



MACHAKOS UNIVERSITY

University Examinations for 2016/2017 Academic Year

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

THIRD YEAR APRIL SESSION EXAMINATION FOR BACHELOR OF
EDUCATION SCIENCE

KRM 307: NON-RUMINANT ANIMAL PRODUCTION

DATE: SCHOOL BASED

TIME:

INSTRUCTIONS:

Answer **QUESTION ONE** and any two questions in section B

QUESTION ONE (COMPULSORY) (30 MARKS)

- a)
- i) Using **TWO** external features explain how a queen bee can be distinguished from a worker bee. (2 marks)
 - ii) Explain **TWO** main differences between a langstroth hive and topbar hive (2 marks)
- b) Explain the causes of the following behavior
- i) Day old brooding chicks crowding at the edges of the brooder guard board. (2 marks)
 - ii) Pregnant rabbit does plucking fur or hair from their bellies and sides. (2 marks)
- c) Explain **FOUR** uses of rabbits (4 marks)
- d) Explain **FOUR** disadvantages of the 'Cat fish' (*Clarius gariepinus*) as an aquaculture species. (4 marks)

- e) Explain **THREE** reasons for ‘creep feeding’ young piglets . (6 marks)
- f)
- i. Describe **TWO** external features that can be used to distinguish a Landrace pig breed from a large white pig breed. (2 marks)
 - ii. Explain **TWO** advantages of keeping pigs (2 marks)
- g) Explain the causes for the following behavioral activities
- i. Supersedure in beekeeping (2 marks)
 - ii. Coprophagia in rabbits (2 marks)

SECTION B. ANSWER ANY TWO QUESTIONS IN THIS SECTION (40 MARKS)

QUESTION TWO (20 MARKS)

- a) Explain the importance of water quality in aquaculture. (10 marks)
- b) Describe the merits and demerits of tilapia as an aquaculture species. (10 marks)

QUESTION THREE (20 MARKS)

- a) Explain **FIVE** causes of newborn mortality in Piglets. (10 marks)
- b) Describe the symptoms and prevention of post weaning diarrhea in piglets. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Failure to lay eggs is one of the main reasons for culling layers. Explain **FIVE** ways of identifying non-layers. (10 marks)
- b) Describe the **FIVE** requirements of a ‘sitting hen’ during natural incubation. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Explain **FIVE** considerations in the construction of rabbit housing. (10 marks)
- b) Explain **FIVE** constraints faced by beekeepers in Kenya (10 marks)