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University Examinations 2024/2025

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DIPLOMA IN AGRICULTURE

AAD 2402: ANIMAL NUTRITION AND LIVESTOCK FEEDING

DATE: DECEMBER 2024

TIME: 1½ HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

- a) State three losses in hay making (3 marks)
- b) State factors affecting mixing of ingredients in formulations (4 marks)
- c) Differentiate between;
 - i. Acid detergent fiber and neutral detergent fiber (2marks)
 - ii. First class proteins and second class proteins (2 marks)
 - iii. Essential amino acids and non-essential amino acids (2marks)
- d) List three types of disaccharides (3marks)
- e) State the characteristics of an ideal material used in silage making (4marks)
- f) Define the following terms;
 - i. Dry matter (2 marks)
 - ii. Digestibility (2 marks)
- g) List three importance of zinc to livestock (3 marks)
- h) List three sources of calcium for animals (3 marks)

QUESTION TWO (15 MARKS)

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- a) Discuss two methods of feed processing (9marks)
- b) State and explain two classes of carbohydrates (6 marks)

QUESTION THREE (15 MARKS)

- a) Discuss the features of a good feed packaging material (8 marks)
- b) Discuss two factors affecting the nutritive value of hay (7 marks)

QUESTION FOUR (15 MARKS)

- a) Apart from water, discuss other four classes of nutrients (7 marks)
- b) One of the methods used in animal feed ration balancing is person's square method.

Using the information given below, determine the percentage Inclusion of Soya Bean Meal (SBM) and corn in a ration, following the Person's square method. Available feed ingredient: Soya Bean Meal; 45% crude protein (CP) Corn, 10% Required: Crude Protein levels in feed: 18% include all the feedstuffs in the ration and show all calculations

(8 marks)