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

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

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

**2016/2017 ACADEMIC YEAR**

**REGULAR**

**COURSE CODE: AAS 3322**

**COURSE TITLE: GENERAL RANGE MANAGEMENT**

**EXAM VENUE: STREAM: BSc. ANIMAL SCIENCE**

**DATE: EXAM SESSION:**

**TIME: 2 HOURS**

**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. Define the following terms with examples:
   1. Rangelands **(2 marks)**
   2. Range management **(2 Marks)**
   3. Range science **(2 Marks)**
2. Briefly explain the principle practices that are employed in the management of range lands ( **6 marks)**

1. Explain the following giving examples
   1. The prairie **(3 marks)**
   2. Grasslands **(3 marks)**
   3. Shrub lands **(3 Marks)**
2. Discuss the following
   1. Range utilization **(3 Marks)**
   2. Range land resources ( 3 marks)
   3. Tragedy of the commons (3 **Marks)**

**SECTION B [40 MARKS]**

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

1. Range land classification in Kenya has been based on three main characteristics, state them and discuss the ecological zones classified.

**(20 Marks)**

1. Livestock has been used as a tool in range management; discuss clearly outlining the production systems. **(20 Marks)**

1. Define the term defoliation and discuss the following **(20 marks)** 
   1. plant physiological effects of defoliation
   2. plants morphological effects of defoliation
   3. defoliation effect on the physical environment

1. Discuss the general factors considered in range improvement **(20 marks)**