



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE
ENVIRONMENTAL HEALTH/ COMMUNITY HEALTH AND DEVELOPMENT**

2ND YEAR 1ST SEMESTER 2023/2024 ACADEMIC YEAR

MAIN

COURSE CODE: HCB 1209

COURSE TITLE: FOOD SCIENCE AND TECHNOLOGY

EXAM VENUE: STREAM: (BSc. Env. Hlth)

DATE: EXAM SESSION:

TIME: 2.00 HOURS

Instructions:

- 1. Answer all the questions in Section A and ANY other 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.**

SECTION A. ANSWER ALL QUESTIONS (30 MARKS).

1. List THREE types of food and for each class mentioned, state the major Nutritive components (**3 marks**)
2. Define the following terminologies as used in food technology and hygiene.
 - a) Pickling. (1 mark)
 - b) Food safety. (1 mark)
 - c) Hygiene (1 mark)
 - d) Blanching. (1 mark)
3. Explain the THREE types of food spoilage (**3 marks**)
4. Describe THREE functions of food. (**3 Marks**)
5. Name FOUR Acts of parliament that regulate food production and or consumption in Kenya (**4 Marks**)
6. Describe Technology as applied in the food processing industry (**3 Marks**)
7. Describe the general principles applied in Food preservation (**5 marks**)
8. Briefly describe common etiological agents of foodborne illnesses (3 marks)
9. Explain the term food biotechnology (2 marks)

SECTION B. ANSWER ANY TWO QUESTIONS (40 Marks)

1. Hazard Analysis Critical control Points is a quality control tool to assess hazards and establish control systems. HACCP is applied through the food chain, from primary production to final consumption. Discuss how HACCP differs from Good hygiene practices in the production of Quality products. (**20marks**)
2. The integrated safety management of foods is based on a legal framework scattered in several Acts of Parliament. Mention at least three of those Acts and

explain how they complement each other in the preservation of Hygiene and safety management **(20marks)**

3. Management is charged with the responsibility of ensuring hygienic practices of employees by using established protocol for proper personal hygiene and health practices. You are invited as a public health officer in this area to give a health talk to the management on possible practices that should be conducted by employees to assure personal hygiene. Outline the themes of your address. **(20marks)**

4. Food spoilage is as a result of Microbial and enzymatic activities. Discuss factors that will aid or inhibit microbial growth in foods **(20 marks)**.