



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN RANGE MANAGEMENT & DRYLAND ANIMAL SCIENCE

ACS 409: BIOTECHNOLOGY

DATE: 14TH DECEMBER, 2017

TIME: 1.30 -3.30 PM

Instructions: ANSWER ALL QUESTIONS IN SECTION A

ANSWER ANY TWO QUESTIONS IN SECTION B

SECTION A (30 marks):

- 1) Describe five advantages of Artificial Insemination (10 marks)
- 2) Discuss five applications of Animal cloning (10 marks)
- 3) Describe methods used in conservation of animal genetic resources (10 marks)

SECTION B (40 marks):

- 4) Briefly discuss the role of biotechnology under the following applications:
 - a) Multiple ovulation & Embryo transfer (5 marks)
 - b) *In Vitro* embryo production (5 marks)
 - c) Animal disease diagnostics & epidemiology (5 marks)
 - d) Animal vaccine development (5 marks)
- 5) Describe rumen fermentation (20 marks)
- 6) With examples, discuss transgenic animals and their values (20 marks)