UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER

PROGRAMME: BS.c. ANIMAL SCIENCE YEAR 3, BS.c. ANIMAL SCIENCE (DAIRY OPTION) YEAR 3, BS.c. AGRONOMY YEAR 3

TITLE OF PAPER: PASTURE AND FODDER MANAGEMENT

COURSE CODE: AS 305

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER FOUR (4) QUESTIONS

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QUESTION 1

(a) Briefly discuss any five guidelines to be followed for successful pasture establishment. (10 marks)

(b) Below is information on two seedlots of Rhodes grass (A&B).

Based on pure germinating seed (PGS),

(i) which seedlot is of better quality? (5 marks)

(ii) which seedlot would require a higher seed rate than recommended, and why? (5 marks)

(iii) Based on pure live seed (PLS) content of a seedlot, determine which seedlot is expensive. (SHOW ALL YOUR WORK). (5 marks)

A:	60% Germination	B: 85% Germination
	70% Purity	95% Purity
	E110.00 /kg,	E145.50 /kg.

QUESTION 2

(a) Discuss fully the role of planted pastures under the headline: "Provision of more reliable feed". (10 marks)

(b) For larger areas, pasture establishment is faster with the broadcasting method. Beginning with seed mixing until seedling emergence, describe fully the steps involved in pasture establishment. (15 marks)

QUESTION 3

Return from money invested depends on the skill of pasture management, that is, taking care of the established pasture species. Describe four ways by which a farmer can achieve this goal. (25 marks)

QUESTION 4

(a) Define tillering. (5 marks)

(b) What is the significance of tillering in planted pasture species? (5 marks)

(c) Assume you are a ranch manager in charge of 85 herd of dairy cattle.
The cattle need supplementary feeding in the form of hay for 180 days in winter.
Given that the animals are fed at a rate of 8 kg hay DM per head per day,
calculate:

(i) the total hay (DM) needed during the winter period. (3 marks)

(ii) barn capacity in bales required to store the hay assuming each bale weighs 25 kg. (2 marks)

(iii) the total area to be reserved for hay making assuming a pasture yield of 8 tonnes per/ha. (5 marks)

(iv) Adjust the values for (i) hay needs, (ii) barn capacity and (iii) area to be reserved for hay making assuming 10% loss in hay making. (5 marks)

QUESTION 5

(a) (i) Describe five benefits farmers are likely to get from pasture mixtures as opposed to pure pasture stands. (10 marks)

(ii) Give limitations of pasture mixtures and possible solutions. (10 marks)

(b) Why is plant material cut into smaller pieces during silage making? (5 marks)