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2ND SEMESTER 2006/2007

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION

**PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 4 AND
BACHELOR OF SCIENCE IN ANIMAL SCIENCE YEAR 4**

COURSE CODE: APH 305

TITLE OF PAPER: PASTURE AND FODDER MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

**INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS
BEGIN EACH QUESTION ON A NEW SHEET**

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THE CHIEF INVIGILATOR**

Question 1

1. A local dairy farmer wants to establish planted pastures for his cows but is not sure which grass species to plant. Explain fully the factors that must be considered in selecting a pasture species to plant. (25 marks)

Question 2

- (a) Highlight possible benefits that may be obtained from forage legumes in pasture production if properly managed. (20 marks)
- (b) What two disadvantages are associated with grazing forage legumes? (5 marks)

Question 3

- (a) Rotational grazing is a common and beneficial practice in cultivated pastures. Discuss this concept and highlight its merits and demerits. (15 marks)
- (b) Highlight the factors that influence the nutritive value of pasture plants. (10 marks)

Question 4

Discuss briefly the importance of adjusting the frequency of grazing and leaving recommended stubble height after grazing in pasture management. (25 marks)

Question 5

You are in charge of a dairy farm at Luyengo. The farm has 70 cows that require supplementary feeding in the form of silage for 160 days in winter.

Given that the cows are fed at a rate of 10 kg (on dry matter basis) per head per day, calculate:

- (a) total silage needs during winter. (5 marks)
- (b) total area required for silage production if the yield of maize is 20 tonnes/ha fresh material (with 24% dry matter). (6 marks)
- (c) the number of pit silos required assuming each silo is 5.4 m long, 3 m wide and 1.5 m deep, and each cubic meter can take 120 kg of silage on dry matter basis. (8 marks)
- (d) adjust the values for (i) area required to produce the maize and (ii) the number of pit silos assuming a 20% loss in silage production. (6 marks)