



**UNIVERSITY OF SWAZILAND**

**SUPPLEMENTARY EXAMINATION PAPER**

**2<sup>nd</sup> SEMESTER 2008/2009**

- PROGRAMME** : **BSc. AG. ECON. & AGBMGT YR2**  
**BSc. AGRIC. EDUCATION YR2**  
**BSc. AGRONOMY YR2**  
**BSc. ANIMAL SCIENCE YR2**  
**BSc. HORTICULTURE YR2**  
**BSc. LAND & WATER MGMNT YR2**
- COURSE CODE** : **AEM 205**
- TITLE OF PAPER** : **FARM MANAGEMENT**
- TIME ALLOWED** : **TWO (2) HOURS**
- INSTRUCTIONS** : **ANSWER ALL QUESTIONS. EACH QUESTION CARRIES A TOTAL OF 25 MARKS**

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**QUESTION 1**

Given the production function of maize as:

$$Q = 100 + 10x - 0.2x^2$$

Where: Q = quantity of maize produced; and x = quantity of fertilizer used,

- Determine the physical maximum quantity of fertilizer to use and the physical maximum quantity of maize obtainable. **[10 marks]**
- If price of Q (or  $p_q$ ) is E100, and the price of X (or  $p_x$ ) is E20, determine the optimum quantity of maize to be produced. **[10 marks]**
- If fertilizer (or x) is the only input used, determine the profit that will be obtained from maize production. **[5 marks]**

**QUESTION 2**

With the aid of a diagram, describe the key management functions, giving a clear indication how these functions are interlinked. **[25 marks]**

**QUESTION 3**

You are a consultant and have been requested by Mr Dlamini who is a farmer to provide advice on the feed ration to consider as a means of accomplishing his profit maximizing goal. Mr Dlamini is using a combination of maize grain ( $Y_1$ ) and hay ( $Y_2$ ) as his inputs to achieve a constant weight gain for his feeder steers. The price of maize is E4.40/kg and that of hay is E3.00/kg.

Feed ration	A	B	C	D	E	F	G
Maize Grain (kg)	825	900	975	1050	1125	1200	1275
Hay (kg)	1350	1130	935	770	630	520	440

- Using the above information, what advice would you give to your client? Justify your answer. **[15 marks]**
- Discuss the sources of risk that any farm business is likely to incur. **[10 marks]**

**QUESTION 4**

Mr E.V. Chibi cultivates 300 ha of maize. He is not sure whether he should buy a trailed harvester or continue using a contractor to harvest his field at a cost of E40 per hectare. Regarding the trailed harvester, Mr Chibi has received the following information from a local dealer:

▪ Price of new harvester	=	E70, 000.00
▪ Interest rate	=	16% per annum
▪ Insurance	=	E380.00
▪ Repair costs	=	E10.00 per hectare
▪ Fuel and oil	=	E10.00 per hectare
▪ Other working costs	=	E5.00 per hectare
▪ Salvage value after 10 years	=	E4, 000.00

(a) Should Mr Chibi buy and use the trailed harvester or not? Show all the evidence. **[15 marks]**

(b) What other factors would you consider in making your final decision? **[5 marks]**

(c) Should the economic principles for determining profit-maximising input levels be applied before or after completing an enterprise budget? Why? **[5 marks]**