



UNIVERSITY EXAMINATIONS 2014/2015 ACADEMIC YEAR

1st YEAR EXAMINATION FOR THE DEGREE OF BSC. AGRIC., BSC RES. MGT., BSC ANSCI

COURSE CODE/TITLE: AST 106/KAN B106 – INTRODUCTION TO ANIMAL SCIENCE

END OF SEMESTER: I

DURATION: 3 HOURS

DAY/TIME: MONDAY 8.00 TO 11.00AM

DATE: 15.12.2014 (H2)

Instruction: Answer all questions in section A and any two questions in section B

Section A. Answer all questions [40 marks].

Question 1:

- a) Outline the two scientifically based reasons why meat is an important food for humans [5 marks]?
- b) What is a nutrient? Explain why one might choose to study it [5 marks]?
- c) What is the difference between forage and roughage? What are the characteristics of good quality forage [5 marks]?

Question 2:

One of the aims of genetic engineering is to produce a protein as cheaply and easily as possible. In order to do this, the gene that triggers production of the desired protein is inserted into a host organism.

- i) State three reasons why bacteria make good host organisms.
- ii) Define a vector in relation to genetic engineering?
- iii) Define a plasmid in relation to genetic engineering? [5 marks]

Question 3:

What is artificial insemination? What are some of the advantages and disadvantages of artificial insemination in the context of Kilifi County [10 marks]?

Question 4:

Why has there been an increased interest in the study of animal behaviour and welfare in recent years by veterinarians and animal scientists [5 marks]?

Question 5:

Why is a herd health plan so important? Outline all the elements that must be considered in herd health plan [5 marks]?

Section B. Answer any two (2) questions [30 marks].**Question 6:**

Drosophila (fruit flies) can be either straight-winged or curved-winged. Straight-winged is dominant and curved-winged is recessive. (a) What would be the result in the F_1 generation of crossing a homozygous straight-winged fly with a curved-wing fly? (b) What is the probability that they would be straight-winged? (c) What would be the result in the F_2 generation of crossing 2 of the F_1 flies? (d) How would you determine the genotype of any unknown straight-winged fly? [15 Marks]

Question 7:

Write an essay on: How nucleic acids are suited to their functions in living organisms [15 marks].

Question 8:

Write an essay on the role of ruminant livestock in sustainable agricultural systems [15 marks]?