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QUALIFICATION: BACHELOR OF HUMAN NUTRITION	
QUALIFICATION CODE: 08BOHN	LEVEL: 7
COURSE: FOOD PROCESSING AND PRESERVATION	COURSE CODE: FPC721S
DATE: NOVEMBER 2024	SESSION: 1
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION: QUESTION PAPER

EXAMINER: MS FIINA K. NAMUKWAMBI

MODERATOR: DR FRANCIS CHIKUSE

INSTRUCTIONS:

1. Answer all questions on the separate answer sheet.
2. Please write neatly and legibly.
3. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
4. No books, notes and other additional aids are allowed.
5. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS:

1. None

ATTACHMENTS

1. None

This question paper consists of 3 pages including this front page

SECTION A: SHORT ANSWER QUESTION**[16 MARKS]****QUESTION 1:****[16 MARKS]**

- 1.1 Explain the following terms and concepts:
- 1.1.1 Food preservation. (2)
 - 1.1.2 Secondary processing. (2)
 - 1.1.3 Intellectual property. (2)
 - 1.1.4 Sensory evaluation. (2)
 - 1.1.5 Dry cleaning. (2)
- 1.2 Unit operations are procedures grouped into common operations. Mention any three (3) pre-processing unit operations in food industries. (3)
- 1.3 Outline three (3) common chemical preservatives. (3)

SECTION B: LONG ANSWER QUESTIONS**[84 MARKS]**

Please answer ALL of the questions in this section.

QUESTION 2:**[25 MARKS]**

- 2.1 Establish how the following principles can be used in the preservation of fruits and vegetables.
- 2.1.1 Use of heat. (1)
 - 2.1.2 Reduced water activity. (1)
 - 2.1.3 Use of acidity. (1)
 - 2.1.4 Use of irradiation. (1)
- 2.2 A variety of things can happen during the growing, harvesting, storage and preparing of food that can affect its nutritional content. In summary, describe how the following processes affect food nutrient content.
- 2.2.1 Blanching. (2)
 - 2.2.2 Dehydrating (2)
- 2.3 Prove with justifications how the following food preservation method can be used:
- 2.3.1 Reduced water activity (AW). (3)
 - 2.3.2 Low pH and organic acids. (3)
 - 2.3.3 Reducing oxidation- reduction potential. (3)
- 2.4 Cooking is essential during food processing/preparation. Defend the benefits of cooking. (2)

- 2.5 Preserving the nutrients value of vegetables are essential for long shelf life. Outline suggestions used to preserve food to retain the maximum nutrition in the foods. (6)

QUESTION 3:

[13 MARKS]

- 3.1 Differentiate between acceptance and preference test. (2)
- 3.2 Distinguish between trademark and trade secrets. (2)
- 3.3 Separate the word mixing from forming. (2)
- 3.4 In a tabular format, give details about the advantages and limitations of conventional steam and hot-water blanchers. (4)
- 3.5 Enumerate three (3) types of homogenisers equipment. (3)

QUESTION 4:

[22 MARKS]

- 4.1 The World Health Organisation (WHO) has made food safety one of its priorities, urging countries to integrate food safety as an essential public health function. Each food processing companies are required to have Hazard Analysis Critical Control Points (HACCP) plan in their processing plant. List and explain seven (7) principles of HACCP. (14)
- 4.2 Describe four (4) factors that influence the rate of heat penetration into a food. (8)

QUESTION 5:

[24 MARKS]

- 5.1 State the benefits of food processing and preservation. (5)
- 5.2 Enumerate three (3) types of descriptive sensory tests. (3)
- 5.3 Describe five (5) basic rules which should always be applied when running sensory evaluation test. (10)
- 5.4 Briefly discuss three (3) roles of intellectual property in Agriculture. (6)

END OF QUESTION PAPER