



UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME: BACHELOR OF SCIENCE IN AGRICULTURAL
ECONOMICS AND AGRIBUSINESS
MANAGEMENT YEAR III**

COURSE CODE: AEM 308

TITLE OF PAPER: AGRICULTURAL FINANCE

TIME ALLOWED: TWO (2) HOURS

**INSTRUCTION: ANSWER FOUR (4) QUESTIONS
QUESTION ONE (1) IS COMPULSORY**

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INVIGILATOR**

Question 1

A farmer wishes to decide between two enterprises, broiler production and piggery production. The cash flow projections for each of the activities are as shown below.

- (a) Choose between the following farm activities using the payback method and the NPV where the required rate of return is 12%. **(10 marks)**

Expected Net Cash flows		
Year	Broiler Production (E)	Piggery Farming (E)
0	(450,000)	(450,000)
1	180,000	50,000
2	171,000	133,000
3	163,000	162,000
4	201,000	168,000
5	223,000	146,000
6	231,000	169,000
7	221,000	180,000
8	166,000	221,000
9	105,000	260,000
10	86,000	350,000

The discount factor at 12 percent is as follows:

Year	1	2	3	4	5	6	7	8	9	10
DF	0.893	0.797	0.712.	0.636	0.567	0.507	0.452	0.404	0.361	0.322

- (a) Discuss the outcome of the two methods, outlining the advantages and disadvantages of each method. **(10 marks)**
- (b) The piggery project is very vulnerable to increases in the price of animal feed. The farmer is concerned that the probability of this occurring in the second year of the project is high. Conduct a sensitivity analysis based on the assumption that an increase in the price of feed beginning on the second year reduces the net cash flow by 10%. Calculate the impact on the NPV. **(10 marks)**
- (c) Discuss the concept of compounding. Using examples, describe two of the most common applications of compounding **(10 marks)**.

Question 2

- (a) Mr. Dlamini, a sugarcane farmer wishes to establish a sugarcane production farm and decides to borrow E500,000 from the Swaziland Building Society (SBS) to purchase a 20 hectare farm in Big Bend. SBS charges him a fixed interest rate of 9% per annum for the loan. He also borrows E1million from FINCORP to establish the project, which consisted of buying and installing irrigation system equipment, bush clearing, land preparation and the installation of electricity. FINCORP charges him 14% per annum fixed interest rate. FINCORP also required him to provide from his own resources to meet working capital expenses which amounted to E650,000 per annum. He realizes that he only has half of this amount and approaches Swazibank for the rest. Swazibank charges him an interest rate of 16% per annum for the loan. He uses his savings that had been sitting in a call account earning 4.5% for the balance required. Explain the capital structure favoured by Mr. Dlamini and calculate the Weighted Average Cost of Capital. **(15 marks)**
- (b) What is an optimal capital structure? **(5 marks)**

Question 3

- (a) When granting agricultural credit, it is important that it is done based on sound business principles. Discuss the important factors that should be considered by the financiers in assessing a loan application. **(10 marks)**
- (b) Discuss the types of credit and their purpose. **(10 marks)**

Question 4

- (a) Most Agricultural firms tend to be highly financially leveraged. Explain what this means and the implications for business risk. **(5 marks)**
- (b) Describe five major of agribusiness industries in Swaziland, outlining the challenges each one faces in the attempt to survive and thrive in the business environment. **(15 marks)**

Question 5

Buyer driven value chains are usually promoted by processors, exporters, retailers, traders, wholesalers and other buyers. A typical example in Swaziland is the horticulture industry which is to a certain extent driven by NAMBoard. Contract farming is the most common model used with varying degrees of formality. Using examples, discuss the benefits and challenges of contract farming. **(20 marks)**