

**SPECIFY TYPE OF
EXAMINATION**

FIRST ATTEMPT

FIRST RESIT

SECOND RESIT

RE-TAKE



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES
THIRD YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE
OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE**

2022/2023 ACADEMIC YEAR

REGULAR

COURSE CODE: AAB 1301

COURSE TITLE: CROP RESIDUES AND AGRO-INDUSTRIAL BY-PRODUCTS

DATE:

STREAM: BSC. ANIMAL SCIENCE

TIME: 2 HOURS

SESSION:

Instructions:

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



Registration No.....

SECTION A: (30 Marks)

Answer ALL questions from this Section.

1. Outline the main by-products obtained from the processing of each of the following crops;
 - a) Citrus **(2 Marks)**
 - b) Tomatoes **(2 Marks)**
 - c) Sugarcane **(2 Marks)**
2. Define each of the following plant by-products;
 - a) Straw **(1 Mark)**
 - b) Bran **(1 Mark)**
 - c) Husks **(1 Mark)**
 - d) Seed cake **(1 Mark)**
 - e) Pulp **(1 Mark)**
3. Explain THREE factors that hinder the use of peach wastes as animal feed. **(3 Marks)**
4. Explain FOUR factors that limit the effective utilization of crop residues by animals. **(4 Marks)**
5. Explain the FOUR techniques used to increase the efficiency of digestibility of crop residues and by-products. **(4 Marks)**
6. Discuss the potential animal and human health impacts resulting from the use of animal by-products as a feed source. **(8 Marks)**

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

7. Discuss the factors affecting the quality and quantity of crop residues. **(20 Marks)**
8. Discuss the various animal products that can be used as feed for animals. **(20 Marks)**
9. Discuss the major challenges faced by small-scale farmers in the use of crop residues and agro-industrial by-products as animal feed. **(20 Marks)**