

**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)