



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**SECOND YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE**

**2021/2022 ACADEMIC YEAR**

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**COURSE CODE: AAS 3321**

**COURSE TITLE: RUMINANT AND NON-RUMINANT PRODUCTION**

**DATE:** **STREAM: (BSc. AGED & Animal Science)**

**TIME: 2 HOURS** **SESSION:**

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**Instructions:**

- 1. Answer ALL questions in Section A and B and ANY TWO questions in Section C**
- 2. Candidates are advised not to write on question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**SECTION A [20 MARKS]**

**Answer ALL questions from this Section.**

1. Differentiate between ruminant and non-ruminant animals. (2 marks)
2. Apart from sources food, farm animals also have other function. Explain. (3 marks)
3. What is rumination or chewing the cud? (3 marks)
4. Define the term breed and give examples. (2 marks)
5. Give any four reasons for rabbit production. (4 marks)
6. What is synchronization in the context of animal breeding? (2 marks)
7. Describe the management of a pregnant cow. (4 marks)

**SECTION B [30 MARKS]**

**Answer ALL questions from this Section.**

8. Explain the following in the context of animal production:
  - a) Layers (2 marks)
  - b) Calving (2 marks)
  - c) Lambing (2 marks)
  - d) Furrowing (2 marks)
  - e) Broilers (2 marks)
9.
  - a) Indicate how land may be allocated in a mixed farm. (4 marks }
  - b) Give a general structure of a pig herd (2 marks }
  - c) Explain caecum function in the digestive system of a rabbit. (4 marks }
10. Explain the importance of the following in stock management activities:
  - a) Debeaking (2.5 marks)
  - b) Castration (2.5 marks)
  - c) Colostrum feeding (2 marks)
  - d) Brooding (3 marks)

**SECTION C      [20 MARKS]**

**Answer ONE question from this Section.**

11. Ruminants have a complex multi-chamber stomach. Discuss the specific roles of each chamber in the digestion process. (20 marks)
12. Discuss the brooding management of chicks, indicating the equipment required. (20 marks)
13. Write short notes on the following:
- a) Drenching (4 marks)
  - b) Weaning (4 marks)
  - c) Artificial insemination (4 marks)
  - d) Natural mating (4 marks)
  - e) Rabbit housing (4 marks)