



# MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

ANS 302: NON- RUMINANT ANIMAL PRODUCTION

DATE: 6/12/2019

TIME: 2.00-4.00 PM

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## INSTRUCTIONS:

Answer QUESTION ONE and any two questions

### QUESTION ONE (20 MARKS)

- a) Explain **FOUR** characteristics of **layer** breeds of chicken (4 marks)
- b) Explain the importance of the following
  - i. Coprophagia in rabbits (2 marks)
  - ii. Supersedure in bees (2 marks)
- c) Explain **FIVE** birth related problems in swine production (5 marks)
- d) Explain **FOUR** disadvantages of trout as aquaculture species (4 marks)
- e) Explain **FIVE** factors to consider when siting an apiary (5 marks)
- f) Explain **FOUR** benefits of record keeping in non-ruminant livestock farms (4 marks)
- g) Explain **FOUR** ways to control diseases in poultry production (4 marks)

### QUESTION TWO (20 MARKS)

- a) Farmers in Kibwezi have had poor crop yields and want to start beekeeping. Explain **FIVE** advantages of bee keeping over other livestock enterprises (10 marks)
- b) Explain **FIVE** advantages movable comb hives have over fixed comb hives (10 marks)

**QUESTION THREE (20 MARKS)**

- a) Discuss **FIVE** factors that pose a challenge to pig production in Kenya (10 marks)
- b) Describe **FIVE** components that are considered at when candling eggs (10 marks)

**QUESTION FOUR (20 MARKS)**

- a) Ear mange is a parasite that will reduce the productivity of rabbits. Describe **FIVE** ways of controlling the effects of this parasite (10 marks)
- b) Describe **FIVE** honey harvesting equipment that every beekeeper should possess (10 marks)

**QUESTION FIVE (20 MARKS)**

- a) Farmers in Katumani want to start culturing and growing fish. Describe **FIVE** aspects to consider during site selection for earthen fish ponds under the following
  - i. Land area (5 marks)
  - ii. Water supply (5 marks)
- b) Discuss **FIVE** advantages and **FIVE** disadvantages of the battery cage system of rearing chicken. (10 marks)