



UNIVERSITY EXAMINATIONS 2013/2014 ACADEMIC YEAR

3rd YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE & ENTERPRISE DEVELOPMENT.

COURSECODE/TITLE: ARM 301: RUMINANT PRODUCTION

END OF SEMESTER: I

DURATION: 3 HOURS

DAY/TIME: MONDAY: 8.00 - 11.00AM

DATE: 9/12/2013 (A1)

Instruction: Answer all questions in **Section A** and **any Two** in **Section B**

SECTION A – 40 marks (Attempt all questions)

Question one

Define the following terminologies

- a) Steer
- b) Lambing
- c) Crutching
- d) casting
- e) Rutting
- f) Sexed semen

(6 marks)

Question two

Briefly explain what is meant by:

- a) Oestrus synchronization
- b) Oesophageal groove

(3marks)

(2 marks)

Question three

Ear notching is one of the identification methods done in livestock. Illustrate using diagrams showing the following ear notch numbers

- a) 777
- b) 1451

(2 marks)

(2 marks)

Question four

- a) Outline any six requirements of a calf pen (3 marks)
- b) Outline any six advantages why small scale farmers may prefer to keep dairy goats over dairy cows (3 marks)
- c) List any four dairy sheep breeds and four dairy goat breeds raised by small ruminant farmers (4 marks)
- d) Why are the sheep breeds mentioned above not common in Kenya. (1 marks)

Question five

The table below show different livestocktools/ equipmentand their function. Fill in gaps represented by letters: O, P, Q, R, S, T, U, V, W, X, Y and Z (6 Marks)

	Tool/equipment used	Function
a)	Teat cups	.....O
b)	Emasculator	.....P
c)	.....Q	Scooping growing horn bud in calves
d)	Canister	.....R
e)	.....S	Depositing semen through recto-vaginal technique
f)	Bull ring	.....T
g)	.....U	Clipping hair in livestock
h)	.....V	Drenching in sheep
i)	.....W	Storing liquid nitrogen
j)	Ear notcher	.....X
k)	Hoof pincers	.....Y
l)	Milking hopple	.....Z

Question six

- a) Explain briefly dairy ranching production system (5 marks)
- b) Outline any three legumes and three grasses that farmers practicing semi intensive system of production can grow for feeding their livestock (3 marks)

Section B (Answer any two questions) – 30 marks

Question seven

- a) Cattle farmers who produce only for their family's requirement are said to be practicing subsistence type of production system. For them to transform in order to become commercial farmers and ultimately targeting pure markets they need serious interventions. As an expert in ruminant production, explain in details any **five** such interventions you might bring to the attention of this farmer. (10 marks)
- b) Outline the procedure of training a newly born calf to drink milk using bucket. (5 marks)

Question eight

- a) Camels are said to be pseudo-ruminant. What is meant by pseudo-ruminant? (2 mark)
- b) Explain eight ways in which the camels are adapted to harsh environmental conditions. (8 marks)
- c) Highlight any five behaviour of camels during rut period (5 marks)

Question nine

- a) AI is becoming popular with dairy farmers in Kenya. Explain how semen is collected from a bull using the Artificial Vagina method. (10 marks)
- b) Outline any five preparation that a goat farmer should carry out in readiness for the kidding . (5 marks)

Question ten

- a) Explain any six traits of economic importance in dairy cattle. (6 marks)
- b) As a dairy goat farmer, outline six reasons why milk production record is important. (3 marks)
- c) Illustrate a breeding record sample in goats (5 marks)