

The Open University of Sri Lanka

Faculty of Natural Sciences

Diploma in Food Science



Department	: Chemistry
Level	: 3
Name of the Examination	: Final Examination
Course Title and Code	: Food Microbiology & Food Spoilage (CYD3313)
Academic Year	: 2022-2023
Date	: 02 nd July 2023
Time	: 9.30 a.m. – 11.30 a.m.
Duration	: 2 hr

1. Read all instructions carefully before answering the questions.
2. This paper consists of two parts as Part - A (3 essay type questions) and Part - B (3 essay type questions) in (2) pages.
3. Answer ONLY 02(two) questions from each Part (A and B). Altogether you have to answer (4) questions.
4. Answer for Part A and B questions separately and then attach together. Answer for each question should commence from a new page.
5. Each question carries 100 marks.
6. Use a blue or black pen not a pencil. Use the given book to write down answers for (4) essay questions.
7. Draw fully labelled diagrams where necessary.
8. Clearly state your index number in your answer script.
9. Involvement in any activity that is considered as an exam offense will lead to punishment.

PART A

Answer ONLY 02(two) questions from Part A.

Answer for Part A and B questions separately and then attach together. Answer for each question should commence from a new page.

01.

- (i) Name **three(3)** different types of mushrooms commercially cultivated in Sri Lanka, giving their **generic and common names**.
- (ii) Draw a fully labelled diagram of a fungal fruiting body (mushroom).
- (iii) Describe in detail the steps involved in Oyster mushroom cultivation.

02.

- (i) Briefly describe how the extrinsic factor: **temperature** affects the growth of microorganisms and include the **classification of microorganisms according to the range of growth temperature**.
- (ii) Give **scientific reasons** for the followings:
 - (a) Sometimes microbial growth is observed in jam although the sugar concentration in it is meant to prevent microbial growth.
 - (b) Cheese kept in the fridge develops areas which are blue in colour.

03. Write short notes on the followings;

- (i) Archaea bacteria
- (ii) Generation time
- (iii) Major sources and functions of **C, H, O** and **N** in bacterial cells

PART B

Answer ONLY 02(two) questions from Part B.

Answer for Part A and B questions separately and then attach together. Answer for each question should commence from a new page.

04. "Spoilage causing loss of sensory qualities in food ." with reference to this, give suitable examples and discuss this statement.
05. (i) Indicate the reactions that cause the sour taste in milk.
(ii) Briefly explain how to prevent spoilage of food due to the action of microorganisms by citing suitable examples.
(iii) Sensory qualities resulting from spoilage of commonly consumed food.
Briefly describe sensory qualities resulting from spoilage of dairy products.
06. (i) Food borne diseases from microorganisms are broadly classified as food infection and food intoxication. Briefly explain how **food borne intoxication** occurs with some examples.
(ii) Briefly explain with suitable examples how food spoilage takes place by **freezing and refrigeration**.
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