value is wrongly calculated

(ii)Terminal value is positive Frw 3.77 M and should be undertaken

(iii) is cash outflows less inflows which is wrong

(iv) Terminal value is wrongly calculated

(v)The use of terminal value method to evaluate this project is appropriate

QUESTION EIGHT: Correct option is C

(i)The most common 3E's – economy, efficiency, and effectiveness.

(iii)Efficiency consists of attaining desired results at minimum cost.

Statements ii,iv, and v are correct

QUESTION NINE: Correct option is A

(i)flexed budget is a budget that is prepared at the actual activity level that was achieved in the period, to show what the standard costs should have been at that activity level

(ii) when assessing performance against a flexed budget variances can be calculated.

(iv) budgeted fixed overheads should not be the same in the fixed and flexed budgets

Statement iii and v is correct

QUESTION 10: Correct option is D

(i)This statement is system failure not indicator of fraud

iv) Removing items from the asset register following an internal auction is not fraud indicator

ii, iii and iv are the indicator of risks

SECTION B

QUESTION 11

Marking guide	**Marks**
(A)	
Material X relevant cost	1
Material Q relevant cost (1.5 marks for each computation)	3
Material P relevant	1
Maximum marks	**5**
(B) Total direct material cost	**2**
(C) Use Discounted Cash Flow method to evaluate the new product success. (1 Mark for each well explained point)	**3**
Total marks	**10**

Detailed answer

(A) **The relevant costs which will be considered as production costs for each required material**

Material Name	Already available Qty (Units)	Required Qty (Units)	Initial cost (Frw per unit)	Current price/cost (Frw per unit)	Scrap value (Frw per unit)
X	5,715	9,300	1,500	1,570	85
Q	1,320	3,330	790	1,150	56
P	0	2,450	-	2,100	99

Material X relevant cost: 9,300*1,570= Frw 14,601,000
Material Q relevant cost: (1,320*56) + ((3,330-1,320)*1,150)= Frw 2,385,420
Material P relevant cost: 2,450*2,100= Frw 5,145,000

(B) **Total direct material cost for the new product**

Total direct material cost: Frw 14,601,000+2,385,420+5,145,000=Frw 22,131,420

(C) **Use Discounted Cash Flow method to evaluate the new product success**.

MIC could use Net present value (NPV) which is a method used to determine the current value of all future cash flows generated by the product, including the initial capital investment. To compute the NPV, MIC will need to estimate future cash flows for the product and determine the correct discount rate.

If NPV of the new product is positive, it means that the discounted present value of all future cash flows related to that product will be positive, and therefore MIC should invest in the new product.
However, if NPV of the new product is negative, it means that the discounted present value of all future cash flows related to that product will be negative, and therefore MIC should not invest in the new product.

QUESTION 12:

Marking guide	**Marks**
Identifying recommendations (1 mark each, maximum 5)	5
Explanation (1 mark each, maximum 5)	5
Total marks	**10**

Detailed answer

Recommendations of changes to be made on the existing accounting system.

- ✓ **Training all finance team and give them access to the system:** Efficiency will be increased with more people trained about the system and able to input data
- ✓ **Automatic financial reports**: The preparation and review of important financial reports should be automated to avoid manual manipulation of sensitive financial data
- ✓ Introduction of regular information backups: To avoid data loss and allow easy retrieval of lost data, equipment to facilitate daily backups should be installed
- ✓ Introduce the Bank reconciliation feature: The existing system should be upgraded to include a bank reconciliation feature to minimize the number of errors
- ✓ System user-friendliness: Improve the system interface and navigation features to make the system more user friendly, remove unnecessary restrictions and procedures while allowing customizations
- ✓ **Reporting capabilities**: Improve the system to produce various reports designed for both internal and external parties
- ✓ **Speed**: Improve the system to increase the speed at which transactions are processed and completed
- ✓ **System Security:** The last year data loss could have been caused by hackers exploiting the system vulnerabilities. The system security features should be strengthened, and the security should be among the company's top priorities.

