Private & Confidential

FACULTY OF CULINARY ARTS

FINAL EXAMINATION

Student ID (in Figures)	:	
Student ID (in Words)	:	

Course Code & Name	:	**CUL2023.v2 Food Preservation & Toxicology**
Semester & Year	:	May - August 2023
Lecturer/Examiner	:	Wan Ruzanna Wan Ibrahim
Duration	:	3 Hours

INSTRUCTIONS TO CANDIDATES

1. **This question paper consists of 2 parts:**
   - **PART A (70 marks) : SEVEN (7) short answer questions. Answers are to be written in the Answer Booklet provided.**
   - **PART B (30 marks) : Answer ALL essay question. Write your answers in the Answer Booklet(s) provided.**
2. **Candidates are not allowed to bring any unauthorized materials except writing equipment into the Examination Hall. Electronic dictionaries are strictly prohibited.**
3. **This question paper must be submitted along with all used and/or unused rough papers and/or graph paper (if any). Candidates are NOT allowed to take any examination materials out of the examination hall.**
4. **Only ballpoint pens are allowed to be used in answering the questions, with the exception of multiple choice questions, where 2B pencils are to be used.**

WARNING: The University Examination Board (UEB) of BERJAYA University College regards cheating as a most serious offence and will not hesitate to mete out the appropriate punitive actions according to the severity of the offence committed, and in accordance with the clauses stipulated in the Students' Handbook, up to and including expulsion from BERJAYA University College.

Total Number of pages = 4 (Including the cover page)

PART A : SHORT ANSWER QUESTIONS (70 MARKS)

INSTRUCTION(S) : Answer **SEVEN (7)** short answer questions. Write your answers in the Answer Booklet(s) provided.

---

1. List down and explain **FIVE (5)** importance of food preservation.

(10 marks)

2. Fermentation food like yogurt, beer and *kimchi* undergo fermentation process. Describe the process of fermentation used and the mechanism of preservation in the end of each product.

(6 marks)

3. Fermentation convert food into a more value added product. List **TWO (2)** possible fermented products that can be produce from the following food commodities:

   a. Milk
   b. Meat
   c. Vegetables
   d. Fruits
   e. Beans

(10 marks)

4. Oxygen always associates as a factor on bacterial growth. In most cases, bacteria require oxygen to grow because their methods of energy production on the transfer of electrons that causes reaction on food products.

   a. Describe **TWO (2)** effects of spoilage cause by oxygen. (4 marks)

   b. Explain **THREE (3)** methods in food processing that can be used to prevent spoilage due to oxygen. (6 marks)

5. Differentiate between rapid freezing (blast freezer) and slow freezing (normal freezer) methods.

(10 marks)

6. You are required to preserve 50kg of freshwater fish using any types of preservation technique/ methods. Justify by providing reasons on the technique of preservation you will apply.

(10 marks)

7. Freezing is the easiest, most convenient and least time-consuming method of preserving foods. In food processing, method of preserving food is aided by lowering the temperature to inhibit microorganism growth.

   a. Explain the effects of freezing on physical changes in food (4 marks)

   b. Briefly discuss **FIVE (5)** factors affecting the quality of frozen food. (10 marks)

END OF PART A

PART B : **ESSAY QUESTIONS (30 MARKS)**

INSTRUCTION(S) : Answer **ALL** essay questions. Write your answers in the Answer Booklet(s) provided.

---

1. You are currently working as a researcher in a food company. You are required to produce a product based on local fruits. The food product should have a shelf life of at least 1 year and you are allowed to use any preservation technique. Your product should be marketable and saleable in shops .Your task includes:

   a. Choose **ONE (1)** local fruit and create a product based on the item. (5 marks)

   b. State reasons why you chose the local fruit and why you decided to produce the food product? (10 marks)

   c. State the recipe (ingredients and method) and justify which preservation technique(s) you used and state your reason why you decided to choose that technique. (5 marks)

   d. Discuss at least **FIVE (5)** positive and negative impacts as a result the techniques chosen. (10 marks)

END OF EXAM PAPER