# UNIVERSITY OF EMBU

**2017/2018 ACADEMIC YEAR**

**SECOND SEMESTER EXAMINATIONS**

**SECOND YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE INAGRICULTURE AND BACHELOR OF SCIENCE IN RANGE MANAGEMENT**

**AAS 202: ANIMAL GENETIC RESOURCES**

**DATE: APRIL 11, 2018** **TIME: 11:00 AM – 1:00 PM**

**INSTRUCTIONS:**

**Answer Question ONE and ANY Other TWO Question**

**QUESTION ONE (30 MARKS)**

a) Define animal genetic resources ( 2 marks)

b) Distinguish between resistance and tolerance phenomena in relation to the management of livestock diseases. (2 marks)

c) What are the advantages of incorporating genetic element in disease management strategies? (4 marks)

d) Discuss the factors threatening animal genetics resources in the Kenya. (4 marks)

e) Differentiate the ex-situ an in-situ conservation of animal genetic resources. (4 marks)

f) Discuss phenotypic and genotypic correlations. (4 marks)

g) Briefly discuss socio-economic importance of animal genetic resources. (5 marks)

h) Discuss the status of policies safeguarding animal genetic resources in Kenya. (5 marks)

**QUESTION TWO (20 MARKS)**

a) Discuss the importance of animal genetic resources in Eastern Africa. (15 marks)

b) In relation to Animal Genetic Resource, explain why Red Maasai sheep should be conserved by the Maasai community. (5 marks)

**QUESTION THREE (20 MARKS)**

Describe how animal genetic resources knowledge can be applied in livestock management in the tropical countries. (20 marks)

**QUESTION FOUR (20 MARKS)**

a) Discuss the major failures of animal breeding programmes in the Eastern Africa. (15 marks)

b) Suggest possible solutions for successful breeding programmes for posterity of animal genetic resources. (5 marks)

**QUESTION FIVE (20 MARKS)**

a) Briefly discuss the extraction and multiplication of DNA and RNA from an animal sample. (10 marks)

b) Outline the attributes of the commonly used molecular markers in animal genetic resources. (10 marks)

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