



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES  
UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE  
ANIMAL SCIENCE**

**THIRD YEAR SEMESTER ONE 2017 ACADEMIC YEAR**

**REGULAR**

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**COURSE CODE: APT 3311**

**COURSE TITLE: PASTURE AND FODDER PRODUCTION**

**EXAM VENUE: LAB 14**

**STREAM: BSC AGED**

**DATE: 14/12/18**

**EXAM SESSION: 9.00 – 11.00 AM**

**TIME: 2 HOURS**

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**Instructions**

- 1. Answer ALL questions in Section A (compulsory) and ANY TWO 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**
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## **SECTION A**

**Answer ALL questions in Section A**

1. Define the following terms (5 marks)
  - a) Pasture
  - b) Apomictic pastures
  - c) Biennial pasture
  - d) Caryopsis
  - e) Raceme
2. a) Name three sub families of the family gramineae giving examples in each case (3 marks)  
b) Highlight the importance of forage conservation and state two common forms of forage conservation (5 marks)
3. State the anti-nutritive factor in sorghum forage and advice a farmer on how it can be avoided (5 marks)
4. Highlight the importance of seed inoculation with the right rhizobium and name two types of rhizobium based on their reaction to Ca and soil pH giving examples in each category (6 marks)
5. Scientifically name four examples of multipurpose tree legumes used as forage for livestock and cite the anti-nutritive factor present (4 marks)
6. Explain two major reasons as to why intake of legumes in ruminant animals is restricted (2 marks)

## **SECTION B**

**Answer ANY TWO questions in Section b**

7. a) Describe the factors that influence the nutritive value of herbage (10 marks)  
b) Highlight in detail the differences between temperate and tropical grasses (10 marks)
8. a) Discuss the factors that influence the grazing behavior of farm animals (10 marks)  
b) Discuss the available grazing systems that a farmer can use citing suitability and disadvantages of each (10 marks)
9. a) Enumerate the characteristics of plants used for silage making (5 marks)  
b) Step by step describe the process of silage making citing importance of each activity (10 marks)  
c) Name and briefly describe five structures that are used to store silage (5 marks)