



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

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**FOURTH YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE  
DEGREE OF BACHELOR OF SCIENCE FOOD SECURITY**

**2019/2020 ACADEMIC YEAR**

**SPECIAL EXAMS/RESIT**

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**COURSE CODE: AFB 3422**

**COURSE TITLE: Food Quality Assurance and Control**

**EXAM VENUE:**

**STREAM: BSc. Food Security**

**DATE:**

**EXAM SESSION:**

**TIME: 2 HOURS**

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**Instructions:**

1. **Answer ALL the questions in section A and any TWO 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.**
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**SECTION A [30 MARKS]**

**Answer ALL questions from this Section.**

1. Explain the meaning of the following terminologies as used in food quality assurance and control
  - a. Food safety **(2 marks)**
  - b. Food hazard **(2 marks)**
  - c. Food quality audit **(2 marks)**
  
2. a. Explain three important components of food quality **(6marks)**
  - b. Using any **two** sensory parameters, explain how you will evaluate dairy milk to ascertain whether it is safe or unsafe for human consumption **(4 marks)**
  - c. Briefly explain any three Good Agricultural Practices that should be practiced by tomato farmers during harvesting to maintain quality of tomato fruits **(6 marks)**
  
3. a. What is ISO 2200 as used in food quality assurance and how is it beneficial to consumers **(3 marks)**
  - b. Explain the difference between is ISO 22000 and HACCP **(2 marks)**
  - c. How does KEBS protect consumers from unsafe food products **(3 marks)**

**SECTION B [40 MARKS]**

**Answer any TWO QUESTIONS from this Section.**

4. Quality improvement is still not a success story in the Kenyan food industry. Discuss possible challenges to food quality improvement in Kenya. **(20 marks)**
  
5. Discuss the **five** major factors affecting/limiting shelf- life and sensory properties of food, highlighting the cause/type of reaction involved and the undesirable effects resulting from the reactions **(20 marks)**
  
6. Dairy industry is an important agricultural sub-sector in Kenya's economy. However, lack of knowledge on best practices and constraints to improvement among smallholder farmers continue to hamper milk quality. You have been hired as a food quality expert to train small-holder dairy farmers in Nyandarua County on the best quality assurance and control practices in the dairy value-chain that will improve milk quality. Clearly explain the practices you will focus on , from milk production to consumption **(20 marks)**