



Strathmore
UNIVERSITY

STRATHMORE BUSINESS SCHOOL

MASTER OF MANAGEMENT IN AGRIBUSINESS

END OF SEMESTER EXAMINATION

**MMA 8106: COOPERATIVE DEVELOPMENT AND MANAGEMENT FOR
AGRIBUSINESS**

Date: Friday 20th May 2022

Time: 3 Hours

Instructions

1. This question paper consists of **FIVE** questions.
2. Candidates should attempt only **THREE** questions. **Question ONE** is compulsory.
3. Marks will be awarded on the basis of clear exposition of your ideas, precision in the use of language and the validity of your logic.
4. Where relevant, show all your workings on the answer sheet provided.

Question 1 (40 Marks)

The livestock farmers and the families of three Counties in an arid and semi-arid area in Kenya have come together and agreed to form a cooperative. The aim is to bring lasting peace and economic prosperity among the populace. For many years, the three Counties have been marred by conflict, cattle rustling and loss of lives, especially of the herders, with a number of households being torched to ashes almost every year. Water and feed have always been a problem in the three Counties, and part of the establishment of the cooperative requires a plan on how to get water and feed for the livestock. You have been tasked to provide advisory services on what the farmers in the three counties need to do to form and run a sustainable livestock cooperative.

Required:

- (a) In a step, by step and a detailed approach, describe the process that should be followed to get the livestock cooperative operational. **(15 marks)**
- (b) In the process of forming the cooperative, a number of stakeholders and linkages are envisaged. Discuss the stakeholders and the kind of linkages that will be required to support the newly established livestock cooperative. **(15 marks)**
- (c) What should the new livestock cooperative consider to sustain the cooperative model into the future? **(10 marks)**

Question 2 (20 Marks)

- (a) In the context of a farmer-based cooperative, distinguish between financial and bourdesian capital. **(6 marks)**
- (b) You are provided with the following extracts of financial statements of Kinangop Goat Farmers' Cooperative (KGFC) for the last two years ended 31st December and some accompanying ratios.

	2021	2020		2021	2020
Statement of profit or loss	Kshs.	Kshs.	Balance sheet		
Sales of goats	4,300,000	3,800,000	Non-current assets	Kshs.	Kshs.
Sale of goat milk	980,000	850,000	Property, plant and equipment	10,000,000	8,900,000
Total sales	5,280,000	4,650,000	Current assets		
Cost of sales	2,816,524	2,381,373	Inventories	340,000	320,000
Gross margin	2,463,476	2,268,627	Receivables	250,000	210,000
Other income	120,000	90,000	Cash and bank	130,000	150,000
Net income	2,583,476	2,358,627	Total current assets	720,000	680,000
Operating expenses	1,670,000	1,550,000	Total assets	10,720,000	9,580,000
Profit before tax	913,476	808,627	Equity and liabilities		
Taxation	36,000	27,000	Equity		
Profit after tax	877,476	781,627	Share capital	5,100,000	5,100,000
			Retained earnings	2,279,103	1,401,627
			Total equity	7,379,103	6,501,627
			Long-term debt	3,000,000	2,670,000
			Current liabilities		
			Payables	253,150	327,400
			Other liabilities: dividends paya	87,748	80,974
			Total current liabilities	340,898	408,374
			Total equity and liabilities	10,720,000	9,580,000

The accompanying ratios over the two years are as follows:

Ratios	2021	2020
Gross profit margin	46.7%	48.8%
Operating profit margin	17.3%	17.4%
Net profit margin	16.6%	16.8%
Current ratio	2.1	1.7
Quick ratio	1.1	0.9
Cash ratio	0.4	0.4
Debt ratio	28.0%	27.9%
Return on assets	8.2%	8.2%
Return on equity	11.9%	12.0%
Days sales outstanding (days)	17.3	16.5
Days inventories outstanding (days)	44.1	49.0
Days payables outstanding (days)	32.8	50.2

Required:

- i. Comment on the financial performance and position of KGFC over the two years. **(10 marks)**
- ii. How financially sustainable is the cooperative? **(4 marks)**

Question 3 (20 Marks)

Fresha Dairy Cooperative is in the process of acquiring a mini milk processing plant to facilitate its value addition processes and diversify its revenue streams. They have identified a cheaper processing plant they can import from India at a cost of US\$ 40,000. The estimated milk processing volumes for the next 5 years are as follows:

Year	1	2	3	4	5
Litres of milk processed	350,000	355,400	352,708	353,600	240,000

The selling price and variable cost per litre of processed milk over the 5-year period is as follows:

Year	1	2	3	4	5
Selling price per litre (Kshs)	52	52	57	57	58
Variable cost per litre (Kshs)	36	36	40	42	44

Fixed costs are estimated at 45% of the gross profit (contribution). Assume a 30% taxation charge on the reportable profit.

To raise the required funding for the purchase, the cooperative is seeking 80% funding using debt with an interest rate of 12% per annum. Assume an exchange rate of 1US\$ to 100 Kenya shillings (Kshs).

Required: Evaluate whether it is worthwhile to make the proposed investment. Be sure to highlight both financial as well as non-financial considerations when making the decision.

Question 4 (20 Marks)

- (a) Highlight 4 benefits that may accrue to a farmer-based cooperative operating in a given region, as opposed to a limited liability company operating in the same region. **(10 marks)**
- (b) A business model canvas is useful in understanding and reviewing an organization's business model and to aid in designing an efficient business model or correct inefficiencies identified within the business model.

Required: Using a rice cooperative as an example, explain the applicability of business model canvas in such a setting. **(10 marks)**

Question 5 (20 Marks)

- (a) When cooperatives grow, they may consider a "delegate-system" in conducting their business and affairs. Highlight FOUR roles of a delegate in such a setting. **(8 marks)**
- (b) Agro-food supply chain integration (ASCI) plays a growingly important role in the stable and sustainable development of agriculture (Zhang, Luo and Li, 2021).

Required: Discuss FOUR roles of agricultural co-operatives participating in supply chain integration. **(12 marks)**