

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Agricultural & Plantation Engineering



Study Programme	: Bachelor of Industrial studies Honours in Agriculture
Name of the Examination	: Final Examination
Course Code and Title	: AGI6582 Food Processing
Academic Year	: 2024/2025
Date	: 28 st January 2026
Time	: 0930-1230hrs
Duration	: 3 hours

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **2 sections**, **section 1 contains (15) questions** and **section 2** contains (6) questions in **five (5) pages**
3. Answer all questions in **section I** and any **four (4)** questions from **section II**.
4. All questions carry equal marks.
5. Answer for each question should commence on a new page.
6. This is a Closed Book Test (CBT).

Index No :

SECTION I: Answer all questions. Use the space given under each question.

1. List **five (05)** unit operations applied when producing tomato sauce.

i.

ii.

iii.

iv.

v.

2. (a) Name **two (02)** wet cleaning methods that can be applied for perishables.

i.

ii.

- (b). Briefly explain the advantages of wet cleaning compared to dry cleaning.

3. Colour-sorted food products have high quality and demand. Name **two (02)** colour-sorted food products available in the market.

i.

ii.

4. What is the main advantage of membrane filtration technology in the food industry?

5. a) Define the term emulsification.

.....
.....
.....
.....
b) Name **two (02)** synthetic emulsifying agents used in the food industry.

i.

ii.

6. What is the reason for having a grainy texture in homemade ice creams?

7. What is the heat treatment method applied in processing the following processed foods?

i. Milk for yoghurt making -

ii. Milk in glass bottles stored outside -

iii. Condensed milk-

iv. Whey protein of milk for sick people —

8. What is meant by “retorting” in food processing?

9. Name two (02) fermented food products for following fermentation types.

Lactic acid fermentation -

Ethanol fermentation -

 Acetic fermentation -

10. Illustrate the sublimation steps of the freeze-drying.

11. List **two (02)** freeze-dried food products available in the market.

i. -----

ii. -----

12. Give examples for following extruded products.

 Hot extruded -

 Cold Extruded -

13. What is the shelf life of the following products?

 Curd without preservatives -

 Frozen fish slices -

 Minced chicken -

 Pasteurised milk at 4°C -

 UHT fruit juice -

14. What is the best processing technology that can be recommended to produce an identical taste containing king coconut for the export market?

15. Name one (01) novel/ innovative food product that can be introduced to the local or export market.



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SECTION 2: Answer any four (04) questions.

1. a. Briefly explain the term D value in commercial sterility of a food product with an illustration. (Marks 10)

 b. If the initial microorganism spore load is 10^5 after 8D application, what is the final microbial load? (Marks 5)
 c. Draw a flow diagram to show unit operations that are applied in the fish canning/ tin manufacturing process. (Marks 10)
2. Write short notes on the following topics
 - a. Application of “overrun” process in commercial Ice creams (Marks 12.5)
 - b. Briefly explain the importance of cook chill system in the food catering sector. (Marks 12.5)
3. “Fast frozen meat quality is better than slow frozen meat.” Critically evaluate this statement, giving suitable illustrations. (Marks 25)
4. Compare and contrast the following topics.
 - a. High Pressure Processing (HPP) vs thermal processing. (Marks 12.5)
 - b. Thawing of ice crystals is slower than making ice crystals (Marks 12.5)
5. “Case hardening of baked foods could be prevented by controlling the temperature of the oven.” Critically evaluate this statement. (Marks 25)
6. Discuss the different applications of Nano Technology in the food industry? (Marks 25)