
CERTIFIED ACCOUNTING TECHNICIAN
STAGE 3 EXAMINATIONS

S3.2: MANAGEMENT ACCOUNTING

DATE: THURSDAY 30, NOVEMBER 2023

INSTRUCTIONS:

1. Time allowed: **3 hours**.
2. This examination has **three** sections: **A, B and C**.
3. Section A has **10** multiple choice questions equal to 2 marks each.
4. Section B has **2** questions equal to 10 marks each.
5. Section C has **3** questions equal to 20 marks each.
6. All questions are compulsory.
7. The question paper should not be taken out of the examination room.

SECTION A

QUESTION ONE

Which two of the following statements relating to management accounting information is true?

- (i) There is a legal requirement for the information to be produced
- (ii) It is produced for internal users
- (iii) It includes both financial and non-financial information
- (iv) Strict rules govern the format in which the information is presented

- A (ii) and (iv)
- B (ii) and (iii)
- C (i) and (iv)
- D (iii) and (iv)

(2 Marks)

QUESTION TWO

A retail company benchmarks the performance of one of its poorer performing stores against that of one of its flagship stores.

Which type of benchmarking is the company using?

- A Internal Benchmarking
- B Competitive Benchmarking
- C Functional Benchmarking
- D Strategic Benchmarking

(2 Marks)

QUESTION THREE

The following information is relevant to Butare Ltd

Capital Employed	FRW 300,000,000
Cost of Capital	10%
Residual Income	FRW 60,000,000
Imputed Interest	FRW 30,000,000

What is the company's return on investment (to the nearest whole percent)?

- A 20%
- B 50%
- C 30%
- D 10%

(2 Marks)

The following information relates to Question four and five

QUESTION FOUR

A company operating a standard costing system has the following direct labour standards per unit for one of its products:

Four hours at FRW 1250 per hour

Last month when 2,195 units of the product were manufactured, the actual direct labour cost for the 9,200 hours worked was FRW 11,075,000.

What was the labour efficiency variance for the last month?

- A FRW 425,000 Favourable
- B FRW 425,000 Adverse
- C FRW 525,000 Favourable
- D FRW 525,000 Adverse

(2 Marks)

QUESTION FIVE

Using information from Question four

What is the labour rate variance

- A FRW 425,000 Favourable
- B FRW 425,000 Adverse
- C FRW 525,000 Favourable
- D FRW 525,000 Adverse

(2 Marks)

QUESTION SIX

A company which manufactures sports footwear selects some running shoes for examination. The procedure used is that two random numbers are chosen, x and y. Starting at the xth pair of running shoes, every pair at an interval of y is then chosen for examination.

Which best describes this type of sampling?

- A Multi-stage sampling
- B Random sampling
- C Systematic sampling
- D Stratified sampling

(2 Marks)

QUESTION SEVEN

Using an interest rate of 5% per year, the net present value of a project has been correctly calculated as FRW100,000. If the interest rate is increased by 2%, the net present value of the project falls by FRW 50,000.

What is the internal rate of return of the project (to the nearest whole percentage)?

- A 6%
- B 9%
- C 8%
- D 11%

(2 Marks)

QUESTION EIGHT

A division of a service company is aware that its recent poor performance has been attributable to a low standard of efficiency amongst the workforce, compared to rival firms. The company is adopting a balanced scorecard approach to setting performance targets. As part of its objective of closing the skills gap between itself and rival companies, the division's management has set a target of providing at least 40 hours of training each year for all its employees.

What does this performance target reflect?

- A A customer perspective
- B A learning and growth perspective
- C An internal process perspective
- D A finance perspective

(2 Marks)

QUESTION NINE

BR co budgets to make 25,000 units of output (in four hours each) during a budget period of 100,000 hours. Actual output during the period was 27,000 units which took 120,000 hours to make.

What is the Capacity Utilization Ratio and Production Volume Ratio?

	Capacity Utilization Ratio	Production Volume Ratio
A	90%	108%
B	90%	83%
C	108%	90%
D	120%	108%

(2 Marks)

QUESTION 10

A manufacturing business is introducing Total Quality Management (TQM). In a TQM environment, **Which two of the following are likely to be prevention costs?**

- (i) Cost of repairs under warranty
- (ii) Training in quality control
- (iii) Maintenance of inspection equipment
- (iv) Performance testing

- A (ii) and (iii)
- B (i) and (ii)
- C (ii) and (iv)
- D (iii) and (iv)

(2 Marks)

SECTION B

QUESTION 11

(a) Time series analysis in management accounting is defined as a series of figures or values recorded over a period of time. The four components of time series analysis are: trend, seasonal variation, cyclical variation and random variation. **Giving examples, define the following terms as used in time series analysis**

(i) **Trend** (2 Marks)

(ii) **Seasonal Variation** (2 Marks)

(b) Rwamagana Millers Ltd (RML) is the largest floor processing company in the Eastern Province of Rwanda. RML has presented to you as the Cost Accountant with the following data for sales recorded over a period of 7 years.

Period	Sales Units
2016	1,560
2017	1,520
2018	1,840
2019	1,800
2020	1,880
2021	1,760
2022	1,920

Required:

Using additive model and assuming a moving average of three (3-years), **prepare a time series analysis table and show the following:**

(i) **Trend** (4 Marks)

(ii) **Seasonal Variation** (2 Marks)

(Total: 10 Marks)

QUESTION 12

Smart Publishers Ltd (SPL) deals in the printing of text books for secondary schools in Rwanda. SPL would like to establish the relationship between number of books produced and the cost of production of the books. The following cost data relates to the last eight months of the year 2022.

