



STRATHMORE BUSINESS SCHOOL

MASTER OF MANAGEMENT IN AGRIBUSINESS

END OF SEMESTER EXAMINATION

MMA 8303: FINANCIAL AND MANAGERIAL ACCOUNTING IN AGRIBUSINESS

Date: Friday, 10th November 2023

Time: 3 Hours

Instructions

- 1. Question One is Compulsory**
- 2. Answer Two other questions** choosing from **Question Two to Four**

Question 1 (Compulsory) (50 Marks)

Use the case provided to answer parts this question.

- (a) Briefly summarize the main business of the organization (2 Marks)**
- (b) Highlight Key incomes, expenses, assets, liabilities and capital of the company for 2022 and 2023. (Provide a maximum of three items based on material amounts). Suggest possible reasons for the changes in the figures from one period to the next. (22 Marks)**

Use a table with the following headings:

Item	2022 (sh.m)	2023 (Sh.m)	Change +-Sh.m	Possible reason(s) for change
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(c)(i) For each of the two years, compute the following ratios:

- Total Assets Turnover (2 Marks)**
- Return on Equity (2 Marks)**
- Cash Return on Revenue (2 Marks)**
- Current Ratio (2 Marks)**

(ii) Using the financial statements and the ratios computed above, comment on the following aspects of the business over the two years

- Efficiency (1 Mark)
- Profitability (1 Mark)
- Cash Flow (1 Mark)
- Liquidity (1 Mark)

(d) Use the Balanced Scorecard to evaluate the performance for year 2023.

Provide the Five Perspectives, mentioning one goal and one measure you are using to evaluate the performance (10 Marks)

Use a table with the following headings:

Perspective	Goal	Evaluation supported with a measure
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Question 2 (25 Marks)

(a) Mwatela and his family, located in one of the coastal towns of Kenya, carry out mid-scale diversified farming consisting of crops, livestock, poultry, and fish. He would like to know the financial performance for each farming activity and for the overall business. He provides the following information relating to the financial year ending 30 June 2023:

	Opening Inventory	Purchases	Closing Inventory
	sh.000	sh.000	sh.000
Crops	4,000.00	-	5,000.00
Growing crops	3,000.00	-	4,500.00
Seeds	2,000.00	1,500.00	2,500.00
Cattle	75,000.00	40,000.00	105,000.00
Cattle food	10,000.00	14,000.00	5,500.00
Poultry	9,000.00	15,000.00	13,500.00
Poultry food	1,000.00	3,000.00	2,000.00
Fish	2,000.00	1,000.00	3,200.00
Fertilisers	5,000.00	3,500.00	3,000.00

Sales	sh.000	Drawings	sh.000
Butter	1,500.00	Butter	400.00
Milk	9,000.00	Milk	2,500.00
Eggs	13,000.00	Eggs	500.00
Crops	21,000.00	Vegetables	600.00
Flowers	1,500.00	Poultry	200.00
Fruits	4,000.00	Fish	100.00
Cattle	36,000.00	Fruits	300.00
Poultry	14,000.00		
Fish	6,000.00		
Vegetables	5,000.00		

Other expenses	sh.000
Wages	23,500.00
Insurance	1,500.00
Depreciation	20,000.00
Repairs	1,200.00

Note: The drawings relate to consumption of goods by Mwatela and his family during the year. For accounting and tax purpose, these consumptions are treated as revenue in the respective farming activity.

Required: Prepare the statements of profit or loss for the following:

- (i) Livestock **(5 Marks)**
- (ii) Crops **(5 Marks)**
- (iii) Poultry **(3 Marks)**
- (iv) Fish **(2 Marks)**
- (v) General business activity **(5 Marks)**

(b) Highlight FIVE ways in which softwares aid Mwatela and other farmers in Financial Reporting and Management Accounting **(5 Marks)**

Question 3 (25 Marks)

(a) Vox limited manufactures tea, coffee and cocoa. The following data relates to the company for the year ended 31 December 2022:

	Tea	Coffee	Cocoa	Total
Output (units)	200,000	225,000	25,000	sh.000
Selling Price per unit (Sh.)	220	200	250	
Direct Material Cost per unit (Sh.)	50	100	100	
Direct Labor Cost per unit (sh. 50 per hour)	100	50	50	
Production Costs				
Machining				4,500
Set up and quality control costs				9,000
Receiving				3,200
Packing				<u>1,500</u>
Total Production costs				<u>18,200</u>
Cost Driver Data				
Labor Hours per unit	2	1	1	
Total Labor Hours	400,000	225,000	25,000	650,000
Machine Hours per unit	2	2	2	
Total Number of Machine Hours	400,000	450,000	50,000	900,000

