FACULTY	AGRICULTURE, ENGINEERING AND NATURAL SCIENCES		
SCHOOL	AGRICULTURE AND FISHERIES SCIENCES		
DEPARTMENT	FOOD SCIENCE AND SYSTEMS		
SUBJECT	POST-HARVEST TECHNOLOGY		
SUBJECT CODE	F3601SP		
DATE	JUNE 2024		
DURATION	3 HOURS	**MARKS**	100

SECOND OPPORTUNITY EXAMINATION

Examiner: **Dr. P. Hiwilepo – van Hal**

Internal Moderator: Mr. S. Emvula

External Moderator: **Prof. V. A. Jideani**

This question paper consists of **one (1)** page excluding this front page.

Instructions

- **Answer all five (5) questions**

QUESTION 1

Explain how careless handling and temperature cause significant losses on the following:

a) Bananas **[5]**
b) Tomatoes **[5]**
c) Mangoes **[5]**
d) Potatoes **[5]**

QUESTION 2

Describe the following terminologies and provide relevant examples for each:

a) Vacuum Packaging **[5]**

b) Controlled Atmosphere Storage (CAS) **[5]**

c) Modified Atmosphere Packaging (MAP) **[5]**

d) Hypobaric Storage **[5]**

QUESTION 3

a) With the aid of a sketch show how ethylene gas production relates to respiratory peaks for climacteric and non-climacteric fruits. **[10]**

b) By using a food pipeline diagram, describe the post-harvest handling system for fresh grapes. Indicate the possible causes of quantitative and economic losses along the pipeline. **[10]**

QUESTION 4

a) Once there is heavy build-up of pest infestation, fumigation can be done using lethal gases from tablets or pellets. Explain how phostoxin (Aluminium Phosphide) is used in grains fumigation. **[8]**

b) Discuss how degreening and waxing are done to maintain quality as well as to improve the appearance of fruits and vegetables. **[12]**

QUESTION 5

a) Discuss three (3) biochemical changes occurring during the ripening of tomatoes. **[6]**

b) As a Manager working at (Namibian Agronomic Board) NAB, you are requested to give a presentation on "Maize postharvest losses" to a group of subsistence farmers. What would be your advice with regards to drying and storage facilities? **[14]**

END OF THE EXAMINATION