



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2019/2020

DIGITAL SCHOOL OF VIRTUAL AND OPEN LEARNING

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE
IN ANIMAL NUTRITION AND MANAGEMENT

KRM 858: BIOTECHNOLOGY IN ANIMAL NUTRITION

DATE: SATURDAY, 24TH OCTOBER, 2020

TIME: 2.00 P.M. - 5.00 P.M.

INSTRUCTIONS:

Answer question ONE and any other THREE questions

1. (a) Explain the meaning of the following terms and give appropriate examples:
 - (i) Biotechnology (5 marks)
 - (ii) Probiotics (5 marks)
 - (iii) Prebiotics (5 marks)(b) Explain the use of the following in animal nutrition:
 - (i) Spray dried plasma (2 marks)
 - (ii) Copper salts (3 marks)
 - (iii) Buffers (3 marks)
 - (iv) Bloat preventing substances (3 marks)
 - (v) Methane production inhibitors (3 marks)(c) Explain the methods used to protect high value nutrients from degradation in the rumen. (6 marks)
2. Discuss the use of antibiotics as growth promoters in livestock production. (10 marks)
3. Discuss the use of biotechnology to improve quality and preventing deterioration of conserved animal feeds. (10 marks)
4. Discuss the potential for use of biotechnology for modification of rumen microorganism to improve livestock production. (10 marks)
5. Discuss the potential benefits, risks and concerns associated with the use of Genetically Modified Organisms (GMO's) (10 marks)