



**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 ANIMAL SCIENCE**  
**2017/2018 ACADEMIC YEAR**  
**REGULAR**

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**COURSE CODE AAS 3311**

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

**EXAM VENUE: LR 3**

**STREAM: BSc ANIMAL SCIENCE**

**DATE: 11/12/17**

**EXAM SESSION 9.00 – 11.00 AM**

**TIME: 2HOURS**

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**INSTRUCTIONS**

- 1. Answer ALL questions in section A and ANY other two questions in section B**
- 2. Candidates are advised to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**SECTION A 30 marks**

1. Define the following giving examples.
  - (a) Crop residues (3marks)
  - (b) Bone meal (3marks)
2. Describe the management of crop residues under the following topics
  - (a) Residue incorporation (3marks)
  - (b) Balling and removing the straw (3marks)
  - (c) Residue burning (3marks)
3. Explain how the following are utilized on the farm.
  - (a) Coffee husks (2 marks)
  - (b) Maize Stover (2mks)
  - (c) Citrus remains (2mks)
4. Describe the following as used in crop residue management and utilization.
  - (a) Benefits of molasses to dairy cattle (3marks)
  - (b) Advantages of pineapple waste (3mks)
  - (c) Value addition on maize stovers (3marks)

**SECTION B 40 Marks**

5. Discuss the management and utilization of the following horticultural crop wastes. (20 marks)
  - (a) Potato
  - (b) Carrot
  - (c) Tomato
  - (d) Baby corn
6. Explain the following improvement methods on crop residues (20 marks)
  - (a) Heating
  - (b) Milling
  - (c) Chemical treatment
7. Discuss the utilization of the following products in livestock feeding. (20 marks)
  - (a) Blood meal
  - (b) Feathers
  - (c) Molasses