SECTION C

QUESTION 13 **Marks**

Marking guide

(A)

Computation of Cost per Driver (0.5 mark for each calculation maximum 2)	2
Calculation of total overhead cost for each product (0.5 mark for each calculation, maximum 4)	4
Direct materials (1 Mark for product x and 1 Mark for product Y)	2
Direct labour (1 Mark for product x and 1 Mark for product Y)	2
Computation of Overheads (1 Mark for product x and 1 Mark for product Y)	2
Calculation of Mark-up of 40% (1 Mark for product x and 1 Mark for product Y)	2
Maximum marks	**14**

(B)

Three Merits of ABC (1 mark for each maximum 3)	3
Three Disadvantages of ABC (1 mark for each maximum 3)	3
Maximum marks	**6**
Total marks	**20**

Detailed answer

(a)**Computation of cost per Driver**

Activity	**Cost driver**	**Cost (Provided) – 'Frw'**	**Total drivers (Provided) - Frw**	**Cost per driver - Frw**
Formula		**A**	**B**	**C=A/B**
Procurement costs	Number of purchase orders	253,000,000	667,085	379.26
Machine set up costs	Number of machines set ups	138,000,000	275,486	500.93
Quality control costs	Number of inspections	270,000,000	472,161	571.84
Machine depreciation	Machine hours	111,000,000	86,648	1,281.05

Calculation of total overhead cost for each product

	Product X	**Product Y**
	Frw	**Frw**
Procurement costs	(379.26 *3)= 1,137.79	(379.26 *5)= 1,896.31
Machine set up costs	(500.93*1)= 500.9	(500.93*1)= 500.93
Quality control costs	(571.84 *2)= 1,143.68	(571.84 *3)= 1,715.52

Machine depreciation	(1,281.05 *8)= 10,248.36	(1,281.05 *7)= 8,967.32
Total	**13,030.76**	**13,080.08**

Product cost and selling price

	Working	**Product X**	**Working**	**Product Y**
Direct materials		19,500		21,300
Direct labour	((412,500,000/36,882) *4/60)	745.62	((412,500,000/36,882) *3/60)=	559.22
Overheads		13,030.76√		13,080.08√
Total Product Cost		**33,276.38**		**34,939.29**
Mark-up of 40%		13,310.55		13,975.72
Product selling cost		**46,586.93**		**48,915.01**

(b) ***Merits and Disadvantages of ABC***

Merits

1. ABC is not difficult to use
2. ABC allows the understanding of what drives overheads costs
3. Provides more realistic product costs.
4. ABC allows more overhead to be traced to products.
5. ABC provides accurate and reliable cost information
6. ABC focuses attention on the nature of cost behaviour and can help to reduce costs and identify activities that do not add value to products.
7. ABC recognises the complexity and diversity of modern production allowing the use of multiple cost drivers.

Disadvantages

1. ABB will require detailed analysis of overheads and measuring of activities. This can be a complex, costly and time-consuming project.
2. ABC is more complex than traditional absorption costing systems and consequently more expensive to develop and administer.
3. With ABC, it may be difficult to select appropriate cost drivers.
4. With ABC, it may be difficult to accurately split/spread costs that are shared across activities.

QUESTION 14

Marking guide	**Marks**
(A) Ratio	
Operating profit Margin.	1.5
Return on capital employed.	1.5
Asset turnover.	1.5
Quick ratio.	1.5
Inventory days.	1.5
Receivable's collection period.	1.5
Payables' payment period.	1.5
Gearing ratio.	1.5
Noncurrent asset turnover.	1.5
Maximum marks	**13.5**
(B) Terms relating to performance measurements and cost management:	
Explanation -Productivity	1
Explanation Value added.	1
Explanation Capacity ratio.	1.5
Explanation Opportunity cost	1.5
Explanation Limiting factor	1.5
Maximum marks	**6.5**
Total marks	**20**

Detailed answer

(a) **Ratios on Buryohe Ltd financial statement**

No.	**Ratio**	**Formula**	**Computation**
(i)	Operating profit Margin	Operating profit*100/sales	(141,199,210/1,782,000,000)*100%=7.92%
(ii)	Return on capital employed	Profit*100/Capital employed	(141,199,210/ 15,267,753,830-630,863,500)*100%=0.96%
(iii)	Asset turnover	Revenue/Capital employed	(1,782,000,000 / 15,267,753,830-630,863,500)*100%=12.17%
(iv)	Quick ratio	Current assets/Current liabilities	((591,300,850 + 189,676,980)/630,863,500) =1.24
(v)	Inventory days	Average inventory× 365 days/Cost of sales	(650,853,000/ 1,128,000,560)*365=211 Days
(vi)	Receivable's collection period	Trade receivables*365 days/Credit sales	(591,300,850/ 1,782,000,000)*365=121 Days
(vii)	Payables' payment period	Trade payables*365/Credit purchases	(630,863,500/ 1,128,000,560) *365=204 Days =
(viii)	Gearing ratio (Debt/equity)	Total debt× 100/Equity	(4,302,590,000/(9,590,500,000+ 743,800,330))*100%=42%=

