

CHUKA



UNIVERSITY

SUPPLEMENTARY/ SPECIAL EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF
BACHELOR OF SCIENCE IN ANIMAL SCIENCE**

ANSC 333: ANIMAL NUTRITION AND LIVESTOCK FEEDING

STREAMS: BSC (ANSC)

TIME: 2 HOURS

DAY/DATE: MONDAY 01/02/2021

8.30 AM – 10.30 AM

INSTRUCTIONS:

ATTEMPT ALL QUESTIONS IN SECTION A AND ANY TWO IN SECTION B

SECTION A

1. a) Describe the following terms as applied in animal nutrition and feeding;
Forage or roughage
Husks
Hulls
Concentrate
Additive (5 marks)
- b) With an example describe the following
Ash- (2 marks)
Non-proteins- (2 marks)
Nitrogen-free Extract (NFE) (1 mark)
2. a) Outline feed ingredients for non-ruminants farm animals rich in carbohydrates (2 marks)
- b) Highlight nitrogen based feeds for domestic ruminants. (2 marks)
- c) Outline attributes of non-ruminant omnivorous with a complex foregut (2 marks)
- d) Highlight attributes of non-ruminant herbivores with a rather large and complex large (2 marks)
- e) Highlight attributes of feed roughages (2 marks)

- 3. a) Outline limitations of fats and oil in feeding farm animals (2 marks)
- b) Highlight on the availability of carotene and/or Vit A for the farm animals (2 marks)
- c) Highlight farming systems that integrates with fodder production cultivation (2 marks)
- d) Outline advantages of *Lablab purpureus* as animal feed (2 marks)
- e) Highlight benefits of sweet potatoes as an animal feed supplement (2 marks)

Section B

- 4. a) Discuss attributes influencing feed nutrient content irrespective of human errors (10 marks)
 - b) Discuss factors influencing fodders grown for livestock feeding (10 marks)
 - 5. a) Discuss fish meal as animal feed ingredient (10 marks)
 - b) Discuss factors influencing home-made feed formulation (10 marks)
 - 6. a) Discuss factors affecting nitrogen balance in non-ruminant animals (10 marks)
 - b) Discuss attributes influencing grass hay feeding to livestock (10 marks)
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