Month	Number of Books	Total Cost
	Units	FRW 000
May	750	1,800
June	625	1,900
July	640	2,000
August	825	2,100
September	1,175	2,800
October	1,200	2,440
November	1,500	2,950
December	1,400	2,800

Required:

Using Regression analysis method of cost estimation,

- (a) Calculate the Variable cost per unit (4 Marks)
- (b) Calculate the fixed cost (2 Marks)
- (c) Formulate the total cost equation (2 Marks)
- (d) Calculate the total cost when 1,250 books are produced (2 Marks)

(Total: 10 Marks)

SECTION C

QUESTION 13

Nile Safaris operates passenger transport service and is also responsible for the maintenance of track signalling equipment, and other facilities such as stations. In recent years it has been criticised for providing poor services to the travelling public in terms of punctuality, safety and the standard of facilities offered to passengers. Last year, Nile Safaris invested over FRW 200 million in new tracks, station facilities and track maintenance programmes in an attempt to address these criticisms.

Summarised financial results for Nile Safaris for the last two years are given below:

Extract of statement of profit or loss account for the year ended 31st December,

Particulars	2021	2022
	FRW Millions	FRW Millions
Sales	180	185
Profit before interest and tax	18	16.5
Interest	3.2	4.7
Income tax	4.4	3.5
Profit available to ordinary shareholders	10.4	8.3

Extract of statement of financial position as at 31st December,

Particulars	2021	2022
	FRW Millions	FRW Millions
Non current assets	100.4	120.5
Current assets		
Inventory	5.3	5.9
Receivables	2.1	2.4
Cash	6.2	3.6
Total assets	114	132.4
Ordinary share capital	35	35
Reserves	50.6	68.2
8% Debentures (more than a year)	20	20
Payables due within a year	8.4	9.2
Total Equity and Liabilities	114	132.4

Required:

(a) Calculate the following financial performance measurement ratios for Nile Safaris for the years 2021 and 2022, clearly showing your workings.

- (i) Return on capital employed (ROCE) (2 Marks)
- (ii) Operating profit margin (2 Marks)
- (iii) Asset turnover (2 Marks)
- (iv) Current ratio (2 Marks)
- (v) Receivables collection period (2 Marks)

(b) Evaluate the financial performance of the entity in 2021 and 2022 in terms of ROCE, operating profit margin, asset turnover and current ratio (4 Marks)

(c) Suggest three (3) non-financial indicators that could be useful in measuring the performance of passengers' transport service and explain why your chosen indicators are important? (6 Marks)

(Total: 20 Marks)

QUESTION 14

Rusizi Ltd manufactures two types of products: X and Y. Rusizi Ltd currently operates using a traditional costing technique of apportioning overhead costs on the basis of labour hours. The newly appointed management accountant has proposed that the company shifts from the traditional method of accounting for overheads to activity-based approach of apportionment of overheads.

Details of the two products are as follows:

Particulars	X	Y
Budgeted production units	6,000	4,000
Direct materials cost per unit	8,000	12,000
Direct labour hours per unit	3	2
Machine hours per unit	4	6

Direct labour costs FRW 4,000 per hour and labour hours for the period are budgeted at 40,000. Machine hours for the period are budgeted as 30,000. Production overheads are estimated at FRW 54,000,000.

An analysis of the production overheads establishes that this cost arises in relation to four activities in the following proportions and has the following associated volumes:

Particulars	Proportion of overhead costs	Activity Volume			Cost Driver
		X	Y	Total	
Machine set up	40%	30	50	80	Number of set ups
Order handling	25%	240	160	400	Number of orders processed
Material handling	20%	520	720	1,240	Number of movements of materials
Quality control	15%	40	90	130	Number of inspections
	100%				

Required:

(a) Calculate the cost per unit for each product using traditional method of apportioning overheads using labour hours (4 Marks)

(b) Calculate the cost per unit using Activity Based Costing (ABC) principal (10 Marks)

(c) Discuss the effect of a move from traditional costing technique to ABC on the pricing and profitability of Rusizi Ltd (6 Marks)

(Total: 20 Marks)

QUESTION 15

(a) Define the following terms as used in the context of budgeting

(i) Flexed budget

(2 Marks)

(ii) Rolling budget

(2 Marks)

(iii) Incremental budget

(2 Marks)

(iv) Zero based budget

(2 Marks)

(v) Principal budget factor

(2 Marks)

(b) Java has recently opened a fast-food restaurant in Muhanga region. Fast-food restaurants are characterised by their quick food service. The fast-food restaurant market in the town is dominated by a small number of long-established restaurants. Java is seeking to grow its business and attract the town's residents with its burger meals. The performance report for the first month of business is to be presented at the restaurant's monthly management meeting. A draft performance report for the first month of business is reproduced below:

Particulars	Budget	Actual	Variance	
Sales (no of meals)	6,000	5,400		
	FRW	FRW	FRW	
Revenue	180,000,000	167,400,000	12,600,000	Adverse
Direct materials	48,000,000	49,140,000	1,140,000	Adverse
Direct labour	33,000,000	27,000,000	6,000,000	Favourable
Variable production overheads	<u>21,000,000</u>	<u>18,900,000</u>	2,100,000	Favourable
Total variable costs	<u>102,000,000</u>	<u>95,040,000</u>	6,960,000	Favourable
Contribution	78,000,000	72,360,000	5,640,000	Adverse
Fixed cost	<u>36,000,000</u>	<u>40,000,000</u>	4,000,000	Adverse
Profit	<u>42,000,000</u>	<u>32,360,000</u>	9,640,000	Adverse

Required:

Using a flexible budgeting approach, **redraft the operating statement so as to provide a more realistic indication of the variance**

(10 Marks)

(Total: 20 Marks)

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