(ix)	Noncurrent asset turnover	Revenue*100/Noncurrent asset	(1,782,000,000/ 13,835,923,000)*100%=13%

(b) **Describe the following terms relating to performance measurements and cost management:**

(i) Productivity is the measure of how hard the employees are working or how productive they are being in their hours at work

(ii) Value added is the difference between the value of the inputs in a business and the value of the outputs. The inputs are the cost of materials and bought in services and the value of the outputs is the sales revenue of the business

(iii) Capacity ratio is a measure of the hours worked compared with the budgeted hours. Has the work force worked more hours or fewer hours that expected or budgeted? The capacity ratio is calculated by comparing the actual hours worked to the hours that were budgeted and expressing this as a percentage.

Capacity ratio = $\frac{Actual\ hours\ worked}{Budgeted\ hours}$x100%

(iv) Opportunity cost: Where an organisation has a number of possible courses of action/options, opportunity cost represents the cost of the benefit that is lost/sacrificed when the choice of one course of action requires that the next best course of action is given up.

(v) Limiting factor: A limiting factor arises in the context of decision making in a business. It is a resource that is in short supply such that it restricts the ability of the organisation to provide and sell more of its products or services. For example, labour hours, machine hours, key raw material etc.

QUESTION 15

Marking guide	**Marks**
(A) production capacity to meet the demand.	
Computation of Labour cost per unit	1
Computation of Budgeted variable overhead	0.5
Computation of Budgeted variable overhead per hour	0.5
Computation of Total required labour hours	1
Shortfall of hours	1
Conclusion	1
Maximum marks	**5**

(B) Optimal production plan and expected total annual profit.

Variable overhead	2
Contribution per unit	2
Contribution per labour hour	2
Ranking	1
Optimal production plan	
Production in units	1
Total labour hours required	2
Contribution	2
Total contribution	1
Profit	2
Total marks	**20**

Detailed answer

(a) Verify, through calculations, whether Rubirizi Company will have the production capacity to meet the demand.

Labour hours per unit

	Muneza	**Mbazi**
Labour cost per unit	10,000	12,000
Labour cost per hour	2,000	2,000
Labour hours per unit	5 (10,000/2,000)	6 (12,000/2,000)

Budgeted production overhead	8,500,000
Budgeted variable overhead	3,400,000 (8,500,000*40%)
Budgeted fixed overhead	5,100,000 (8,500,000 -3,400,000)
Total Budgeted labour hours	29,250
Budgeted variable overhead per hour	116.24 (3,400,000/29,250)

	Muneza	**Mbazi**
Demand	2,600	2,950
Required labour per unit	5	6
Total required labour hours	13,000 (2,600*5)	17,700 (2,950*6)

Total required labour hours	(13,000 + 17,700)= 30,700
Available labour hours	29,250
Shortfall of hours	1,450

Rubirizi Company does not have enough budgeted labour hours to meet budgeted demand

(b) **Optimal production plan and expected total annual profit**

Optimal production plan and expected total annual profit
Labour hours are therefore, a limiting factor

	Muneza	Mbazi
Selling price per unit	32,000	37,000
Direct material	16,000	19,000
Direct labour	10,000	12,000
Variable overhead	(5*116.24)= 581.20	(6*116.24) =697.44
Total variable costs per unit	26,581	31,697
Contribution per unit	(32,000-26,581)=5,419	(37,000-31,697)= 5,303
Labour hours per unit	5	6
Contribution per labour hour	(5,419/5)= 1,083.8	(5,303/6)= 883.8
Ranking	1	2

Optimal production plan

	Muneza	Mbazi
Contribution per unit	5,418.8	5,302.6
Production in units	2,600	(29,250-13,000)/6)= 2,708
Total labour hours required	13,000	(29,250-13,000)=16,250
Contribution	(5,418.8*2,600)= 2,817,778	(5,302.6*2,708) =2,393,519

Total contribution	(14,088,889 + 14,361,111)=28,450,000
Budgeted fixed overhead	5,100,000
Profit	(28,450,000 -5,100,000)= 23,350,000

End of model answer and marking guide