CERTIFIED ACCOUNTING TECHNICIAN

STAGE 3 EXAMINATIONS

S3.2: MANAGEMENT ACCOUNTING

DATE: THURSDAY 28, NOVEMBER 2024

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 of the following statements best differentiate management accounting and financial accounting?

i) Management accounting information are needed for internal use only whereas financial accounting information are needed by external stakeholders
ii) Financial accounting information are needed to assess the performance and state of affairs of an entity but management accounting information are needed mainly for planning, control and decision-making purpose
iii) There is no difference between Management accounting and Financial Accounting

A (i) only
B (ii) and (iii)
C (i), (ii), and (iii)
D (i) and (ii)

(2 Marks)

QUESTION TWO

Which of the following statements describes benchmarking?

A Comparison between different departments or functions within an organization.
B Internal functions are compared with those of the best external practitioners of those functions, regardless of the industry they are in.
C Comparisons with competitors in the business sector through techniques e.g. reverse engineering.
D All of the above

(2 Marks)

QUESTION THREE

UMUYANGE Ltd is a company which manufactures adobe bricks. During the month of April 2024, they used 20 workers to produce 20,000 bricks in 500 hours.

What is the productivity per labour hour of UMUYANGE Ltd?

A 40 Bricks per labour hour
B 1000 Bricks per labour hour
C 25 Bricks per labour hour
D None of the above

(2 Marks)

The following information relates to Question Four and Five

Mulindi Ltd is a factory based in Gicumbi district and specialises in the production of Vino hygiene paper. The standard production is 10 Cartons. Each carton of Vino has 12 pieces. Each carton of Vino requires 0.2 labour hours at FRW 2,000 per hour. During the last week of June 2024, the factory produced 64,000 cartons of Vino using 8,000 labour hours at FRW 1,500 per hour.

QUESTION FOUR

How many labour hours will be needed to produce 80,000 cartons in July 2024 based on June actuals?

A 10,000 labour hours
B 12,800 labour hours
C 16,000 labour hours
D 11,200,000 F

(2 Marks)

QUESTION FIVE

What is the labour rate variance for the month of June 2024?

A FRW 7,200,000 adverse
B FRW 4,000,000 Favourable
C FRW 4,000,000 adverse
D None of the above

(2 Marks)

QUESTION SIX

Which of the following is a non-probability sampling method?

A Random sampling
B Systematic sampling
C Cluster sampling
D Quota sampling

(2 Marks)

QUESTION SEVEN

Muhizi & Sons Ltd produces mineral water. In the month of May 2024, the company produced 10,000 Litres at a cost of FRW 2,500,000. In the month of June 2024, the company produced 7,000 Litres at cost of FRW 1,800,000. In July 2024, the total production was 8,600 litres at a total cost of FRW 2,200,000.

What is the total cost function for Muhizi & Sons Ltd?

A TC = 170,000 -233X
B TC = 170,000 + 233X
C TC = 2,500,000+233X
D TC = 1,800,000+233X

(2 Marks)

QUESTION EIGHT

Which of the following is a non-financial performance indicator?

A Number of goods returned
B Unit cost of returned goods
C Cost of reworking defective goods as a percentage of total production cost
D None of the above

(2 Marks)

QUESTION NINE

Which of the following are types of control ratios?

A Efficiency and solvency ratios
B Capacity and liquidity ratios
C Efficiency and activity ratios
D Liquidity and solvency ratios

(2 Marks)

QUESTION 10

Which of the following best describes Total quality management?

A Setting goals and guidelines to meet them
B Continuous improvement in quality, productivity and effectiveness
C Meeting international standards threshold
D None of the above

(2 Marks)

SECTION B

QUESTION 11

FR Kennedy Junior is a new investor in Rwanda from Belgium, he was attracted by various investment incentives available in Rwanda. He has decided to invest in modern agriculture by leasing machines to different cooperatives across the country. He was informed that the machine will cost FRW 40,000,000 and will be paid in the first year of operations. The machine will operate for 4 years with an annual fixed maintenance fee of FRW 500,900 paid at the beginning of each of the four years' period. The first year's cash inflows are expected to be FRW 9,800,500 with a consistent annual growth rate of 3% for the subsequent years. FR Kennedy Junior is requesting for a deep analysis to assess the viability of his investment in Rwanda.

Required:

Using the information provided, **advice FR Kennedy Junior on whether to invest in or reject the proposed investment. Assume a cost of capital of 9%. (***refer to the present value table on the last page***)** **(**10 Marks)

QUESTION 12

The finance director of CYURU Hospital has tasked you as the newly recruited Accounts Officer to analyse the relationship between the number of patients admitted at the hospital and the total admission costs incurred by the hospital.

You have been provided with the following data for the year 2024.

