



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

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

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

**2021/2022 ACADEMIC YEAR**

**REGULAR**

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**COURSE CODE: AAB 1209**

**COURSE TITLE: ANIMAL HOUSING, FARM STRUCTURES AND  
BIOCLIMATOLOGY**

**EXAM VENUE:**

**STREAMS: BSc. ANIMAL SCIENCE**

**DATE:**

**EXAM SESSION:**

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer ALL questions in section A and ANY other 2 Questions in section B.**
- 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 [30 MARKS]**

**Answer ALL questions from this Section.**

1. Differentiate between farm structures and farm buildings ( **2 Marks**)
2. Define **the following words** ( **2 Marks**)
  - a. Insulation
  - b. Ventilation
  - c. Bioclimatology
  - d. Farm structure
3. Why is the study of environmental control in relation to animal housing important ( **3 Marks**)
4. State and briefly explain the three functions of farm structures ( **3 Marks**)
5. There are laid down protocols for animal house hygiene, briefly state them ( **3Marks**)
6. State the ventilation types in animal houses ( **2 Marks**)
7. State factors that influence heat exchange in animals ( **2 Marks**)
8. How is the total thermo neutral heat production of an animal derived ( **3Marks**)
9. State the physical climatic factors that must be addressed when constructing a farm structure ( **4 marks**)
10. Briefly explain how livestock waste must be handled on a farm ( **3 Marks**)
11. List some anomalous behavior that farm animal exhibit when under hear stress ( **3Marks**)

## **SECTION B [40 MARKS]**

**Answer ANY TWO questions from this Section.**

12. List and discuss the types of ventilation and their importance ( **20 Marks**)
13. Briefly discuss the following
  - a. Thermo neutral zone in relation to animal environment ( **5 Marks**)
  - b. Heat exchange in animals ( **5marks**)
  - c. Heat loss in farm animals( **5Marks**)
  - d. Air humidity and moisture in an animal environment ( **5Marks**)

14. Discuss animal environmental requirement under the following
- a. Physical climatic factors influencing animal environment ( **10 Marks**)
  - b. Microbiological and other environmental factors influencing the animal (**10Marks**)
15. Discuss insulation under the following
- a. Importance of insulation ( **5 Marks**)
  - b. Types of insulation (**10 Marks**)
  - c. Five factors to be considered when selecting an insulation method(**5 Marks**)