



UNIVERSITY OF EMBU

2016/2017 ACADEMIC YEAR

FIRST SEMESTER EXAMINATION

THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
AGRICULTURAL (ANIMAL SCIENCE OPTION)
AAS 310: ANIMAL FEED RESOURCES

DATE: DECEMBER 1, 2016

TIME: 8:30-10:30AM

INSTRUCTIONS:

Answer Question ONE and ANY other TWO Questions

QUESTION ONE (30 MARKS)

- a) i) List any four characteristics of Crop residue (2 marks)
i) Differentiate between antibiotics and probiotics (2 marks)
ii) Soya bean is a very good protein source for animal feeds. Explain its limitations and how can it be corrected (2 marks)
iii) Describe how you would physically recognize good quality hay. (2 marks)
iv) Define the term fodder crop (2 marks)
- b) i) Name any three Essential amino acids and explain why they are important in Non ruminant diets (5 marks)
ii) Explain the advantages of Ammonium hydroxide (NH_4OH) over Sodium hydroxide (NaOH) in the hydrolysis of crop roughages (4 marks)
iii) Name any two Potential sources of Minerals for livestock feeds (2 marks)
iv) With suitable examples, explain the meaning of the term Non protein Nitrogen (3 marks)

- v) Cotton seed is a good source of protein. Describe its major limitation as a feed resource? (2 marks)
- vi) Describe the disadvantages of green chop as an animal feed resource (4 marks)

QUESTION TWO (20 MARKS)

- a) Discuss any four factors that affect the nutritive value of forages? (8 marks)
- b) Discuss the four major categories into which feed additives are classified (8 marks)
- c) Describe the mechanism of action of antibiotics as feed additives (4 marks)

QUESTION THREE (20 MARKS)

- a) Most livestock keepers rely on common roughages to feed their animals and supplement them using the available concentrates. Describe the general characteristics of Common roughages. (12 marks)
- b) Farmers produce large quantities of crop residues which they find very difficult to utilize in feeding their livestock. Explain how a farmer can improve such material and use them as a feed resource in his farm. (8 marks)

QUESTION FOUR (20 MARKS)

- a) A farmer grazing his livestock on a lush grass pasture found a half of the herd bloated. Discuss this phenomenon under the following sub headings;
- i) The limiting factors of grass pastures (4 marks)
- ii) What could be responsible for the bloat observed in the cattle? (2 marks)
- b) With suitable examples, highlight the classification of minerals as a feed resource. (8 marks)
- c) Differentiate between macro and micro minerals (4 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the characteristics of Protein concentrates that makes them different from other concentrates (8 marks)
- b) Describe silage as feed resource giving its advantages and disadvantages. (12 marks)

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