Period	**Number of Patients**	**Admission Cost**
		FRW
January	360	29,400
February	380	30,400
March	340	27,400
April	320	28,000
May	300	28,600
June	260	26,200
July	220	25,600

Required:

Using least square method,

a) **Calculate the variable cost per patient and the total fixed cost incurred by CYURU Hospital** (8 Marks)
b) **The estimated regression equation** **(1 mark)**
c) **Estimate the total admission cost incurred by CYURU Hospital in September, 2023 if 350 patients are admitted** (1 Mark)

(Total: 10 Marks)

SECTION C

QUESTION 13

a) The following financial statements relate to VIBC Ltd for two years: 2022 and 2023.

Statement of profit/loss and other comprehensive income:

	2023	2022
	FRW	**FRW**
Revenue	235,000	167,000
Cost of Sale	127,000	95,000
Gross Profit	**108,000**	**72,000**
Other Income	5,000	
Operating Cost	78,000	48,000
Finance Cost	9,000	5,000
Profit before tax	**26,000**	**19,000**
Tax	7,800	5,700
Profit After Tax	**18,200**	**13,300**

Statement of financial position as at 31st December:

	2023	2022
Non-current assets	**FRW**	**FRW**
Property, plant and equipment	95,300	52,500
Total non-current assets	**95,300**	**52,500**
Current assets		
Inventory	21,400	8,000
Trade and other receivables	41,600	32,000
Sort term Investment (Highly liquid)	15,000	10,000
Cash and cash equivalent	115,000	108,000
Total current assets	**193,000**	**158,000**
Total assets	**288,300**	**210,500**
Equity and Liabilities		
Share Capital	150,000	100,000
Share Premium	15,000	10,000
Retained earnings	28,500	16,500
Total equity	**193,500**	**126,500**
Non-current liabilities		
Bank loan	70,000	50,000

	2023	2022
Current liabilities		
Trade and other payable	12,000	25,300
Income tax	7,800	5,700
Dividends payable	5,000	3,000
	24,800	**34,000**
Total equity and liabilities	**288,300**	**210,500**

Required:

Using the above information, **compute the following ratios for the two years; 2022 and 2023.**

i) **Gross Profit Margin** (3 Marks)
ii) **Acid test ratio** (3 Marks)
iii) **Equity gearing ratio** (3 Marks)
iv) **Receivables period ratio** (3 Marks)
v) **Interest cover ratio** (3 Marks)

b) **Explain five limitations of using ratio analysis in performance measurement (**5 Marks)

(Total: 20 Marks)

QUESTION 14

NURU Ltd produces four products, A, B, C and D using the same equipment and similar process of production. An extract of the production data for these products in the month of January 2024 is shown below.

	A	B	C	D
Output units	2,000	7,500	2,250	1,250
Direct labour cost per unit (FRW)	8,000	2,000	6,000	2,500
Direct materials cost per unit (FRW)	4,000	2,800	3,200	3,600
Labour Hours per unit	6.00	4.50	3.50	4.20

NURU Ltd incurred the following overhead costs:

Particulars	**Cost**
Stores	4,250,000
Inspection	2,450,600
Set up costs	3,200,000
Engineering support cost	2,000,000
Machine related costs	1,860,000

Corresponding cost driver information for the four products is given below:

Corresponding cost drivers					
	A	**B**	**C**	**D**	**Total**
Number of requisitions	120	180	140	100	540
Number of inspections	50	25	75	50	200
Number of set ups	80	120	160	60	420
Engineering hours	600	480	420	500	2,000
Machine hours	300	450	250	200	1,200

Required:

a) **Calculate cost per unit using absorption method (conventional method) of absorbing overheads with labour hours as the basis of apportionment** (6 Marks)
b) **Calculate cost per unit using activity-based costing (ABC)** (10 Marks)
c) **Explain the impact on profitability of a move from absorption costing to activity-based costing on the four products** (4 Marks)

(Total: 20 Marks)

QUESTION 15

a) **Explain what you understand by the term master budget and explain its main contents** (3 marks)
b) **SIMBA** factory company manufactures Mineral water, and it is currently operating at 40% capacity producing 10,000 cartons of mineral water per year. Each carton contains 24 bottles. The data provided below relates to the cost of producing one carton of mineral water:

Details	**FRW**
Material	10,000
Labour	3,000
Overheads (60% fixed)	5,000

Additional information:

1. The current selling price is FRW 20,000 per carton of mineral water.
2. If the production capacity of the factory is increased to 50%, the selling price will drop by 3%.
3. At 90% capacity, both selling price and direct material will decrease by 5%.

Required:

Prepare a flexible budget showing the profits / losses at 40%, 50% and 90% capacity utilisation. (13 Marks)

c) **Discuss the role of budgeting in a manufacturing company.** (4 Marks)

(Total: 20 Marks)

End of Question Paper

Present value interest factor of FRW1 per period at i% for n periods, PVIF(i,n)

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239

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