



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND
TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

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

2024/2025 ACADEMIC YEAR

COURSE CODE: AFB 5115

COURSE TITLE: Food Systems and Resources

DATE:

TIME:

TIME: 3 Hours

**STREAM: MSc (Food Security and
Sustainable Agriculture)**

Instructions:

- 1. Answer Question 1 and Any other two questions.**
- 2. All questions carry equal marks.**

Question 1**[20****MARKS]**

(A) Food systems encompass the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products. Food systems comprise all food products that originate from crop and livestock production, forestry, fisheries and aquaculture, as well as the broader economic, societal and natural environments in which these diverse production systems are embedded.

Looking at existing global food systems and predicated demands for food, discuss in detail some of the future prospects of food systems.

[10 MARKS]

(B) Discuss in detail the strategies that can be employed by governments in order to enhance the resilience of communities to changing food systems.

[10**Marks]****Question 2****[20 MARKS]**

(A) Industrialization has profoundly reshaped food systems by leading to increased food production, processing, and distribution, impacting diets, and creating new challenges and opportunities for food security and sustainability.

Discuss in detail how industrialization has shaped food systems, both positively and negatively

[10 Marks]

(B) A sustainable food system lies at the heart of the United Nations' Sustainable Development Goals (SDGs). Adopted in 2015, the SDGs call for major transformations in agriculture and food systems in order to end hunger, achieve food security and improve nutrition by 2030.

Discuss the reasons why the food systems approach is preferred as a way of addressing the food and nutrition challenges

[10 Marks]**Question 3****[20 MARKS]**

A) Globalization significantly impacts food systems, leading to increased food availability and diversity, but also potentially exacerbating inequalities in access, shifting diets, and affecting the livelihoods of small-scale producers.

(1) Discuss the positive impacts of globalisation on food systems

[5 Marks]

(2) Discuss the negative impacts of globalization on food systems

[5 MARKS]

B. Policies significantly impact agriculture, food systems, and human/ecological health, influencing everything from food production and distribution to environmental or ecological sustainability and human health outcome

Apart from issues of biodiversity, discuss other aspects in which policies can have an impact on ecological and environmental Health. **[10 Marks]**

Question 4

[20

MARKS]

(A) Insects are a very important resource and human beings depend on them for various reasons.

(1) Discuss the economic importance of insects **[5 MARKS]**

(2) Discuss the nutritional composition of edible insects **[5 Marks]**

(B) The utilisation of insects as food and feed is gradually gaining momentum globally. Discuss some of the challenges that have contributed to the slow adoption of edible insects as human food, and suggest possible ways of enhancing the utilization of edible insects in the human diet, commonly known as entomophagy. **[10**

Marks]