

**FOURTH SEMESTER M.Sc. DEGREE [REGULAR/SUPPLEMENTARY]
EXAMINATION, APRIL 2022**

(CBCSS)

Food Science and Technology
FST 4E 18—DAIRY TECHNOLOGY
(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

General Instructions

1. *In cases where choices are provided, students can attend all questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *The instruction if any, to attend a minimum number of questions from each sub section / sub part / sub division may be ignored.*
4. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

Part A

*Answer any four questions.
Each question carry 2 marks.*

1. What is recombined milk ?
2. What is the significance of alkaline phosphatase test ?
3. What is an atomizer ?
4. List out the defects of butter.
5. What is pilot sterilization test ?
6. What are the different types of khoa ?
7. What is overrun in ice cream ?

(4 × 2 = 8 weightage)

Part B

Answer any four questions.

Each question carry 3 marks.

8. What do you understand by standardization of milk ? What is its significance in dairy industry ?
9. Differentiate between *chhana* and *paneer*.
10. What are the various methods of ghee manufacture ?
11. Write about the nutritive value of *khoa*.
12. Differentiate between butter oil and ghee.
13. Differentiate between LTLT and HTST pasteurization methods.
14. Give reasons for introducing toned milk in India.

(4 × 3 = 12 weightage)

Part C

Answer any two questions.

Each question carry 5 marks.

15. With the help of a flow diagram, explain the process of manufacturing Cheddar cheese.
16. What are the ideal characteristics of a cleaning agent and sanitizer ? Explain the process of “clean-in-place” in dairy industry.
17. What is churning ? Explain the various theories of churning.
18. With the help of a neat flow diagram, explain the method of whole milk powder production.

(2 × 5 = 10 weightage)

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Food Science and Technology

FST 4E 17—TECHNOLOGY OF MEAT, FISH AND POULTRY PRODUCTS

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

General Instructions

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Section A

Answer any four questions.

Each question carries 2 weightage.

1. Note on factors controlling meat color.
2. Write on chitosan and its commercial applications.
3. Note on post mortem changes in fish.
4. List out factors affecting egg quality.
5. List out and explain preservation methods of fish.
6. Note on non-comminuted meat products - ham and bacon.
7. Note on irradiation of meat.

(4 × 2 = 8 weightage)

Turn over

Section B

Answer any four questions.

Each question carries 3 weightage.

8. Write in detail - meat and fish processing industry by-products utilization.
9. Explain value addition by dehydration of meat.
10. Note on different method of meat tenderization.
11. Draw the flow chart and explain steps for canning of fish.
12. Note on composition and nutritive value of hen egg.
13. Note on quality control in meat processing and Hurdle Technology.
14. With suitable diagrams explain microscopic structure of meat tissue.

(4 × 3 = 12 weightage)

Section C

Answer any two questions.

Each question carries 5 weightage.

15. With suitable diagrams, explain modern abattoir designs and hygienic slaughter methods.
16. Write in detail. Current challenge and prospects of meat, poultry and fish industries in India.
17. Write on the :
 - a) Composition ;
 - b) Quality and nutritive value ; and
 - c) Biochemical changes in fish after fishing.
18. Write on :
 - a) Explain the code of practice for ante-mortem and post-mortem inspection of meat animals.
 - b) Note on post-mortem biochemical changes and conversion of muscle to meat.

(2 × 5 = 10 weightage)

**FOURTH SEMESTER M.Sc. DEGREE [REGULAR/SUPPLEMENTARY]
EXAMINATION, APRIL 2022**

(CBCSS)

Food Science and Technology

FST 4E 16—FOOD PLANT AND QUALITY MANAGEMENT

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

General Instructions

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Part A

Answer any four questions.

Each question carries 2 marks.

1. Short note on export promotion bodies in food sector.
2. Describe break-even point in a food industry.
3. What is GCC and explain its function briefly ?
4. Describe briefly product traceability.
5. Explain significance of critical control Point.
6. Short note on EPA regulations.
7. Short note on Market Research.

(4 × 2 = 8 marks)

Turn over

Part B

Answer any four questions.

Each question carries 3 marks.

1. Write briefly the procedure to obtain patent.
2. Write briefly on marketing aspects of products.
3. Give an account on food export Regulations.
4. Pricing of food products-Explain briefly.
5. Explain briefly Purchase and Stores procedures.
6. What is WHO and explain its major functions ?
7. Differentiate the roles of Food safety officers and food analysts.

(4 × 3 = 12 marks)

Part C

Answer any two questions.

Each question carries 5 marks.

1. Discuss elaborately about cost factors in fixation of prices of food product.
2. Describe HACCP Principles and discuss guidelines for their application.
3. Explain codex alimentarius protocols. Discuss all the mandatory standards.
4. What are the Quality attributes of food and explain each aspect ?

(2 × 5 = 10 marks)