



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

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**FIRST YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE OF  
MASTER OF SCIENCE IN FOOD SECURITY AND SUSTAINABLE AGRICULTURE**

**2019/2020 ACADEMIC YEAR**

**REGULAR**

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**COURSE CODE: AFB 5112**

**COURSE TITLE: Climate Change Causes, Mitigation and Adaptation**

**EXAM VENUE: STREAM: MSc. Food Security and Sustainable Agriculture**

**DATE: 11/09/19**

**EXAM SESSION: 9.00 – 12.00NOON**

**TIME: 3 HOURS**

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**Instructions:**

- 1. Answer question ONE and ANY other 2 Questions**
- 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.**

1. a) Explain how climate change is affecting biodiversity?  
**(4 Marks)**
- b) Explain with examples the negative impact of climate change on coastal zones and blue economy  
**(4 Marks)**
- c) Differentiate between climate change adaptation and climate change mitigation  
**(4 marks)**
- d) Explain the term climate change resilience?  
**(4 Marks)**
- e) Explain with examples the concept of climate smart agriculture  
**(4 Marks)**
2. As the new Minister of Agriculture in your country/county, outline some key climate change mitigation and adaptation policy measure you propose to implement. **(20 Marks)**
3. Define the term agroforestry and describe the three main agroforestry practices **(20 Marks)**
4. Describe climate change vulnerability and discuss its three components.  
**(20 Marks)**
5. Explain with relevant examples why biodiversity loss is considered as one of the key planetary boundaries  
**(20 Marks)**