



University of choice

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)
SCHOOL OF AGRICULTURE, VETERINARY SCIENCES AND
TECHNOLOGY (SAVET)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR**

**MAIN EXAMS
OF
BSc. FOOD SCIENCE AND TECHNOLOGY**

COURSE CODE: AFT 410

COURSE TITLE: PACKAGING AND FILLING TECHNOLOGY

DATE: 18TH DEC, 2023

TIME: 8 – 10 AM

INSTRUCTIONS TO CANDIDATES

This paper is divided into two sections, **A and B**. Answer ALL Questions in SECTION A and any Two in SECTION B

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

Q1. A)

i. Define packaging as used in the food industry **(2 marks)**

ii) Discuss the following basic functions of packaging

- Containment **(2 marks)**
- Protection **(2 marks)**
- Communication **(2 marks)**
- Unitization **(2 marks)**

B) Define the following terms

- Aseptic packaging **(4 marks)**
- Active packaging **(3 marks)**
- Cellulose **(3 marks)**

C) i) Which are the two major features of paper and paperboard which make these materials suitable for packaging? **(6 marks)**

ii) The following are two main types of packaging papers, Discuss

- Bleached paper **(2 marks)**
- Waxed paper **(2 marks)**

D. Attributes of food packaged in glass containers has a modern profile with distinct advantages. Highlight the advantages based on

- Quality image **(4 marks)**
- Transparency **(3 marks)**
- Heat process able **(3 marks)**

SECTION B . ATTEMPT ANY TWO QUESTIONS(30 MARKS)

Q2. You have been employed as a management trainee in a plastic packaging manufacturing company. State the application of plastic in food processing **(15 marks)**

Q3. Tin plate is the most common metal material used for food cans. With the aid of a diagram discuss the structure of tinplate **(15 marks)**

Q4. As a Quality assurance manager in a food processing company, which are the requirements for a successful pouch packaging quality system? **(15 marks)**

Q5. With the use of a table show the self-life of any five different food commodities in different storage conditions mentioning storage condition, normal shelf life and their vacuum shelf life.

(15 marks)