Number of Production runs*	10	13	2	25
Number of component receipts	10	10	2	22
Number of customer orders	20	20	20	60

Required

(i) Determine the profit for each product using traditional costing where total production overheads are allocated to the units based on total labor hours **(6 Marks)**

(ii) Determine the profit for each product using Activity Based Costing (ABC) to allocate production overheads **(8 Marks)**

(b) Agrivet Medical center in Kajiado focuses on treating metabolic diseases in cows. The two main diseases, together with an estimate of the variable costs to treat a cow, an estimate of possible number of cows that will be treated in the next financial period is provided as follows:

	Acetonemia	Fatty Liver
Variable cost to treat a cow	Sh.4,500	Sh.10,000
Estimated number of Cows	2,000	1,000

Variable costs consist of medicine and other consumables incurred in treating or managing cow diseases. The clinic is estimating that operational fixed costs will be sh.8,000,000. These include the salaries paid to the vets, rent, and other operational salaries.

Required

(i) The fee to be charged per cow to breakeven. Assume that the fee to treat Fatty Liver is nearly twice the fee of Acetonemia **(4 Marks)**

(ii) The fee to be charged per cow to make a surplus of sh. 2,000,000. Assume that the fees are related like in (i) **(4 Marks)**

(iii) Highlight THREE assumptions of breakeven analysis **(3 Marks)**

Question 4 (25 Marks)

(a) Qingdob Limited, a company based in China, manufactures and exports farrowing crates for pig farming to Europe, Africa and other Asian countries. The company is preparing the budget for year 2023 using the following information:

Direct materials:	Metal (5kgs at \$12 per Kg)
	Plastic (2 meters at \$15 per meter)
Direct labour:	Shaping (30 mins \$ 6 per minute)
	Finishing (20 mins \$1 per minute)
Production overheads –	Variable (absorbed at \$ 40 per unit)
Production overheads –	Fixed \$50,000

Administration expenses - Fixed \$60,000
Selling and distribution – Variable \$10 per unit
Selling and distribution – Fixed \$30,000

One crate is sold at \$500. The firm was not sure about production, but the capacity could only allow production and sale of between 1,000 and 5,000 crates. If demand was greater than 5,000 then additional production could be done but with an increase in fixed production overheads by \$10,000.

Required:

Prepare a flexible budgeted statement of profit or loss based on (i) 1,000 (ii) 2,000 (iii) 3,000 (iv) 4,000 (v) 5,000 and (vi) 6,000 units. **(18 Marks)**

(b) National Ltd manufactures and sells juice labelled “Montedell” to a wide range of retailers on a wholesale basis. Marketing is done through three geographical areas: Nakuru, Nairobi and Kisumu. The estimates of the costs and revenues for each sales territory for the next accounting period are as follows:

	Nakuru		Nairobi		Kisumu	
	Sh.000	Sh.000	Sh.000	Sh.000	Sh.000	Sh.000
Sales		900,000		1,000,000		900,000
Cost of goods sold		(400,000)		(450,000)		(500,000)
Gross profit		500,000		550,000		400,000
Fixed Selling costs						
Salesmen salaries	80,000		100,000		120,000	
Sales Admin Expense	40,000		60,000		80,000	
Advertising expense	50,000		50,000		50,000	
Salesmen expenses	<u>50,000</u>	<u>(220,000)</u>	<u>60,000</u>	<u>(270,000)</u>	<u>80,000</u>	<u>(330,000)</u>
		280,000		280,000		70,000
Head office admin	80,000		90,000		90,000	
Warehouse expense	<u>32,000</u>	<u>(112,000)</u>	<u>36,000</u>	<u>(126,000)</u>	<u>36,000</u>	<u>(126,000)</u>
Net Profit		<u>168,000</u>		<u>154,000</u>		<u>(56,000)</u>

The juice is packaged and dispatched from a central warehouse, and it is estimated that 50% of the costs are variable and the remainder are fixed. All of the selling costs are fixed, with the exception of salesmen's expenses, which are variable with sales revenue. All of the administration expenses of the headquarters are common and unavoidable to all alternatives and have been apportioned to sales territories on the basis of sales value.

Required:

(i) Advise management on whether to close Kisumu region **(5 Marks)**

- (ii) Highlight any TWO qualitative factors that should be considered in making the decision to close the Kisumu region **(2 Marks)**