SCHOOL	**AGRICULTURE AND FISHERIES SCIENCES**		
DEPARTMENT	**ANIMAL PRODUCTION, AGRIBUSINESS & ECONOMICS**		
SUBJECT	**FEEDS AND FEEDING**		
SUBJECT CODE	**AASF 3702**		
DATE	**OCTOBER 2023**		
DURATION	**3 HOURS**	**MARKS**	**100**

FIRST OPPORTUNITY EXAMINATION

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Internal Moderator: Dr. N. P. Petrus

This question paper consists of three (3) pages including this page.

Instructions: This question paper consists of five questions
Calculators are allowed in the exam
Attempt all questions!!

UNIVERSITY OF NAMIBIA EXAMINATIONS

QUESTION 1 **[20 MARKS]**

Write short notes on the following:

(i) Importance of roughage in ruminants. (5)

(ii) Characteristics of energy concentrates. (5)

(iii) Importance of feeding standards. (5)

(iv) Namibian feed laws. (5)

QUESTION 2 **[20 MARKS]**

(a) State the objective of feed formulation. (3)

(b) Briefly describe the basic information required in order to formulate a ration for any given animal of your choice. (7)

(c) A farmer has available on the farm yellow maize (YM) grain (90 % DM, 10 % CP, 11 MJ/kg ME, 88 % TDN) and Marula seed cake (MSC) (90 % DM, 42 % CP, 12 MJ/kg ME, 85% TDN).

(i) Using the Pearson Square method, calculate, giving 2 decimal points, the composition of the required mixture of the two ingredients to formulate a 16 % CP calf grower ration. (4)

(ii) Calculate, giving 2 decimal points, the DM, ME and TDN content of the calf grower ration. (6)

QUESTION 3 **[20 MARKS]**

(a) State six main goals of feed processing. (6)

(b) Describe the advantages of feed pelleting. (14)

QUESTION 4 **[20 MARKS]**

(a) As an Agricultural or Scientific or Extension Officer in Omaheke Region of Namibia, you are tasked to address a group of Namibian beef cattle producers on a topic titled: "Supplementation of beef cattle in Namibia". Explain how you would advise a Namibian farmer on the supplementation of their beef cattle. (10)

(b) Discuss two (2) common methods used to reduce the levels of anti-nutritional factors in animal feed. (10)

QUESTION 5 **[20 MARKS]**

(a) Briefly explain the urea treatment process of low-quality roughages. (10)

(b) Discuss the potential of encroacher bush as feed for livestock and game animals in Namibia. (10)

END OF PAPER