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QUALIFICATION: BACHELOR OF HUMAN NUTRITION	
QUALIFICATION CODE: 08BOHN	LEVEL: 7
COURSE: FOOD PROCESSING AND PRESERVATION	COURSE CODE: FPC721S
DATE: JANUARY 2025	SESSION: 2
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY/SUPPLEMENTARY 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 QUESTIONS**[10 MARKS]****QUESTION 1:****[10 MARKS]**

1.1. Explain the following terms and concepts:

- 1.1.1. Energy balance states. (2)
- 1.1.2. Food processing. (2)
- 1.1.3. Intellectual property. (2)
- 1.1.4. Pasteurization. (2)
- 1.1.5. Steady-state conduction (2)

SECTION B: LONG ANSWER QUESTIONS**[90 MARKS]**

Please answer ALL of the questions in this section.

QUESTION 2:**[11 MARKS]**

- 2.1 Outline five (5) basic rules which should always be applied when running sensory tests. (5)
- 2.2 Give description of the following methods used for pasteurization:
 - 2.2.1 Holding or Batch system (Holder method). (2)
 - 2.2.2 High Temperature Short Time Method (HTST) (Flash method). (2)
 - 2.2.3 Ultra-High Temperature System (UHTS). (2)

QUESTION 3:**[35 MARKS]**

- 3.1 Classify three (3) ways in which heat may be transferred. (6)
- 3.2 Summarise the purpose of reducing size in food processing? (3)
- 3.3 Enumerate two (2) types of equipment used for hot-water blanchers. (2)
- 3.4 Briefly discuss the factors to consider when designing and selecting food processing equipment. (5)
- 3.5 Outline the benefits of homogenisation of milk (4)
- 3.6 Support with statements, why monitoring procedure in your Hazard Analysis Critical Control Points (HACCP) system is important. (3)
- 3.7 List the sources of energy used in food processing. (4)
- 3.8 What are four (4) factors that affect the shelf-life test? (8)

QUESTION 4**[44 MARKS]**

- 4.1 Compare and construct between discrimination test and descriptive test. (4)
- 4.2 Separate between sorting and grading. (4)
- 4.3 Examine any three (3) different types of non-Newtonian fluids. (6)
- 4.4 Evaluate the following types of descriptive sensory evaluation tests.
 - 4.4.1 Flavor profile analysis (FPA). (2)
 - 4.4.2 Sensory spectrum (SS). (2)
- 4.5 Compose the benefits of blanching. (3)
- 4.6 Outline factors which influence blanching time. (3)
- 4.7 Clarify any five (5) factors that influence the rate of heat penetration into a food. (10)
- 4.8 Describe any five (5) types of intellectual property. (10)

END OF QUESTION PAPER